

eCitizenship - Education - Cosmopolitanis (CEC) Triple Helix in the EU Policies Beyond the Killing Compartments of Social Stigmas and Labels

Andrea Pitasi

Gabriele d'Annunzio University

Sara Petroccia

Gabriele d'Annunzio University

Abstract

The goal of this paper is twofold: to expand the strategic application field of triple helix as a systemic problem setting and problem solving tool and to use it to face one of the key social challenges of our times: the increasing diffusion of the killing compartments (de Swaan: 2015) worldwide and their potential return also in Western areas through the most violent shapes of populism. By adopting some key concepts by Luhmann, this paper is focused on evolving the triple helix as a conceptual tool for inclusion meant as complexity and variety increase by drawing softer and softer distinctions (for example through cosmopolitanism) to skip the killing compartmentalization risk through rigidly and subjectively shaped stigmas with neither essence nor roots as shown by U. Beck in his *The Cosmopolitan Vision* (Beck, 2006).

Keywords: Citizenship, Cosmopolitanism, Triple Helix, EU Policies, Social Changes

Riassunto. *eCitizenship - Education - Cosmopolitanis (CEC) Il modello della Tripla Elica nelle politiche dell'EU oltre gli stigmi e le etichette sociali*

Questo lavoro si ripropone di espandere il campo di applicazione strategico della tripla elica sia come impostazione sistemica dei problemi che come strumento risolutivo delle sfide sociali dei nostri tempi, tra queste la crescente diffusione degli omicidi di massa nel mondo (de Swaan, 2015) anche nei paesi occidentali attraverso violente rappresentazioni populiste. Adottando alcuni concetti chiave di Luhmann, questo articolo è incentrato sull'evoluzione della tripla elica come strumento concettuale di inclusione inteso come aumento di complessità e varietà in grado di definire distinzioni sempre più tenui (ad esempio attraverso il cosmopolitismo) per poi passare agli omicidi di massa alimentati da stigmi anche modellati soggettivamente senza alcun fondamento storico o radici come ampiamente mostrato da U. Beck in *The Cosmopolitan Vision* (2006).

Parole chiave: cittadinanza, cosmopolitanismo, tripla elica, politiche dell'Unione europea, cambiamento sociale

DOI: 10.32049/RTSA.2018.4.02

1. Introduction

The key argument of this paper is to shape a new variant of the Triple Helix specifically the Citizenship - Education- Cosmopolitanism (CEC) new helix is rooted into some pivotal reasons which interconnect research and policy strategically and according to the most accurate methodological project design. Expanding educational conceptual “borders” is strategic to skip the risks and dangers of what de Swaan (2015) defines killing compartments which, reinforcing negative stigmatization, might also reinforce hate speeches and the will to purify and destroy what is not coherent with “us”. The killing

compartments are the top of contingency because every day a different social group can be stigmatized as the one to be destroyed. Our Age is featured by increasing risks, dangers and sometimes violence which mirror increasing complexity. Common sense often inspired by the most banal cognitive saving mechanisms, states that more complexity means more risk, danger and violence which is not reliable while this common sense statement mirrors a great lack of competence in the everyday observer. Rethinking education is strategic in our times. Most of current educational methods are inspired by an obsolete methodological nationalism which often artificially shows as separated what is connected in theory and practice. For example, in many EU high schools studying literature still means to study, more or less in depth, the literature of that country while currently it would make much more sense to teach in all the EU high schools European Literature focusing on the top authors (for example Goethe, Cervantes, Schiller Manzoni, Dante, Zola, Flaubert). The perception of rigid cultural traditions would reinforce the sensation that walls are more viable than highways while a wall has intrinsically no viability. The shapes of the educational system in terms of coding and programming expand this way by structural coupling. A structural coupling of the education system with the law system is strategic to shape convergence and stability through the new helix so that educational degree programs might become as wide as citizenship legal validity especially for those Global Players inspired by free circulation as a valid legal pillar just like in the European Union, for example. If someone has a degree, let's say, in dental medicine, released by a EU university there is no reason to let it be legally valid only at the lower scale of the national state deliver (let's imagine a dental degree of the University of Amsterdam valid in the Netherlands only and not in Italy, France, etc). It implies empowering the Treaty of Lisbon and the Bologna Process European Higher Education Area (EHEA) project jointly and convergently in the new helix introducing cosmopolitanism in those disciplines which are getting more and more obsolete if they remain local thus national. Wide and global disciplines are most of the academic ones medicine, biology, architecture, philosophy, arts, sociology, psychology, economics, technology sciences etc while the local ones are relatively few and need a strong *cosmopolitan* upgrade: law, first of all. The CEC triple helix describes a new shape of

complex system evolution for policy modellers and policy makers. Below the theoretical research framework which the CEC triple helix comes from.

2. Citizenship, Variety and the Killing Compartments

In his book about the ethology of war, Irenäus Eibl-Eibesfeldt (1989), stated that the deepest roots of war and mass violence belong to the radicalization of cultural differences / identities into rigid and at the same time arbitrary traditions. War in its essence does not belong to nature but to culture so to speak. Animals kill each other rather for survival reasons only mankind kills in the name of symbols. The goal of this paper is twofold: to expand the strategic application field of triple helix as a systemic problem setting and problem solving tool and to use it to face one of the key social challenges of our times: the increasing diffusion of the killing compartments (de Swaan, 2015, usefully puts mass murders into four categories: the “conquerors frenzy”, when the killers are intoxicated by victory, like the Nazis in 1941-2, when they launched the Holocaust; the “losers triumph”, when the killers, sensing military defeat, desperately redouble their attacks, the Nazism in 1944-45. Then there is the “rule of terror”, Stalinist Russia and early Communist China; and fourth, the “megapogrom”, the wild pursuit of victims, the expulsion of ethnic Germans from eastern Europe in 1944-46) worldwide and their potential return also in Western areas through the most violent shapes of populism. By adopting some key concepts by Luhmann (1996, 1997, 2013, 2014), this paper is focused on evolving the triple helix as a conceptual tool for inclusion meant as complexity and variety increase by drawing softer and softer distinctions (for example through cosmopolitanism) to skip the killing compartmentalization risk through rigidly, arbitrarily and subjectively shaped stigmas with neither essence nor roots as shown by U. Beck (2006) in his *The Cosmopolitan Vision*. The matter of drawing distinctions is based on the key contribution by George Spencer Brown and then by Luhmann’s writings which also influenced the shaping of the triple helix model also in Leydesdorff words about his own communication theory based on the triple helix model itself: Unlike other communication systems, social systems of communication provide the

information with meaning and the meaning can again be communicated. Human language can be considered as the evolutionary achievement that enables us to communicate both uncertainty and the meaning of an uncertainty. The meaning is reflexively provided from the perspective of hindsight. Thus, this operation reduces the uncertainty, but an interaction terms between the two layers of communication is also generated. The interaction terms provide the meaningful information. The two processes of information exchanges and meaning exchanges can be coupled to varying extents. Providing the (Shannon-type) information with meaning generates value. This reflexive operation is recursive. For example, some meaning can further be codified into knowledge, that is, a meaning which makes a difference. Thus, the subsystems of communications become functionally differentiated in terms of the codes of the communication symbolically generalized media of systems tend to be closed in terms of their operations, but a complex systems can be expected to remain nearly decomposable communication which define different values enable us to communicate more efficiently. In summary, the communication system of society is both horizontally and vertically differentiated. Horizontally, the different codes can operate upon one another using translations: the information is then selectively provided with new meaning. Vertically, the symbolically generalized media exert control on the lower-level exchanges among agents. The self-organization of the (sub)systems of communication is disturbed because these systems have to be organized in the historical instantiations. The states which occur phenotypically are less complex than the phase space of possible meanings. The meanings develop in a non-equilibrium dynamics, while the observables are based on seeking equilibria between actions and reactions. The globalized system remains structurally coupled to its historical manifestations. For example, the knowledge-based economy can be studied in terms of a triple helix of university-industry-government relations, that is, institutional agencies. However, what these relations mean can only be specified in terms of the fluxes of communication which are enabled and constrained by these networks. Thus, the phenomena provide us with values for the variables (x and y), but we are interested in the fluxes (dx/dt , dy/dt). Shannon's (1948) mathematical theory of communication provides us with a calculus for the case of discrete

events. Unlike most social science statistics this calculus enables us to combine the multivariate perspective of studying complexity at each moment of time with the longitudinal perspective [...]. Furthermore, the relational perspective (graph analysis) has to be combined with the positional one (factor analysis). Meaning is provided positionally, while the communication systems operate in terms of relations. A network is constructed in terms of relations, but it can be expected to contain an architecture. Reflexively, this architecture can be reconstructed and the events can then be positioned. Empirical studies are selected in relation to the systems-theoretical questions. For example, one can ask when the European monetary system emerged and then also to which extent European network systems can be considered as self-organizing. The non-equilibrium dynamics of self-organization add globalization to the previously stabilized systems. However, neither the stabilization nor the globalization of communication systems can be taken for granted on a priori grounds. Empirical studies enable us to assess, for example, the extent to which the self-organization of a knowledge-based society has taken hold in history. A knowledge-based economy has to recombine three functions in the dynamics of communication: (1) economic exchange relations, (2) novelty production upsetting the equilibria of the market, (3) political (public) and managerial (private) control at the interfaces between the first two mechanisms. The functions are carried by institutions like governments, industries and universities. The networks of relations can be studied in terms of how the communicative functions are fulfilled. When all the functions operate the system can be integrated, but in a distributed mode. A system of three fluxes has no center, but an overlay of communications can function as a hypercycle sustaining problem solution and innovation at lower levels. (Leydesdorff, 2006). Problems can be expected to emerge at interfaces both horizontally and vertically. The problems provide challenges for further development and innovation. For example, the functional layer may be differently organized from the institutional layer. Industries may sometimes take the role of universities, and vice versa. Insofar as interfaces can be optimized, transaction costs can be reduced and niches with competitive advantages can be maintained in an otherwise complex environment (Williamson, 1991). For example, Italian industrial districts have been considered from this perspective. The systems of

communication and control remain structurally coupled to human agency, but the codification in the communications include and exclude people in terms of their communicative competencies. Thus, one can be excluded from the economic exchange mode because one is poor. But one can equally be excluded from scientific exchanges because one fails to have the education required for the participation. The communication systems develop eigen-dynamics using their codes of communication. These non-linear dynamics are stabilized in organizations as quasi-equilibria, but the control mechanisms are at the level of the fluxes of communication. Thus, the self-organization leads to resilience of patterns of communication which cannot be steered without reflection. This requirement of reflexivity makes all systems increasingly knowledge-based. (Leydesdorff 2006; Pitasi 2015). Thus, to draw a distinction implies high horizontal and vertical reflexivity codes. Not that simple nevertheless, in everyday life and common sense semantics the drawing of distinctions is apparently easy if we consider the popularity of hate speeches, for example.

In this paper we propose the triple helix model in a new variant: Citizenship- Education- Cosmopolitanism (CEC) as briefly argued in the prologue to observe and describe the functional differentiation between the political system and the law system about hate speeches and what happens when the political system structurally couples with the education one or when the law system couples with the education one while a structural coupling between the law system and the political system in the complexity scenarios appears both rather unlikely and risky. A clear example of structural coupling between the law system and the education system are the creative commons and scientific citizenship in the evolutionary strategies of the European Union. Which imply the systemic observation and description of the functional differentiation and hetero referential thematization of the “creative commons” designed by L. Lessig among five different systems: Science: by meaning creative commons as a shape to promote knowledge sharing and win/win collaborations in the field of science. Education creative commons meant as both first mission didactics and third mission public engagement and divulgation resource to let knowledge become more and more accessible for descents and everyman at any level, especially online. Economics where creative commons are thematized as an alternative way

to create profit from knowledge in an age of “intangibles”. Law creative commons as a legal shape to redesign the private/public border in intellectual property rights. The key structural coupling is between the science system and the law system as a possible adjacent, in Kaufmann’s terms, for shaping a scientific citizenship, in Nowotny’s terms (2008, pp. 23-24), for a deliberative democracy which is one of the key evolutionary trends of the European Union. This is why we can observe a key shift from the education system to the science one in redesigning a knowledge intensive society and economics. Citizenship in this paper is basically meant as an evolutionary turn from state-national citizenship to a global one whose evolutionary trend can be called hypercitizenship (Paolone and Pitasi, 2013; Pitasi, 2012a; 2012b; 2013b; 2014a; 2015), education is meant both as in the classic school career meaning and as the making of a scientific citizenship (see above Nowotny) and cosmopolitanism is meant as the increase of symbolic variety and memetic recombinations which generates softer and softer differences and a decrease of compact density meant as a lack of variety (Pitasi *et al* 2013d; Pitasi, 2012c; 2013a; 2014b). The most effective example of this memetic recombination is what U. Beck defined banal cosmopolitanism (Beck, 2006).

Imagine an old gentleman from Vienna. Imagine he considers Sachertorte the “typical” Viennese cake. It would represent a rigid, traditional everyday semantics distinction. Then you start to explain to him that in Sachertorte you need chocolate thus cocoa. Cocoa means Americas, which mean Cristopher Columbus who means The Kingdom of Spain which means the Dutch best cooks to reinvent the taste of cocoa as Isabel of Castilla did not love it memetic recombination emerge to show that nothing typical exists and that the “killing compartment” strategies have no ontological reasons but eventually mere material ones much easier to deal with, for example, through financial and currency turbulences turning “war” into an operational selection of the economic system.

3. Education, Cosmopolitanism and the Social Construction of the Other

Since the very basics of interpersonal communication (Goffman, Schutz von Thun), ontology is rather an illusion. For instance when two persons A and B “communicate” the matter is much more complex than what it might seem at a naïf glance. At least four “drivers” are communicating the self observation of A about him/herself, the self observation of B about him/herself, the observation of A about B and the observation of B about A. This is a very, very basic principle but it is clear enough to show the operational closing/opening of a system. The operation is not much different systemically as it is a binary code selection anyway nevertheless the amount of noise to be eventually turned into meaning is much more than in the very basic interpersonal communication example mentioned above. The social construction of the “Generalized Other” though a very basic binary code through a strong cognitive saving to keep noise out is clearly described by the “Jewish Stigmatization” under the Nazi Regime as it is the most popular, tragic example. Nevertheless, as shown by de Swaan (2015), after the 1948 UN Declaration was signed, slaughters, massacres, bombings, mega programs etc. did not quit at all, the eventually became even more violent and technologically intensive but the increasing autoreferential media thematization about a gigantic noise/ meaning selection operations made these killing compartment operations less visible than the Nazi one eventually through an “adding censorship process” as Umberto Eco would have called it.

4. Complexity increase and Stigmatization to “Purify and Destroy”

Eibl Eibelsfeldt (1989) stated that the socio-political-economical and, first of all, technological development of humankind did not match with an equivalent neurophysiological evolution. In brief, Mankind at its emotional and perceptive level did not change from the Paleolithic Age while the challenges humankind has to cope with dramatically changed becoming more and more complex requiring new evolutionary

strategies. That is why the “Paleolithic Man” might not be able to draw the distinction between noise and meaning and (s)he might more likely set that meaning is ontology, so to speak, and noise does not exist. The Paleolithic Man falls in the trap of what Berger and Luckmann called “the world taken for granted” in which the Paleolithic Man believes his ideas and habits are “the reality” and not just a way to construct among other ways. To be must be few, very simple and confirmed by self fulfilling prophecies on a very small scale: his lifestyle is more similar to one of an animal born and grown in captivity totally unaware of the wider and wilder world outside. His very limited cognitions and his standardized perceptions and emotions make him live any little change as a state of shock and then the denial of noise begins and its most violent shapes it leads to oversimplify by purifying and destroying.

The emergence of the evolutionary trend named hypercitizenship can be a useful tool to downgrade the risk of the “Purify and Destroy” (Sémelin, 2007) effect stigmatized by the killing compartment logics. The key theoretical assumption is that the multidimensional conceptualization of hypercitizenship is the autopoietic and self-referential way in which the organized and globalized social system is redesigning and reconfiguring itself beyond the old neo-feudal scenario of social actions mirrored by the methodological nationalism of old fashion social sciences. We sketched the conceptual emergence of hypercitizenship out by designing a multidimensional convergence among different kinds of citizenship: cosmopolitan (Beck, 2006), scientific (Nowotny, 2008), societarian (Donati, 1993) and entrepreneurial (evolved by Pitasi reinterpretation the work of Audretsch who, in fact, deals with “entrepreneurial society”, not entrepreneurial citizenship). The concept of cosmopolitan vision is a key contribution by Beck, (2006) who states that: «Cosmopolitanism [...] is a vital theme of European civilization and European consciousness and beyond that of global experience (Beck, 2006, p. 2). The author brilliantly adds: «What do we mean then by the cosmopolitan outlook? Global sense, a sense of boundary lessness. An everyday, historically, alert, reflexive awareness of ambivalence in a milieu of burying differentiation and cultural contradictions» (Beck, 2006, p. 3). As a matter of fact, the cosmopolitan outlook can be described as follows: «As a counter-image to the territorial prison theory of

identity, society and politics we can provisionally distinguish five interconnected constitutive principles of the cosmopolitan outlook. First, the principle of experience of crisis in world society. The awareness of interdependence and the resulting civilizational community of fate induce by global risks and crises which overcomes the boundaries between internal and external, us and them, the national and the international. Second, the principle of recognition of cosmopolitan differences and the resulting cosmopolitan conflict character and the (limited) curiosity concerning differences of culture and identity. Third, the principle of cosmopolitan empathy and of perspective taking and the virtual interchangeability of situations (as both an opportunity and a threat). Fourth the principle of the impossibility of living in a world society without borders and there consulting compulsion to redraw old boundaries and rebuild old walls. Fifth the *mélange* principle: the principle that local, national, ethnic, religious and cosmopolitan cultures and traditions interpenetrate, interconnect and intermingle-cosmopolitanism without provincialism is empty, provincialism without cosmopolitanism is blind» (Beck, 2006, p. 7).

Nowotny (2008) provides the key concept of scientific citizenship, which we consider pivotal in linking *Globus* and *Mundus* as the scientific citizen becomes the user both of the *Globus* platform and the *Mundus* catalog by selecting those rights which fit more with his/her wealth, health and well being needs¹. Radical technological innovation powerfully reconfigures individual, personal *Lebenslauf* and systemic organization, for example the agriculture (as GMOs) and the energy agenda. This shift dramatically provokes strong public opinion debates, and their “consequences” easily witness that emotional, incompetent reactions and attitudes simply generate a growing public misunderstanding of science, technology and their socio-economical impacts. That is why scientific citizenship is emerging faster and faster to solve the “incompetence” problem. Scientific citizenship is reconfiguring itself and is emerging in the shape of societarian citizenship (Donati, 1993), inspired by the autonomous, self-organizing “spirit” and mood of the most competent and

1 From this point of view, law becomes one of the *à la carte* products which can be bought by browsing a global “catalogue” (we call *Mundus*) surfing on a technological global platform (we call *Globus*) of which the Internet is the best metaphor and which can be seen as the most important platform for convergence which cannot survive outside a global network. developments and as a driver of numerous, key, changes (see Pitasi, 2012).

skilled knowledge-based elites, educated according to the most self-reflexive, relational, responsible freedom. These elites will be the wide horizon leaders also called hypercitizens, serving as “drivers” of new cycles and trends, whose trajectories follow the $S=R/W$ formula where the supply/demand matchmaking between RS and LSA is in real time in the Time Zero of Desire (TZD) scenarios. Nowotny clearly states that: «The convergent technologies based on successful connections among the biological, informational, nano, and cognitive sciences open up a broad field in which brain and matter, body and environment can interact in a controlled fashion. These and other transformations that spring from science and technology touch on humanity’s self-understanding as much as they change our social life together» (Nowotny, 2008, pp. 12-13). Nowotny’s key contribution evolves into the concept of scientific citizenship, which features a knowledge-based society; as a matter of fact, she states: «Scientific citizenship comprises right and duties and asks about both the functions that expanded concept of citizenship could fulfill in social integration and also the duties that arise from it for citizens as well as for political institutions and administrations» (pp. 23-24). What’s next, then? The future we are now face relies on innovation under conditions of uncertainty (Rogers, 1962). This cannot be equated with Leydesdorff, lack of knowledge quite the contrary. Uncertainty arises from the surfeit of knowledge, leading to too many alternatives, too many possible ramifications and consequences, to be easily judged (p. 116). Thus: «Science and technology cross the boundary between the present and the future with a certain ease and thereby move the future closer the present. Nonetheless the future seems fragile. The loss of temporal distance blurs the difference between what is technologically possible and what is already present in the laboratory, between imagination and reality, which is often a virtual reality. Having lost all utopias, the future presents itself as a sketch of technological visions that block out the social knowledge that is needed to live in a scientific-technological world and to feel well in it» (pp. 155-156). The RING Singularity is a very clear example and case of the evolution of scientific citizenship as a structural coupling between the education and the science systems. It means that in the structural coupling, the educational science systems align their communication process at least open rationally as clearly described and visualized by Leydesdorff (1995, pp. 558-559).

Entrepreneurial citizenship is, in a nutshell, the capability of the citizen to be aware that s/he constructs the world day by day so that waiting and expecting are self defeating mind sets while the challenge is to design, model and construct every day what ever the job s/he does.

The Lobbying citizenship, the fourth and last dimension of hypercitizenship, is the functional equivalent of the previous one but focused on the not for profit third sector and /or on rights.

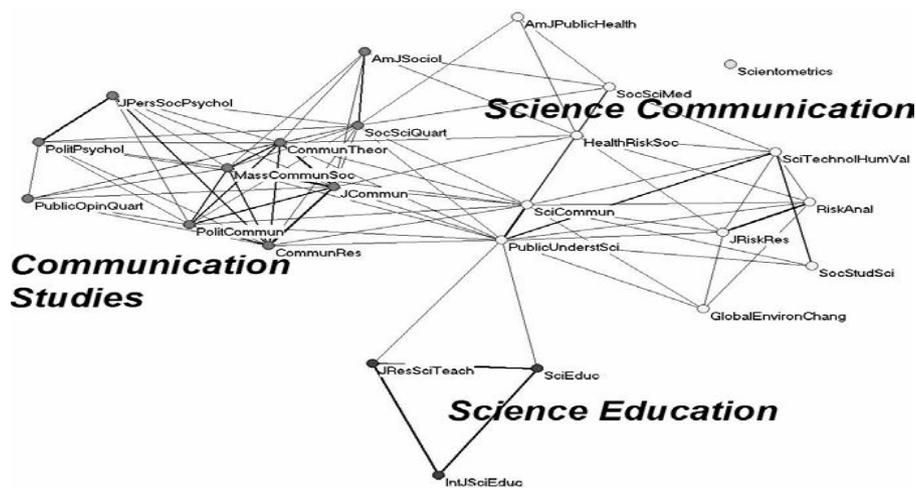


Fig. 1. See Leydesdorff, 2006.

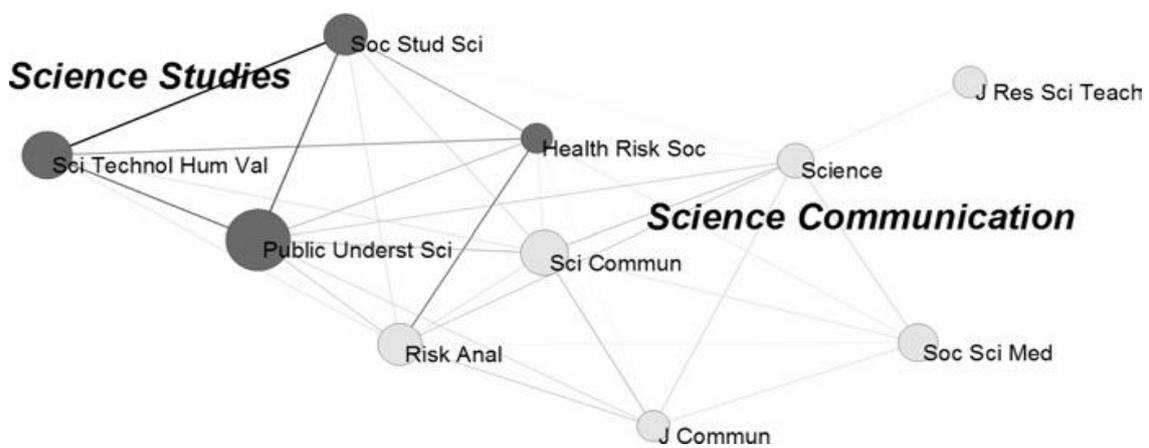


Fig. 2. See Leydesdorff, 2006.

5. The Triple Helix toolkit

The Amsterdam sociological school founded by Elias, considered social sciences research as a four step process from the smallest (psycho-social) through the micro and meso to the biggest, the macro and this four step pattern is also adopted by de Swaan (2015).

At a very first glance, this four step process might appear as the dynamic version of Parsons' LIGA as this process might seem a whole / part one. The re-entry of the triple helix in this process might emphasize the recursive pattern of the triple helix itself in to each step to draw the key distinction that each step is a self referential rank for which recursivity is the chance for alignment but this alignment is neither ontological nor to be taken for granted. The triple helix reintroduces complexity where the process might seem too basically linear.

The Triple Helix variant we present here is composed of Citizenship- Education- Cosmopolitanism where the structural coupling between the education system and the science system is shifting higher educational policies into the science system as described above. This variant sets citizenship enlargement as a key function to skip the “Purify and Destroy Trap” and this enlargements holds on through four key variables (Pitasi, 2012; 2013; 2014; 2015):

- Cosmopolitan Citizenship
- Scientific Citizenship
- Entrepreneurial Citizenship
- Self Organizational Lobbying Citizenship

Education, as shown above, is the second key function of the helix nevertheless education is not meant as the factory of the formalized career;, education, higher education at least, is turning more and more into the shaping of scientific citizenship to be admitted to the deliberative procedures of democratic participation. A voter cannot cast his/her vote in a referendum about GMO, Biotech, nuclear energy or Euro currency policies merely on his/her emotional, Paleolithic mood otherwise the result will be a difference which does not make the difference just like in the Brexit case. Pro Brexit voters were emotionally focused on keeping migrants out, for better and for worse, ignoring the Law system procedures to

exit the EU now they are much more aware of it and Scotland, Northern Ireland and eventually London into a City State upon Sadiq Kahn's proposal are considering to fully join the EU also adopting the euro. Cosmopolitanism is the third key function of the helix and a re-entry from the citizenship function: cosmopolitanism is both a way to enlarge citizenship policies and to redesign educational policies thus it is a kind of re-entry of the previous two functions into a cosmopolitan policy itself by the political system to correct and select its internal, irritating and resonant noise (hate speeches, for example) to skip self imploding (for the political system) selections.

6. Epilogue: A New Triple Helix

The twofold aim of this paper was and is to expand the strategic application field of triple helix as a problem setting and problem solving tool and to use it to face one of the key social challenges of our times: the increasing diffusion of the killing compartments worldwide and their potential return also in Western areas through the most violent shapes of populism.

The problem set in this paper is that traditional political operations might fall into the Paleolithic trap of extreme cognitive saving by mistaking incapability of selecting noise and the denial of noise exposing the political system to self feeding and self implosion. The problem solving provided here is the re-entry of evolutionary complexity into policy modelling through a specific variant of triple helix described above. The HSREC (see Pitasi, 2010) Age evolves through spiral shaped turbulences of different helices. In this paper we focused on a specific helix Citizenship- Education - Cosmopolitanism to understand what risk reduction policies can be adopted and implemented to prevent the re-entry of hate speech stigmatizations and its most radical shape of killing compartmentalization. As the Purification stigma is the key pillar of radicalized destruction and mass murdering, an increase of variety and complexity is the mainstream and key trend to redesign social density so that the social construction of the Other were always a soft blend and not a rigid

and neat stigmatization.

References

- Beck U. (2006). *Cosmopolitan Vision*. Cambridge: UK Polity Press.
- de Swaan A. (2015). *Reparto assassini La mentalità dell'omicidio di massa*. Bologna: Piccola Biblioteca Einaudi.
- Eibl Eibesfeldt I.(1989). *Human Ethology*. New York: Aldine De Gruyter.
- Leydesdorff L. (1995). *The Challenge of Scientometrics. The Development, Measurement, and Self-Organization of Scientific Communications*. Leiden: DSWO Press, Leiden University.
- Leydesdorff L., Oomes N. (1999). Is the European Monetary System Converging to Integration? *Social Science Information*, 38, 1: 57. DOI: 10.1177/053901899038001003.
- Leydesdorff L. (2000). Are EU Networks Anticipatory Systems? An Empirical and Analytical Approach. In Dubois D.M. (ed.), *Computing Anticipatory Systems: CASYS'99*. New York: American Physics Institute.
- Leydesdorff L. (2003). The Construction and Globalization of the Knowledge Base. *Canadian Journal of Communication*, 28, 3: 267.
- Leydesdorff L. (2006). The knowledge based economy and the triple helix model. In Dolfsma W., Soete L. (eds.), *Understanding the Dynamics of a Knowledge Economy*. UK: Edward Elgar Publishing.
- Luhmann N. (1996). *Social Systems*. Stanford: Stanford University Press.
- Luhmann N. (1997). *Die Gesellschaft der Gesellschaft*. Frankfurt am Main: Suhrkamp Verlag.
- Luhmann N. (2010). *Soziologische Aufklärung*. Opladen: WestdeutscherVerlag.
- Luhmann N. (2013). *Theory of Society*. Stanford:University Press.
- Nowotny H. (2008). *Insatiable Curiosity-Innovation in a Fragile Future*. Cambridge: Mass./ London: MIT Press.

- Nowotny H., Testa G. (2009). *Die glaesenen Gene*. Frankfurt am Main: Suhrkamp Verlag.
- Paolone G., Pitasi A. (2013). *Comparing Systemic Business Paradigms: Chance, Complexity, Communication and Evolutionary Strategies*. Saarbrücken: LAP LAMBERT Academic Publishing.
- Pitasi A. (2012a). *Ipercittadinanza. Strategie sistemiche e mutamento globale*. Milano: FrancoAngeli.
- Pitasi A. (2012b). Hypercitizenship and the Management of Genetic Diversity: Sociology of Law and the Key Systemic Bifurcation Between the Ring Singularity and the Neofeudal Age. *World Futures Journal*. 68, 4-5: 314. DOI: 10.1080/02604027.2012.679571.
- Pitasi A. (2012c). WCSA as an Hypercitizenship Lab. *Nuova Atlantide. Rivista di Scienze della Natura, Umane e della Complessità*, 3: 25.
- Pitasi A. (2013a). A systemic sociological theorem of global evolution. *Revista de Direito Econômico e Socioambiental*, 4, 1 92. DOI: 10.7213/rev.dir.econ.socioambienta.04.001.AO05.
- Pitasi A. (2013b). The Hypercitizenship Challenge to Methodological Nationalism. *REDES Revista Eletrônica Direito e Sociedade*. 1, 1: 7.
- Pitasi A. (2014a). Designing hypercitizenship methodologically. *Revista de Direito Econômico e Socioambiental*, 5, 1: 3. DOI: 10.7213/rev.dir.econ.socioambienta.05.001.AO01.
- Pitasi A. (2014b). The Sociological Semantics of Complex Systems. *Journal of Sociological Research*, 5, 1: 203. DOI: 10.5296/jsr.v5i1.5953.
- Pitasi A. (2014c). System. In Ruzzeddu M. (ed.), *Keywords of Systemic Vision*. Saarbrücken: LAP LAMBERT Academic Publishing.
- Pitasi A. (2015). A Systemic Approach to Hypercitizenship. In Bonazzi M., Di Simone V., *Redesigning Worldwide Connections*. Newcastle: Cambridge Scholars Publishing.
- Pitasi A., Mancini G. (2013). *Systemic Shifts in Sociology*. Saarbrücken: LAP LAMBERT Academic Publishing.
- Shannon C.E. (1948). A Mathematical Theory of Communication. *Bell System Technical Journal*, 27: 379 and 623. DOI: 10.1002/j.1538-7305.1948.tb01338.x.

Rogers E. (1962). *Diffusion of Innovation*. New York: The Free Press.

Schuermann R. (1995). *Dai principi all'anarchia*. Bologna: Il Mulino.

Williamson O. (1991). *L'organizzazione Economica. Imprese, mercati e controllo politico*.
Bologna: Il Mulino.