Risk, Social Networks and Social Movements

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Describing the risk induced individualization thesis, Ulrich Beck claims that "it must be conceived of as the beginning of a *new mode of societalization*, a kind of 'metamorphosis' or 'categorical shift' in the relation between the individual and society" (Beck, 1992, p. 127). The effects of this theoretical recapitalization are multiple in the current era of reflexive modernity. On the one hand, individuals are compelled to become themselves the centers of action, to risk to write their own 'reflexive biographies' and to overcome the overarching structural overdetermination of the social. On the other hand, society as the material manifestation of social structures and social networks, now ubiquitously, pervasively and transversally imbued by risk, "*must* be individually manipulated as a 'variable'" (p. 135).

But how much has sociology reflected such a risk-induced 'metamorphosis' of its subject matter? Certainly, there have been some strong pleas toward a social transformation of risk analysis (Short, 1984) and a critical sociology of risk (Tierney, 1999). Although at a slow rate, even qualitative methodologies have been attentive to this transformation – the recent developments in the biographical research of risk (Zinn, 2004) is a good example. However, from the sociology and history of science and STS (Science & Technology Studies) we know that 'paradigm shifts' are painful processes involving not only socio-historical characters, modalities and contexts but also controversies and reconfigurations in and among diverse standings, perspectives, assumptions, epistemic practices and cultures. From this point of view, the question would be: How much have the old sociological divides (e.g., micro-macro, structure-agency, structuralism-individualism, quantitative-qualitative, subjective-objective, explanation-interpretation, nature-society etc.) been informed and reconfigured by the consequences of the modern upheaval of risk in society? Since, it would be pointless to try to answer all these questions, what we are going to do in the sequel is to provide a brief sketch of what seems to be changing wih regards to risk in just two sociological areas: social networks (as theories of relational agency) and social movements (as theories of collective behavior).

There is no doubt that the emergence of risk in modernity has shaken up the rationality assumptions of classical theories of collective action (Olson, 1965): the 'rational actor paradigm' has been extensively criticized in current risk research (Jaeger *et al*., 2001).[1] Furthermore, a large body of critical studies of agency has shattered the certainties of the

[1] At the same time, the 'resource mobilization' approaches in social movements theories have been targeted by many critics (Piven & Cloward, 1992; Kitschelt, 1991; Jasper, 1997). Similarly, the relational structural paradigm of social networks has been equally criticized (Brint, 1992; Emirbayer & Goodwin, 1994). Moreover, discussions on controversies and reassessments of the rational choice paradigm have been already a commonplace in the economic and political science literatures (Lane *et al*, 1996; Green & Shapiro, 1994).

classical 'structurationist' theories of duality (Giddens, 1984; Sewell, 1992). For instance, some theorists (e.g., Urry, 2000, pp. 206-7) come to contest the assumption that purposeful action could be merely enabled and constrained in and by the social network (or 'society' as a structure of recurrently reproduced patterned relationships), in which actors were embedded. The complexity of the situation can be seen in the following two examples of interpretive social networks theories as sociological alternatives to the 'dominant' rational (game-theoretic) paradigm.

Arguing against all rational choice notions of strategic behavior, in their study of the rise of the Medici in early Renaissance Florence, John Padgett and Christopher Ansell (1993) have developed the concept of 'robust action.'[2] In this situation, the goal of actors is to maintain their own high multivocality, flexibility and freedom of choice as long as possible, while at the same time they are trying to narrow the options of their opponents. Therefore, certain actors positioned inside an appropriate web of multilateral influences can maintain their 'flexible opportunism' by tactical maneuvering of their opponents. "Locked-in commitment to lines of action, and thence to goals, is the product not of individual choice but at least as much as others' successful 'ecological control' over you" (Padgett & Ansell, 1993, p. 1264). This is why "[a]mbiguity and heterogeneity, not planning and self-interest, are the raw materials of which powerful states and persons are constructed" (p. 1259). Similar observations have been made in games like chess, where ignorance is unavoidable. Eric Leifer (1991) has found in his work on tournament chess games that skilled players differ from novices not so much in that they are able to see more moves ahead but rather in their ability to keep their own options open while at the same time downsizing the range of their opponents' viable choices. However, playing with an equal partner, skilled players are locked in a positional balance and sustain ambiguity in their play ('content ambiguous action' in Leifer's terminology).

Although quite different from the medieval Medicean party dynamics and chess playing, robust action might foster in situations of risk too, since then the involved actors are deemed to share the same levels of ignorance and, thus, to be locked in similar niches of ambiguity. Necessarily, then, the 'variability' of society during the era of 'fluid modernity'[3] is attained through discursive constructions and communicative interactions

[2] In another vein, under the label of 'robust action,' Eccles & Nohria (1992) have attempted to envision the pragmatic essence of the managerial job ("getting things done"). According to such a scenario, although the short-term intensions and goals that actors develop would be conditioned (both constrained and enabled) by the structural determinants of action, in the long-term, they would be set and modified in a culturally-historically contextual dynamic social process, which cannot be captured by the simplistic assumptions of any model of rational action.

[3] In *Liquid Modernity* (2000), Zygmunt Bauman investigates the processes of liquefaction enacted by modernity from its origins up to the present. In the first stages of modernity, the desire to 'melt the solids' was motivated by the need to make a brave new world cleared from all deficient solids inherited from premodern times. The way this early modern plan of 'melting the solids' was implemented was by freeing the spirit of instrumental rationality and ascribing the determining role to the economy. But the result was that the sedimented new order was more 'solid' than the replaced orders "because – unlike them – it was immune to the challenge from non-economic action" (p. 4). The new situation was limiting the individual freedom for choice and action, Bauman holds. Therefore, in the present stage of 'fluid modernity,' it is the turn of patterns of dependency and interaction to be liquefied. These are the "bonds which interlock individual choices in collective projects and actions – the patterns of communication and co-ordination

that actors are performing, reflecting and coping within risks, uncertainties and indeterminacies of their modern life-chances (Halfmann & Japp, 1993).[4] However, risk and society (social networks in our case) should not be seen to stand to each other in unidirectional, static and substantialist terms. On the one hand, social interaction flowing through the given tracks of concrete social networks can be an important determinant of risk perceptions and accepted strategies of risk prevention, as the research on social networks and HIV/AIDS has shown (Friedman & Aral, 2001; Behrman *et al*., 2003). On the other hand, we have the example of people with genetic diseases and severe disabilities in France, who are mobilized in dynamic patients organizations that even take strategic decisions concerning research on their diseases (Rabeharisoa, 2003 & 2005).

In any case, if risk perceptions, prevention and mobilizations are to be understood as forms of robust action,[5] what we need is a coupled dynamic conception of risk and social networks. This is a conceptual framework, in which social networks cannot not be seen merely as loci of risk but rather as composed of thick relations of communicative interaction constituting those socio-cultural processes through which risk is constructed (Tulloch & Lupton, 2003). In fact, such a perspective has been carried out since the 1990s by the innovative work in the sociology of culture undertaken after Ann Swidler's initiative to form a working group on 'meaning and measurement' within the American Sociological Association (DiMaggio, 1994; Jepperson & Swidler, 1994). The key to this novel conception of culture and society is DiMaggio's interpretation of networks as "crucial environments for the activation of schemata, logics, and frames" (1997, p. 283). According to Paul DiMaggio, structure exists simultaneously through concrete social relationships coalescing actors and through semantic or discursive networks linking cognitive (more or less) and cultural content, among which actors are creating their 'ties,' as they are striving to make sense of this content (p. 281-3). He believes that such abstraction and transposition from one domain to another is due to the existence of a 'structure mapping,' i.e., some form of a "content-related domain-specificity" (p. 281) or a structural homology between the cognitive and semantic network of the socio-cultural representations (through and upon which, in particular, risk dwells) and the multiple overlapping social networks, in which actors are embedded in modern life.

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between individually conducted life policies on the one hand and political actions of human collectivities on the other" (p. 6). Thus, Bauman believes, the challenge that free individuals are confronting is how to use their new freedom in order to find the appropriate niche where they could settle through conformity.

[4] According to Dahrendorf (1979), it is the relative balance between two components what constitutes actors' life-chances: ligature (collective identity) and life-choices (freedom). Consequently, the reconfiguration of collective identities is not just a matter of political opportunities (as structural determinism would prefer) but it corresponds to (both triggers and depends upon) all available affordances, allowing for shifts in individual options to occur. However, in the perspective of social networks, such morphogenetic affordances are always collectively shaped (as outcomes of influence processes or amalgamations of shared values, norms or institutions).

[5] Harrison C. White (1981, 1995b & 2002) has advanced a similar argument in his study of production markets. In particular, he has proposed that production markets can be analyzed as induced role structures, in which each actor operates in an optimizing mode within a niche, the choice of which is implemented by a non-optimizing mode in the context of the specific pattern of social relations (the embedded social network). In this way, "firms minimize uncertainty by forming a market as a collection of niches based on signals observed in their commitments" (2002, p. xiii).

Hopefully, the theoretical presuppositions of such a link between culture (risk) and structure (social networks) have been already facilitated by the 'cultural turn' that certain theories of social networks have started following in the 1990s and afterwards. The origin of this turn comes from the sociologist's Harrison C. White *Identity and Control* (1992), where he claims bluntly that "a social network is a network of meanings" (p. 67) and that "stories describe the ties in networks" (p. 65). Thus, White and co-workers (White, 1992 & 1995a; Mische & White, 1998) have put forward the idea that it is through "bundles of narratives and discursive signals" that "*network domains*" are defined as "specialized fields of interactions characterized by clusters of relations and associated sets of stories" (Mische, 2003, p. 264). Network domains (that White often abbreviates as 'netdoms') are hybrid constructions, in which: "Networks catch up especially the cross-sectional patterns of connection and resonance in interaction. Domains catch up especially the meanings and interpretations which are the phenomenology of process as talk. These two, networks and domains, come together for the type of tie and … for construction of social meanings and times" (White, 1995a, p. 1038). By incorporating both a temporal and a relational dimension, the conceptualization of network domains contributes to a reconfiguration of the study of identity formation through *narratives* (Somers, 1992 & 1994). In such a setting,[6] actors are continually 'switching' back and forth throughout multiple cross cutting networks, stories and discourses that constitute their everyday lives. 'Publics' are the shared space-times or the are(n)as that facilitate such transitions among different networks and stories. In them, the multiple social times and meanings are suspended and the corresponding network domains are decoupled from each other, thus, forming some sort of a 'temporary bubble' (White, 1995a, p. 1056).[7] A good example of such switching dynamics consists of the case of conversational interactions among participants who may sustain their own network relationships. Formal network-analytic and statistical modeling (Gibson, 2000 & 2005) reveals interesting patterns of how participants take the floor ('taking turns') in the presence of hierarchical (superior-subordinate) and horizontal (friendship and co-working) network commitments and what sort of identity transitions ('participation shifts') may emerge from one speaking turn to the next ('talking ties').

However, beyond their own complex 'chemistry' (their socio-historical and cultural co-articulations), sometimes, social networks possibly become themselves components of certain collective behavior phenomena and, in particular, social movements. Typically, the latter may emerge under such circumstances as when the goals of techno-economic progress in modernity flare up acute conflicts and, thus, trigger civil responses in some

[6] Harrison C. White (1992, pp. 102-115) uses the imagery of 'fluidity' to represent this setting. Fluids being "failed networks" can come from the liquidation of network (or solid) structures. White argues that such a 'phase transition' can be produced by two interacting kinds of uncertainty. On the one side, there is ambiguity, designating uncertainty in purely cultural context. On the other side, there is what White calls 'ambage,' designating uncertainty in purely social-structural contexts. Ambiguity is about fuzzy meanings and interpretations while ambage "concerns the concrete world of social ties, in networks of ties and corporates among nodes" (p. 107). According to White, "a polymer gel is more like social networks. These very long molecules reptate through messy, inhomogeneous environments which include other such chains and induce new ties" (p. 70). "We are creatures living within social goos, shards, and rubbery gels made up by and of ourselves" (p. 337).

[7] Furthermore, White (1995a) introduces the idea of 'Bayesian forks' from statistics in order to capture the uncertainty or ambiguity that arises and is managed at network switchings.

form of collective action. In the context of risk society, such processes are clearly depicted by Ulrich Beck: "The double face of 'self-annihilating' progress … produces conflicts that cast doubt on the social basis of rationality – science, law, democracy" so that "society is placed under permanent pressure to negotiate foundations without a foundation" and "experiences an institutional destabilization, in which all decisions – from local government policy … to … law and technological development – can suddenly be sucked into fundamental political conflicts" (Beck, 1999, p. 66). In other words, given the 'self-annihilating' and 'destabilizing' role played by ST (Science and Technology) during modernity, we can talk about 'ST-related social movements' (STSMs), in which issues arising from and claims targeted to technoscience (ST) happen to play a salient role. So, in what follows, we would like to conclude by giving a brief overview of certain aspects and typologies of STSMs. Note that we are not covering and it was beyond our aims to explore the vast literature around social movements in the context of environmental activism (Jamison, 2001; Tesh, 2000; Frickel, 2004).[8] Two other noticeable omissions that we have made concern the work on AIDS activism (Epstein, 1996) and on patients' organizations (Rabeharisoa, 2003 & 2005), which has been already mentioned above.

Risk is usually understood as an unintended consequence of social action (Jaeger *et al*., 2001, p. 139). In addition, admitting that there exist many different conceptualizations of risk corresponding to different cultures, Jost Halfmann (1999) distinguishes the risk cultures according to their proximity to the dominant social practice of risk taking. In this sense, he considers that 'risk-related social movements' (RSMs) are examples of a peripheral risk culture, since they resist technoscientific risk, which is put forward by the dominant center of society. Drawing upon Dahrendorf's (1979) decomposition of life-chances in ligatures and life-options, he claims that modern RSMs are addressing threats to life-chances (which have been aggravated by technoscience) by acclaiming individual self-empowerment through participation in egalitarian activities. Furthermore, Halfmann (1988, 1999) explores the idea that there exist different representations of risk-avoidance across different social movements (making a trans-national comparison for the anti-nuclear movements in the USA and Germany).

Phil Brown, Stephen Zavestoski, Sabrina McCormick and co-workers have been studying during the last years an important example of RSMs, the 'health social movements' (HSMs), which are focused and organized around issues of health (Brown *et al*., 2004). They consider HSMs subdivided in three categories: (i) 'health access social movements,' (ii) 'constituency-based HSMs,' which address health inequality and inequity based on race, ethnicity, gender, class and/or sexuality differences, and (iii) 'embodied HSMs' (EHSMs), which address disease, disability or illness experience. They restrict their study to the case of EHSMs, because they appreciate that the latter (1) focus on the biological body, (2) challenge directly the existing medical/scientific knowledge and practice and (3) often lead to hybrid organizations composed of activists,

[8] Moreover, we want to avoid entering the discussion of whether STSMs constitute 'new social movements,' due to the theoretical difficulties of the latter concept – a concept extensively reviewed in the social movements literature (for instance, Melucci, 1980; Laraña *et al*., 1994; Pichardo, 1997; Halfmann, 1988).

patients and scientists/health professionals. Drawing on theoretical work on collective identity (Poletta & Jasper, 2001) and oppositional consciousness (Groch, 1994; Mansbridge & Morris, 2001), Brown and co-workers arrive at a notion that they call 'politicized collective illness identity.' Furthermore, adapting the STS concepts of 'boundary objects' (Star & Greisemer, 1989) and 'boundary work' (Gieryn, 1983), they envision EHSMs as 'boundary movements.' As such, they argue that EHSMs (a) attempt to reconstruct the demarcation lines between science and non-science; (b) blur the boundary between experts and lay people; (c) transcend the usual limits of social movements activity; and (d) overlap different social worlds and, so, may be used by different parties. Finally, Brown and co-workers provide a concrete case study with the analysis of the environmental breast cancer social movement.

The last type of STSMs that we will examine is the notion of 'technology- and product-oriented social movements' (TPSMs), which has been elaborated by David Hess (2004, 2005). Hess considers TPSMs as mobilizations in the civil society sphere that are in general linked with private-sector firms too and support an alternative technology/ product together with the corresponding policies. Hess argues that in the context of TPSMs the following three hypotheses of processes are raised: (i) The 'private-sector symbiosis' hypothesis, which brings TPSMs mobilizers close to inventors, entrepreneurs and industrial reformers; the theoretical roots of this symbiosis originate from the literature of industrial innovation and the theory of ecological modernization (e.g., Mol, 2000). (ii) The 'incorporation and transformation' hypothesis, which postulates the absorption of the innovations of the TPSMs by established industries through a simultaneous restructuring of the design of the technology/product to become more compatible with existing processes/products and more corporately profitable; in the case of the environmental movement, the first part of this hypothesis, the incorporation process, comes from Jamison (2001). (iii) The hypothesis of 'object conflicts,' which suggests that, in the course of implementation of the previous hypothesis, there is a greater diversification of the technology/product that implies a possible development of conflicts among various actors over the range of the technology/product and issues of its design; the concept of object conflicts draws upon the STS analysis notion of 'boundary objects' (Star & Geisemer, 1989) and the STS policy analysis notion of 'boundary organizations' (Guston, 2001). Furthermore, Hess (2005) focuses on the special case of nutritional therapies for cancer and he compares this case with two other examples of TPSMs: renewable energy technologies and the open-source software movement.

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