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Harrison White’s Notes on the Constituents of Social Structure is one of those rare texts (at least in the social sciences) which can influence generations of scholars without ever being published – that is, in a certain sense without officially existing. Grey literature, as it is called, which can nevertheless sometimes conceal and preserve authentic pearls of knowledge. They simply circulate through networks and generations, conserved as precious objects by their lucky owners, leaving traces of their existence and movements only in quotations, footnotes and bibliographical references. And talk.

To be sure, after more than 40 years of clandestine life, at last these Notes have been published, but in a textbook reader and, above all, in an incomplete and apparently not always trustworthy version.¹ This is one of the reasons of the interest of “Sociologica” in publishing it – if not for the very first time, at least for the first time in the form the text deserves. Which for this journal means not only in its original form (so original that we have decided to publish its set of figures exactly as they were in the original mimeo), but also with some useful critical apparatus: a

¹ See Calhoun et al. [2007, 171-181], where you can find an abridged version of Notes under the title “Catnets” dated 1966, which is similar to the 1965 version here reproduced (and usually quoted), but deprived of some paragraphs and with some possible mistakes in the order of presentation. An electronic version of a copy of the original 1965 mimeographed text is downloadable in the Institute for the Social Network Analysis of the Economy website (www.isnae.org), together with some other relevant materials from that same period. It is a real pity that these materials are scarcely known outside the world of network analysts. These notes are intended as a first contribution to their diffusion beyond the circles of aficionados and specialists, while offering a perspective on the text which is I suspect relatively heterodox inside those same circles.
preface penned by White himself over four decades after the first drafting of the text, and a post-scriptum written by one of the most influential students of White, who happened to be his teaching assistant at the time – the sociologist Michael Schwartz.

While leaving their authoritative words to accompany the reading of these Notes, what I would like to do in this short introduction is just to provide some information and suggestions (sometimes provocative) which could be useful to frame them while helping the readers of today to find their way in a text that retrospectively could be read in many different manners and through different (even looking) glasses.

The idea White develops in this early text (he was 35 at the time) is a simple and powerful one: to bring together the notions of network (abridged *net*) and category (abridged *cat*) in a new concept, *catnet*, which can be defined as any set of individuals comprising both a category and a network. In other words, a set of persons constitutes a catnet in as much as they are both a category (“a bunch of people alike in some respect”) and are linked by some kind of interpersonal bond. Therefore, at the center of this text is the exploration of a duality: that of relations and categories, i.e. classificatory concepts. But this very general idea is embedded in an array of other ideas and conceptual definitions regarding what a network is and how we can identify it, what a category is and how we can represent it (mainly in network fashion), which kinds of network and categorical systems are possible (here we find respectively two and four types: balanced net systems and limited net systems, and ad hoc, generic, cross-tabulation and contextual categorical systems), how catnets evolve from simpler systems of both network kind (*net*) and categorical kind (*cats*) and – finally – how institutionalization affects the evolution of a net, giving life to what White calls a “frame,” that is a “cultural definition” of a net (something which, argues White, has links with both balanced net systems and above all contextual category systems). We can visualize the content of Notes as in Figure 1.

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2 According to mathematical graph theory, a *net* is a finite set of points linked, or partly linked, by a set of lines (called arcs). White takes the noun but gives it a new sociological meaning, stipulating that “a net is more than an observable recording of a set of relations between pairs of people” even if it is “less than a map known and attended to by any or all of the people in the net.” According to White’s definition, “the persons in the net accept the idea that they have meaningful indirect relations with anyone paired with a man with whom they are paired,” even if “the many possible indirect connections among people […] are not recognized as falling into distinct new types of relation with their own definitions and contents, i.e. the indirect connections are not ‘institutionalized’” (my italics). As I read this, White adds a strong subjective dimension to the mathematical concept in order to “make it more useful as a concept in sociology.” And as we will see, institutionalization leads to greater complexity, asking for analytical concepts which are not found in network theory, such as “frame.”

3 This duality has been subsequently taken up, reinterpreted (as involving “persons” and “groups” instead of relations and categories) and formally developed by Breiger [1974]. For a further development, more sensitive to cultural categories than to social categories (e.g. groups), see Mohr and Duquenne [1997].
In order to appreciate the conceptual novelty and historical meaning of these Notes, it is worth recalling that when they were drafted, sociology – and American sociology above all – was still under the hegemony of Parsons and his structural-functionalist paradigm, partly tempered by the more structuralist approach followed by Columbia-based sociologists Merton (himself a student of Parsons) and Lazarsfeld. White had nothing of relevant to do with Parsons and his school at the time, apart from being in the Department Parsons contributed to build. A physicist by formation (his first PhD was in theoretical physics at MIT), and a student of organizations at Princeton (for his second PhD, this time in sociology), in the early Sixties White was still an outsider – or a maverick – to most sociology of his days. His intellectual background was not functionalism but mathematics and cybernetics; a sophisticated

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4 Even if hegemonic, Parsons and structural-functionalism were far from being free from criticism. The critique against the “oversocialized conception of man” dates back to the very early Sixties [Wrong 1961]. As is well known, this was very influential in the development of one of the main outcomes springing out of Harrison White’s teaching in Harvard, the so-called new economic sociology, mainly thanks to the imagination and willingness of a student of his, the well-known Mark Granovetter [see Granovetter 1985]. So, when reading attacks against the attitudes and values approach, keep in mind that this was already in the air in certain sociological circles. This criticism, it is worth remembering, set the ground for the strong anti-cultural bias which marked both network analysis and economic sociology qua structural sociology in the Seventies and Eighties. But was also a catalyst for the more politically oriented (and radical) sociologies which emerged in the sixties – to which White’s new sociology was not totally alien (as Schwartz explains in his Post-scriptum recalling the “structure of feeling” which animated White’s lessons).
political scientist from Europe like Karl Deutsch and a heterodox political scientist turned economist like Herbert Simon (and neither Parsons, nor Merton or Lazarsfeld) were his mentors and guides in the social sciences. To be sure, he was in good relations with a student of Parsons, the anthropologist David Schneider, whom he met at Chicago in his first academic job as a professor. But Schneider was an anthropologist, and Parsonianism had a different meaning in anthropology than in sociology. And in Chicago he came into contact with the Chicago tradition of study on careers, occupations and institutions, a relevant influence on his early work on French Impressionism, conducted with his (first) wife Cynthia and at the origins of a book published in the same year of these Notes [White and White 1965]. But Harvard was also the place where small group research was at the time alive and kicking, thanks to sociologist and historian George Homans and social psychologist Freed Bales, and this was clearly the academic cluster nearest to White in the Department of Social Relations. Intellectual networks are however more ramified than faculty organization, and if we were to find another sociologist working along similar lines at that time this would be James Coleman – coming from Columbia and (re)directed to Chicago – whose studies in mathematical sociology and on the social structures behind the diffusion of innovations were clearly known (and quoted) by White.

An Introduction to Social Relation, 10 (usually abridged as SocRel10) was the undergraduate course White taught for some years just after arriving at Harvard in 1963; it reflected this eccentric position and background: no functionalist books among the references, and very few sociologists at all, but mainly anthropologists and historians (like Lawrence Stone’s great book on the crisis of aristocracy in England). Indeed, it was probably anthropology more than sociology that was the field

5 See the reference to Harold Wilensky and his research on career structures in Notes.
6 Indeed, their careers had already crossed, as White was hired at Chicago when Coleman left in 1959 to start a new sociological department at Johns Hopkins (thus starting also a vacancy chain), and published his first book, on the algebra of kinship systems, in a series on mathematical sociology co-edited by the same Coleman. Unlike White, Coleman was trained in a truly sociological centre such as the Bureau for Applied Social Research, in Columbia University, directed by Lazarsfeld and Merton, and one of the early fortress of structural sociology.

7 In 1966, for example – a year for which notes taken by Michael Schwartz as teaching assistant, including the syllabus, are available – the list of required readings included the following: The Tiwi, by G. Hart and A. Pilling (an ethnographic research), Stone’s The Crisis of the Aristocracy, A. Mayer’s Caste and Kinship in Central India (Mayer was a pioneer in anthropological thinking on network), M. Dalton’s Men who Manage (a book on management by a Chicago ethnographer) and finally four texts from mainstream sociology: A. Reiss’ Occupations and Social Status, C. Kerr and colleagues’ The Interindustry Propensity to Strike, Lipset and Zatterburg’s A Theory of Social Mobility and R. Kelsall’s Higher Civil Servants in Britain. W. Foote Whyte’s Street Corner Society was not a required reading, but figured prominently in the course. It is worth noting that even if never quoted, Simmel is a ghost-like presence all over the Notes – especially in the sections on pairs and triads and so on.
of research in which White felt himself involved at the time as a social scientist. Anthropology was, at least, the discipline to which the subject of his first monograph [White 1963] referred, and to which he often refers also in these Notes. To be sure, he approached the study of one of the main topics in anthropology, that is kinship, with the instruments and the aim of contributing to mathematical sociology. But kinship – the elementary structures of kinship – asks for the sociological eye able to grasp the subtle intricacies of social relations and native categories of talk: both elements which could be easily by-passed when studying attitudes, values and opinions – that is the typical objects of American sociology in the Fifties and early Sixties. This anthropological legacy has deeply affected not only White’s intellectual biography but, through him, structural sociology (something, I think, still to be assessed in its full epistemological implications).

Categorical concepts were of course already very well known in both sociological and anthropological thinking: not only structural-functionalist theory but sociological theory as a whole had been built on them, as well as the underlying idea that people are sociologically relevant and tractable in as much as they are collectable, and collected, in different categories, be it age, sex, occupation, education, and so on. Categories are groupings of people according to some attribute. Class is a category, like gender, status group, cohort, nation, and profession. Also values and norms and beliefs can form categories (through their different contents). But who knows how a category is defined, and when it exists as a social fact? Often, the scholars or analysts themselves define a categorical concept, and superimpose on social reality their own classifications. “Rather than representing or corresponding to actual partitions of social actors in reality, the analyst projects these categories upon the social landscape to bring some order into and make sense of it” [Azarian 2005, 86]. This was the main fault of the categorical concepts (and of scholars like Parsons who made intensive use of them of course) according to White: to give the appearance of an ordered social

As is well known, Simmel had been excluded from the sociological canon which Parsons defined in his Structure of Social Action. This was, as it seems, another way to show impatience toward the old guard. On this see also Granovetter [1990b, 15].

As linguistic anthropologist Keith Basso once observed, “Perhaps the term categorical meanings could be substituted for cultural meanings” [1979, 98], in order to better distinguish – as all meanings are in some sense cultural – meanings relative to symbolic contents from meanings relative to “the structural and affective components of situated social relationships” [ibidem, 99]. This missed distinction is responsible, I suspect, for many analytical and theoretical confusions in both structural and cultural sociology. However, as cultural sociology defines itself as the sociological study of meaning-making [e.g. Smith 1998; Spillman 2002a], we can also guess that this missed distinction is more consequential for structural sociologists than for cultural sociologists. For the latter, meanings are always “in some sense cultural” and worthy of study, while the former usually conflate “meanings” with “categorical meanings” and put them out of the door, while letting them in again through the window as “social meanings.”
world, from which to derive explanations whose theoretical bases where at best very weak. As he wrote: “Theory in sociology, and other social sciences, at present deals most effectively with category concepts: class, values, epochs in evolution, attitudes, locales, ages, sex. It is hard to generate models of causation in such classificatory system, however elaborate” [White 1967, 1; quoted in Azarian 2005, 86]. A point still repeated almost ten years later: “The presently existing, largely categorical descriptions of social structure have no solid theoretical groundings” [White, Boorman, and Breiger 1976, 732].

While categories were well known and used (and abused) tools in social science, network was in the early Sixties still an underdeveloped idea, at least in sociological theory – less so in anthropology, where network metaphors and insights were used at least since Barnes now classical article on a Norwegian parish and had already proved their usefulness. But while in anthropology – mainly British anthropology – network analysis was considered to be a complementary ingredient of social analysis together with more categorical structural-functional approaches [see Mitchell 1969], for sociologists like White the idea of the network was interesting precisely because it promised to push sociology beyond artificially created categories, driving it toward the real, “concrete” social life where the action is. And it is network, as we all know, that White chose to develop and to insist on, both alone and with his students, in the following years, giving rise to what has been called “the Harvard breakthrough [Scott 2000] or the “Harvard renaissance” [Freeman 2004] – that is one of the main episodes and epochs in the development of social network analysis.

As already mentioned, White had just moved to Harvard from Chicago, and his work retained important links with both anthropologists – mainly those working on kinship systems, the subject of his first book [White 1963] – and scholars who had elaborated on the basic sociometric views – the same he used in his PhD research thesis in Sociology, focused on a Development & Research division in Pittsburgh. Contrary to both Parsons and Homans, the two most prominent sociologists in Harvard at the time, it was not theory as such but method at the heart of White’s “school” – a relatively integrated network of scholars, all of them students and former students, already identifiable as an “academic group” in the early Seventies [see Mullins 1973].

“The Harvard group developed as mathematically orientated structural analysts, concerned with the modelling of social structures of all kinds. There was no single theoretical focus to their work, the unifying idea being simply that of using

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9 To be sure, Mullins himself was one member of the “group” and this helped the identification, which acted as a performative (that is, contributed to the social production of the same group as something really existent for both its members and its publics: see Wellman [2000] for an insider view).
algebraic ideas to model deep and surface structure relations. It was network analysis as a method that united them” [Scott 2000, 33].

This is not the place for reviewing decades of sociological research on networks built around and from White’s ideas and work, which has developed since then well beyond methodological issues and toward highly theoretical constructions [see White 1992, 2008]. For this I refer the reader to the aforementioned books and to the many texts which deal with social network theory and research [e.g. Berkowitz 1982; Collins 1988; Degenne and Forsé 1994; Powell and Smith-Doerr 2005; see also Mizruchi 2007] and to contributions specifically devoted to the general social theory of White such as Azarian [2005] and Grossetti and Godart [2007].

Instead, what I would like to suggest in the following is how this early text on the network foundations of social structures – a revolutionary text according to many practitioners of network analysis – if read and used in its own terms could have offered a partially different way out from structural-functionalist categorical social theory and a different foundation for social network analysis, more in tune with following developments in cultural theory and cultural sociology – and in this manner, I believe, still more revolutionary in its theoretical and epistemological implications (even if not in its institutional, e.g. disciplinary, effects, as I will say later).

As White recalls in his preface, “40 years later,” his early aim was to cut off categories and attributes completely from sociological theory, something which he however realized was indeed too difficult to do, or simply too much. Catnet was his (provisional?) solution: a middle way between categorical approaches and network analysis. How difficult it could be to eliminate categories from the sociological vocabulary and thinking is revealed by this very simple observation which White advances at the beginning of his discussion of net systems: “There must be a common culture to define a type of relation sharply and clearly, if there is to be a net defined by the presence or absence of that relation between pairs of persons. The implication of a common culture and the implication that a net is defined over some set of persons both lead one to define the population over which the net is perceived. Population is essentially a categorical concept; so the concept of net is not in fact independent of the concept of cat” (my italics).

10 For a different vision, which insists upon the theoretical dimension of the methodological research inscribed in social network analysis, see Berkowitz [1988, 492-93].

11 As you can read in the website of the ISNAE, the Institute for the Social Network Analysis of the Economy, these Notes “revolutionized thinking about social structure” (http://isnae.org/Resources/DepartmentOfSocialRelations). ISNAE is not to be confounded with the INSNA, the International Network for Social Network Analysis, based in Toronto, on whose history and crucial role in the diffusion of social network analysis and structural sociology see Wellman [2000].
From this admission, it becomes apparent why a paper aiming to posit the “constituents of social structure” focusing on networks could end with a discussion of the concept of frame, which is most revealing of the need to preserve a sense of categorical understanding while modelling social structure. What is a frame for White? It is a theory held in a certain culture – that is, in a certain social group defined by a shared culture – about the structure and the (abstract) types of indirect relations which are acknowledged in that culture, each with its own set of rights and duties and its own emotional quality (sic!). As a theory, says White, a frame is usually used as an ideal-type. But he is well aware that a frame is a folk, practical theory, a “world vision” which cannot be fully rationalized, nor fully understood by all its practical users. But it is institutionalized, and “exists independent of any concrete net of relations existing in the society.” As the types of indirect relations which constitute a frame are of course categories, this means also that “the frame can be seen as an extreme case of a contextual system of categories,” that is a system of categories whose meaningfulness depend upon the context of the whole structure formed by the categories.12

As balanced net systems are also considered by White “akin to frames,” the social relevance he attributed to “frames” as principles of social organization and sociological explanation cannot be overrated, leaving room for at least two questions: where does this concept of “frame” come from? And how did it spread after these Notes in White’s intellectual circle and more in general in structural sociology?

White unfortunately does not reveal sources in the text, but we have reasons to believe he drew directly the concept from Erving Goffman. Of course, a more natural

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12 As is clear, catnets – and the network style of social thinking in general – are members of a more general family of approaches which can be labelled “relational,” among which is now prominent Bourdieu’s field theory (on field theory in general see Martin 2003). It is worth noting that Harrison White has reviewed and praised the book in which the French sociologist fully developed his theory of social fields – *Les règles de l’art* – and it is well known that this same theory has been easily translated by others in network analysis terms [DiMaggio 1986; Anheier, Gerhards, and Romo 1995]. Notwithstanding this, the two sociologists are often conceived – also by White’s followers – as distant scholars with mutually incompatible research programs and working epistemologies (simplifying a bit, White is considered a social scientist while Bourdieu an obscure thinker whose work is embedded in a still more obscure epistemology). How can we solve this apparent puzzle? I suspect that what is labelled (by a certain audience) as obscurity in the case of Bourdieu the philosopher turned sociologist, could be classified (by that same audience, and against structural equivalence) as complexity in the case of White the theoretical physicist turned sociologist. To be sure, also Bourdieu (and his school) takes distance from network analysis and American structural sociology, on the grounds that it is not enough structural (and still too interactionist): not interpersonal relations but power differentials in terms of different endowments of capital makes “structure” for Bourdieu. Indeed, as even Grossetti and Godard [2007] suggests, White’s approach could be aptly labelled a form of “structural interactionism” [see also Degenne and Forsé 1994]. For a subtle comparison of Bourdieu’s relational social theory with social network analysis see de Nooy [2003]. See also Breiger [2000] for a comparison between Bourdieu’s analytical relational tools and not those of White, but of a sociological theorist who has contributed a lot to both mathematical sociology and social network analysis as James Coleman.
reference would be Gregory Bateson [1955], the source of Goffman and of his much praised and influential *Frame Analysis* [Goffman 1974], as well as one of the contributors to the development of cybernetics, together with White’s mentor in the social sciences, the political scientist and communication scholar Karl Deutsch. But White is today sure Bateson was not his source at the time, while it is true Goffman used the (Batesonian) concept of frame already in his early book *Encounters* [Goffman 1961]. As Tom Burns [1992] suggests, also the art historian Ernest Gombrich made some uses of the concept of frame (while never labelling it so) in an influential essay of the Fifties, later published in an influential book of 1963 [see Gombrich 1963], just two years before *Notes*. Gombrich could have been a real source too, because of White’s extensive readings in art history at that time.\(^{13}\)

As for the second question, my guess is that the answer should be: very little, or nothing at all, at least in *mainstream* social network analysis, and until social movement theory did introduce in political sociology (even *structurally-oriented* political sociology) ideas drawn from Goffman’s *Frame Analysis*.\(^{14}\) This is not surprising, if we consider that the main thrust of both network analysis and structural sociology – shared by White as a pioneer contributor to both – is to detect concrete social structures behind cultural appearances in form of categorical descriptions and ideal abstractions.

What Harrison White seems to have realized while writing these *Notes* is however that categories and attributes have to do not only with survey analysis nor are necessarily generated by “averages called for by cultural glosses” [White 1992b, 210] or some other arbitrary statistical measures used as principle of classification, but are instead *also* part and parcel of the same social and cultural reality [DiMaggio 1992; Brint 1992]. The mistake of survey analysis is just to assume that common sense classifications could work for analysis without reflecting on their commonsensical basis [see also Cicourel 1973]. But the rationale of this assumption is what is relevant, sociologically speaking: it is because these classifications – that is these category con-

\(^{13}\) H.C. White, personal communication. One reason for the apparent neglect of Bateson’s original formulation may be very simply that it was published in a very specialised venue before being reproduced in the much celebrated *Steps To an Ecology of Mind* in the early Seventies. As it should be clear, anyway, there is still food for thoughts about the question of the origins of the frame concept in *Notes* – and on the intellectual relationships between White’s and Goffman’s sociology. For a stimulating attempt to explore the links between social network concepts and symbolic interactionism (a tradition Goffman is often associated to) see Fine and Kleinman [1983], who insist on subjective meanings as integral ingredients of relationships, and productive of their continuous negotiation and change.

\(^{14}\) For some exemplar integration of structural sociology and frame analysis in social movement research see Diani [1996] and – even more focused on the symbolic dimension of networks – Ansell [1997]. For a recent example of integration between network analysis White’s style and (Goffmanesque) frame analysis in political sociology see McLean [2007].
cepts – are already used by social agents (included sociologists), and are so familiar to them that their meaning could be so easily grasped, and their use in research is so easy. This is the reason why they usually work even without much thinking.

This means that category concepts – those produced, transmitted, inherited, used and transformed by the same social agents in their practical life – are parts and vehicles of culture sub specie of typifications: they aren’t necessarily generated abstractly in the researcher’s mind but may be deeply embedded in social reality and could be grasped through a detailed cultural analysis. In any case, natives use categories and attributes in their everyday life, as “equipment for living” (in Kenneth Burke’s words), and it is this not so irrelevant part of social life that a pure structural sociology aims to put aside [cfr. DiMaggio 1992]. So, while it could be sound to be sceptical of these category concepts prima facie, put them under scrutiny and maybe cut them from research as analytical tools, sociologists could expel them from their research field only at their risk and peril: because social reality exists in fact – in the mind of social actors and in their practices – as a web of categories which organize cognitively the world, including the net of relations in which we are all embedded. Social agents do in fact act according to category concepts like age, class, sex, types of attitudes, and also friendship, kinship and so on… Every role is a category concept. And this web of classifications is what anthropologists and sociologists often mean today with the concept “culture” [D’Andrade 1995; DiMaggio 1997; Cerulo 2001], while underlying their symbolic and cultural variability. From this point of view, it makes little sense to represent the social world in purely structural, i.e. network terms, without also including in the whole picture categories and classifications which are culturally defined and culturally variable.16

In his early writings, and in these Notes, White seemed really sceptical about the possibility of a culture-free structural sociology: “Catnets” was his personal solution to the problem of finding a middle ground between a pure structural sociology (completely declined in terms of networks) and a more ecumenical sociology which could be open to classification and taxonomy but also able to maintain cultural and

15 This is something White was apparently fully aware when writing, just at the beginning of Notes, that “the relation [between a pair of persons] must be familiar and clearly defined in the eyes of the people in the set so that it makes sense to say 1) each pair of people either is o is not in that relation and 2) the relation between one pair has about the same type of content and significance as the relation between another pair” (my italics).

16 In White’s own words: “The principal result of this evolution [that which produces catnets] is the definition in the eyes of participants of a new type of relation, equivalence within the structure” [White 1965, 6; my italics. I read this not as an invocation of only psychological insights (probably drawn from Gestalt psychology, one of the main sources of sociometry: see Scott [2000]) but also of anthropological ones.
psychological aspects of social life as ingredients and objects of thought and research. Even when in the Seventies he pursued his project of a radically structural sociology, he did not forget at all that cognition and symbolization were part and parcel of social life, which only for analytical purposes – he wrote – could be set apart.\(^\text{17}\)

To be sure, and for reasons we have still to understand completely, White himself seems to have forgotten the strength of these early insights in the years just following these Notes. His work on vacancy chains [White 1970] and structural equivalence [White, Boorman, and Breiger 1976] contains hardly any explicit reference to symbolic, cultural realities. When this happens, it is just to discard it while setting the foundation for the analytic autonomy of structure [see DiMaggio 1992]. Of course, some of the reasons for this resistance toward culture was the urge to take distance from Parsons and his legacy – something strongly (and sometimes ghostly) encoded at the roots of economic sociology too, explaining its widespread reluctance to account for cultural symbols and meanings as an analytically relevant feature of social (and economic) life while implicitly spreading them all over the economic system and the sociological analytical framework.

This is what I personally found most surprising while reading these Notes for the first time, even over their analytical strength and the brilliance of insights embedded in this short text. To be sure, lot of things here included subsequently entered – in a more refined and developed form – into economic and political sociology and above all network analysis. Reading them collected together in such a primitive (i.e. original and elemental) form in an early and clandestine text is not a common experience. But, after all, this is something we can expect from a scholar who “is regarded by many as the greatest living sociologist” [Collins 2005, ix] and is universally acknowledged as a great pioneer in both network analysis and economic sociology [see Freeman 2004; Swedberg 2003; Convert and Heilbron 2007] and a highly original contributor to general sociological theory [Azarian 2005].

\(^\text{17}\) According to some, even blockmodelling was not totally structural [see for instance Brint 1992, 200]. As Azarian puts it [2005, 95] with reference to this analytical procedure: “There is also a subjective side, which seems to have been less noted. That is, this new and abstract relationship is not only discerned by the analyst but it is also perceived by the actors themselves. The blocks of positions that constitute the social structure are not entirely independent from the subjective perception and appreciation of the actors. On the contrary, each set of actors who are positioned in each distinct block, tend to perceive themselves as members of a single collective entity. By the same token, they also tend to perceive actors in any other position as members of another distinct collectivity. Put differently, members of each block tend to regard themselves as sharing a collective role or identity, just as they bestow other, distinct and collectively held roles or identities upon members of other block.” However, there are good reasons to consider blockmodelling – at least as developed in the seventies by White and collaborators and as entered in social network analysis canon [e.g. Wasserman and Faust 1994] – as one of the most radical manifestation of structuralism in social analysis, these caveats notwithstanding.
What is not well known and usually overseen is indeed how much White contributed, indirectly but also directly, to the development of a more culturally oriented branch of sociology. And this not only through books on cultural stuff like the one on French Impressionism – or more recently on artistic careers [White 1993] – but through the same works on social structure and networks for which he is most famous and much quoted. Of course, this too is not something totally new. While usually “hidden” in structure, meanings (that is, according to present understanding of the concept, culture) have been very often at stake in White’s thinking and writing, as Steven Brint has argued some years ago in a brilliant “cultural” reading of White’s more structural works [Brint 1992]. And it is well known to specialists of cultural sociology how influential White’s teaching and tutorship has been for the cohort of Harvard young sociologists who pioneered this new branch of sociology in the eighties (among whom we find influential scholars like Paul DiMaggio and Wendy Griswold) [see Azarian 2005; Santoro 2008].

What this early text makes visible to our eyes is to what extent much social reality was for White sociocultural reality in his early sociological thinking. Culture – in the form of ideas, common perceptions, typifications, set of rights and duties, categories and above all “frames” – is all over these Notes in a way which I personally could never figure out given the places where usually you find references to this text and the likes: articles and books on social structure, on social movements, on economic organizations and so on. Two examples should be sufficient.

Tilly’s use of the catnet concept in his 1978 book on models of mobilization – a kind of Ur-text in both social movement analysis and structural sociology – is probably the single most important text which has contributed to spreading White’s insights well beyond the original network of White’s students – already large and influential, indeed. With respect to White’s original formulation, Tilly’s revision of the concept marks a theoretical regress while guaranteeing an analytical gain: because the framing component of catnet is totally excluded, and category is translated into

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18 According to Brint, there were at least four ways in which “culture” entered White’s structural sociology [in particular in White, Boorman, and Breiger 1976]: “First, as a neglected basis of social structure in the form of typified behavioural expectations; second, as a persistently defocalized source of the contexts and relationships in which relational structure develops; third, as an element that is implicit in all successful structural explanations; and fourth, as rhetoric for making the case in favour of structural sociology” [1992, 195].

19 Indeed, it was only in the Seventies it seems that White chose to de-focalize culture – putting aside cultural analysis – in order to bring out structure – and develop a purely structural, culture-free, analysis [see Brint 1992]. But in the Sixties, and – interestingly – again in the early Nineties [cfr. Emirbayer and Goodwin 1994, 1439] and still today (I think), White has a vision of culture and social structure as merging and meshed sides of a unique socio-cultural reality. For recent evidence of this see White [1995] and White and Godart [2007].
“catness,” that is a pure variable in a two-dimensional space (the other is netness). The implication is that a group of people constituting a catnet is more likely to mobilize around common goals and to act collectively than a group comprising only a network or a category. This makes the concept of catnet useful for thinking group organization: in Tilly’s words, “the more extensive its common identity and internal networks, the more organized the group” [1978, 2-63]. As is well known, in the Seventies and early Eighties Tilly pursued, together with Theda Skocpol (another student of Homans, indeed), the dream of a purely structural sociology in which there was no place for subjectivities, ideologies or culture. Only recently – and after the development, as already said, in social movement research of a more cognitively oriented theory drawn from Goffman’s Frame Analysis but also clearly resonant with the early structural sociology of White – has Tilly accepted more culturally based concepts and models.

How impatient structural sociology was in the Seventies and Eighties toward “culture” results strongly and very clearly from a revealing document such as the program Mark Granovetter – one of the most famous and celebrated and influential among White’s students – drafted for his Cambridge series on Structural Analysis in the Social Sciences, where structural analysis, that is explanatory analysis of “concrete social relations,” is explicitly contrasted with “explanations stressing the causal primacy of abstract concepts such as ideas, values, mental harmonies and cognitive map,” besides technological determinism, reductionist i.e. individualistic approaches and variable-based explanations (see Mizruchi and Schwartz 1987 for an early programmatic statement).

20 For an articulation of the “catnet” concept as elaborated by Tilly in the context of a cognitive sociology of identity politics see Brubaker and Cooper [2000].
21 The dream ended for Skocpol in the early Eighties: see Skocpol [1982]. One well-known moment of crisis in this structuralist faith was her exchange with the social scientist, turned cultural historian and theorist William H. Sewell Jr. on the pages of The Journal of Modern History, in 1985.
22 I am thinking here of concepts widely used by Tilly in the last decade, like stories, identities and “repertoire of contention” [see Tilly 2005, 2006 for recent developments]. The latter is a notion which clearly resonates, even if Tilly never says so explicitly, with Ann Swidler’s concept of culture as a tool-kit or repertoire [Swidler 1986], that is one of the foundations of the new cultural sociology: see Smith [1998] and Spillman [2002a]. For a massive use of categorical concepts, this time in social inequality theory, see also Tilly [1998].
23 We still have to clearly understand why (that is, on which grounds) social relations are supposed to be more “concrete” than, say, (social) ideas, or why structuralism is less solid when applied to myth (as did Lévi-Strauss) than to kinship or the market – something proponents of structural sociology often proclaim. What is the meaning of “concrete”? How can we understand whether a relation is “concrete” or abstract without considering the “ideas” which people have about that relation, and about relations in general? How concrete are these words – and ideas – which figure prominently in the writings of structural sociologists? Reflecting on the concept of “catnet” – that is the duality of relations and categories, or classificatory ideas – and its intellectual genesis could be a necessary step.
Much has been done under the banner of this purely structural analysis – for example in the field of economic sociology, where it has contributed much of what is known and renowned as the new economic sociology [see Granovetter 1990; Swedberg 1997, 2003; Guillén et al. 2002; Convert and Heilbron 2007]. But in a certain way this much acclaimed and influential program of a purely structural sociology has generated as understandable reactions – following a common dynamic in the social and cultural history of ideas – strong arguments and desires for a (sometimes equally pure) sociological study of culture which have done much in the last twenty years for promoting (and legitimating) culture as a sociological object and for developing the field of cultural sociology as a successful subfield of sociological research.\(^{24}\)

Indeed, we can speculate that the radicalism of early structural sociology has contributed much to this resurgence of interest for culture in sociological circles. Apparently dismissed by structural and economic sociologists, negated and often explicitly condemned, “culture” has been taken and revisited – and revitalized [Peterson 1979] – by sociologists unhappy not only with Parsonsian “value paradigm” [Swidler 1986] but also with structural reductionism (which very often meant economic reductionism) and/or aware of the sociological difficulties, if not impossibility, of a purely structural sociology in which only “concrete” social relations and structural mechanisms were considered analytically relevant and able to do explanatory work.

To be sure, White’s early (and more recent) insistence on the necessary interpenetration of the structural and the cultural in social reality [Emirbayer and Goodwin 1994, 1438-39] could have been one of the obstacles in the road towards cultural sociology as a distinctive sociological endeavour, as a relatively autonomous specialty. In order for cultural sociology to be accepted as a field it had to show and prove the autonomy of the cultural level well beyond the conflation argument [see Archer 1988 for a strong criticism of conflation in social and cultural theory].\(^{25}\) This, I guess,

\(^{24}\) As Granovetter recalled some years ago, he and other students of White where at the time “aggressively uninterested in cultural or mental states.” What seems most interesting, however, is the admission that “we [that is, White’s students] were almost, though never quite, behaviourists, without ever giving up the idea that meaning is terribly important (we had, after all, read Weber). But it wasn’t clear how to integrate that with the more concrete and manipulable and non-tautological parts of social life that we were paying more attention to, like social networks” [1999, my italics]. For a relatively early criticism of this common, and little justified in theoretical terms, anti-cultural attitude in (new) economic sociology see Zelizer [1988].

\(^{25}\) According to Emirbayer and Goodwin [1994, 1439n], White’s work can be said to fluctuate between what Archer [1988] calls “central conflation” – the assumption that because culture and social structure are mutually constitutive there is no way to disentangle them – and what the same Archer terms “upward conflation,” which entails a reduction of the cultural sphere to social structure.
was something which paradoxically structural sociology as a radical program of “culture free” sociology helped to achieve. Because, while arguing for the autonomy of the structural level, structural sociologists had to put apart “culture,” generating the conditions for the understanding and claiming of its autonomy in an even stronger manner than at Parsons’ time [see Wuthnow 1987; Alexander 1990, 2003; Emirbayer and Goodwin 1994; Spillman 2002b]. As Jeff Alexander often repeats (following Geertz), culture was not too much important in Parsons, but too little. And this was the problem of his cultural theory [see also Smith 2001].

Mark Granovetter [1990a, 95] once wrote: “Ironically, a main spur to the resurgence of sociological interest in economic life has been economic imperialism. Though some sociologists have accepted microeconomic arguments, many have come to see them (...) as useful foils against which to illuminate the distinctive contributions of the classical sociological tradition.” In a certain way, we can say that – still more “ironically” – a main spur to the resurgence of sociological interest in culture has been the structural imperialism of this new economic and political sociology. Though many – even influential – sociologists have accepted structuralist arguments (i.e. the crucial importance and consequentiality of social relations and their forms), many others have come to see them as useful foils against which to illuminate the distinctive contributions of cultural theory – both classical and contemporary – and of a more culturally sensitive sociology. To be sure, even in more structurally oriented economic sociology there have recently been strong signs of a coming back of “culture” – in the form of values, of practices, of schemata, of meaning systems [see Swedberg 2003; Granovetter 1999; 2007], and this is something which gives real hope for a forthcoming stronger “coupling” and synergetic dialogue between the two subfields.

It seems to me that in Catnets we can sometimes see at work – hidden by a sociostructural vocabulary – also a “downward conflation” (still Archer’s term), that is an analytical privileging of the cultural realm in the form of ideas and (cultural) perceptions and schemes over networks. However, arguments about conflation have to be assessed, I believe, in the light also of recent development of relational data analysis as a means to implement the idea of a “duality,” that is of co-constitution, of network and symbolic elements [see e.g. Mohr and Duquenne 1997; Breiger 2000].

This has meant, typically, a return to one of the most influential sources of structural thought, that is Durkheim, looking not only for “social facts” but also for cultural classifications and symbolic boundaries. This has meant, also, to work for the linking of the two offspring of functionalism, that is British and French structuralism [on this see Maryanski and Turner 1991], which network structural analysis contributed to sharply separate (see again the editorial program by Granovetter).

See Granovetter [1990a] also for some interesting exemplars of socio-structural analysis in the economic field which show how meanings, frames and typifications are implicitly at work in structural analysis – not unlike the “hidden meanings” detached by Brint [1992] in White’s structural sociology.

Of course, culture was always well-placed in the neoinstitutionalist branch of economic sociology, led by scholars like P. DiMaggio, W. Powell (both early contributors also to the sociology of culture), J.W. Meyer, R. Scott and N. Fligstein. Also the rise of consumption as a sociological
A common argument in recent sociology of culture holds that culture influences action not by providing ultimate values or normative expectations but by shaping a tool-kit or repertoire of habits and skills which people use in constructing strategies of action [Swidler 1986]. Like cultural analysts [see Breiger 2000], network and structural analysts too are people engaged in constructing strategies of action for understanding (and explaining) social action. This makes plausible to define the methodological tools and epistemological habits of network analysts and structural sociologists not as “a privileged sphere of autonomous logic” [ibidem, 92] but instead as instances of cultural tastes and of the practical use of cultural symbols, and to suggest that network and structural analysts built their tool-kit – that is their methodological and epistemic culture – and made use of it by selectively choosing only a minimal part of what was available around them and in their lineage, and privileging what seemed useful, appropriate or plausible with respect to their strategies of action, their sensibilities and of course their personal and collective idiosyncrasies.29

What these Notes clearly show is that White had in 1965 a lucid vision of how impossible it would be to study “structure” without taking account of “culture” in the form of ideas, cognitive categories, (indigenous) theories, familiar types, and frames. topic has contributed to this return of culture in economic sociology, as shown by Zelizer [2002; and see Sassatelli 2007 for an overview of the field]. Interestingly, while less quoted than scholars more faithful to a structural approach like Granovetter and Burt, Paul DiMaggio scores higher in “betweenness centrality” in the network structure of internal citations which Convert and Hilbron [2007] have calculated for the years 1980-2000 in the field of economic sociology. This may suggest that the openness to cultural (and cognitive) insights while preserving a (moderate) sense of structure and working to provide bridges between apparently divergent visions does not produce marginality but instead visibility and centrality also in economic sociology.

29 An interesting question which could be raised in such a spirit is the following: if network theory itself could be conceived – like any intellectual tradition – as a cultural form, and we accept [see Lizardo 2006] that also cultural taste can produce social networks, could the peculiarities of this form explain the kind of intellectual network which characterizes network analysis as an intellectual specialty? And are variations in academic success of, say, cultural sociology and structural sociology accountable in terms of variations in intellectual tastes of their practitioners? Still following Lizardo [2006], and much in the spirit of the reflexive (and sociological) analysis of analytical tools as proposed by Breiger [2000], I would suggest that network theory, and therefore structural sociology, has worked for many years as a kind of highbrow culture thanks to its relative inaccessibility (formalization and exoteric graph theory) and created a closed-in network of strong ties (focused mainly on White), while the relatively accessible intellectual culture of cultural sociologists (usually practiced through very readable texts made of words and stories) created the diffuse network that became first “the production perspective” and then the – polycentric and pluralistic – “sociology of culture” [see Santoro 2008]. We can also suggest that the subsequent spread of mathematical tools and the rise of exoteric thinking (e.g. semiotics, formal narrative theory and so on) also in cultural sociology is currently contributing to complicate the social organization of sociological sub-disciplines (and therefore their patterns of success), while subverting received intellectual hierarchies. For a sociology of science approach to social network analysis written by an insider (unluckily still culture-free) see Freeman [2004]. On rhetoric as a feature of (above all early) structural sociology literature see Brint [1992, 204-205].
In other words, White was well aware of so-called Nadel’s Paradox, that is the observation that “a satisfactory approach to social structure requires simultaneous attention to both cultural and relational aspects of role-related behaviour” [DiMaggio 1992]. Indeed, White had also a concept of culture which – albeit still confused and implicit – was clearly different from the Parsonsian one, and much more resonant with both cognitive research (the same contributing to the development of sociometry and of cybernetics) and phenomenology [e.g. Berger and Luckmann 1966]. This notwithstanding, he tried in the following years and for tactical reasons to put these early insights in brackets, working towards a structural sociology which could be culture-free – with “culture” in this case meaning not cognitive categories nor frames, but the traditional “norms and values” of the functionalist tradition. Many if not all of his students have followed his lead, and have dreamed this dream of a pure structural sociology without even realizing it was a dream – something ironically far from that “concreteness” attributed to social relations and their webs, thought of as pure structures upon which they insisted.

People develop culture in part to meet their needs to visualize, operate in and modify the social structure to which they belong.” In other words, through agency culture could be generative of social structure, and not simply an epiphenomenon of it nor a simple (structural) effect. This statement by one of their early masters is something structurally oriented sociologists should always have in mind. Also because “culture” is something they have long developed – in the forms of theories, concepts, analytical models, articles, books and also “intellectual habits” – in order to modify the academic and intellectual structure in which they operate, and sometimes the same structures of the social world they lived in.

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A paradox Paul DiMaggio named after S.F. Nadel, the Austrian psychologist turned anthropologist who firstly wrote about it: see Nadel [1957, 28]. It is not by chance that the new edition of Identity and Control [White 2008] ends with the evocation of this paradox and – more importantly – with a section devoted to “culture as basis for social science.” In a certain way, what I am suggesting here is that these Notes of 1965 contain much of this later development toward what we could read as a cultural theory of social structure. Abbott’s fractal theory of intellectual life could as usual be very useful for understanding this apparently chaotic dynamic of ideas [Abbott 2001].
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Framing Notes
An Introduction to “Catnets”

Abstract: Harrison White’s *Notes on the Constituents of Social Structure* is one of those rare texts which can influence generations of scholars without ever being published. This introduction aims to provide some information and suggestions (sometimes provocative) which could be useful to frame this text in its content and context. In particular, the paper explores the intellectual origins of the idea of catnet within the history of network analysis research and Harrison White’s biography, and argues for its relevance as an early admission by White of the impossibility of a pure structural, culture-free sociology – that is independent from the contextual study of cultural meanings and cognitive frames.

*Keywords: Harrison White, catnet, structural sociology, network analysis, Nadel’s Paradox.*

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