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Language Planning and Language Ecology: **Towards a theoretical integration**

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1. THEORETICAL FRAMEWORKS: 1. THE (BIO)ECOLOGICAL METAPHOR

In recent years, in order to answer the fundamental questions in the field of linguistic policy and planning, we have made metaphorical use of the conceptualization and organization of biological phenomena into systems, known popularly as *ecology*. Of course, sociolinguistic objects are not fundamentally (or exclusively) biological; they belong to a different, emerging order of phenomena. Nonetheless the analogies we construct, the concepts we adapt, the questions we raise, and, above all, the paradigm we seek to produce - by considering languages as cultural 'species' living in a particular environment with their own ecosystems - are likely to be illuminating and suggestive.

We should of course be clear at all times that the model is metaphorical, and be aware of the potential dangers of a reification of systems of linguistic communication. Though we place them in broader sociocultural contexts than those usually considered, there is always the risk of neglecting individuals inside the model and of forgetting the fact that these cultural 'species' are, in the final analysis, the product and function of the cognitive and communicative activity of human beings.

1.1 The ecological perspective: its fundamental contribution

At the **theoretical level** perhaps the greatest virtue of the ecological analogy for sociolinguistics and linguistic policy and planning, and for linguistics in general, is that it provides us with conceptual instruments that can give a more operative definition of what we habitually term the

'context'. Applying the system-based approach of biological ecology (see Margalef 1991) enables us to think of linguistic forms and codes as elements that are by their very nature integrated in their sociocultural habitat. These forms and codes stand in relation to other objects in the ecosystem, such as individuals' ideas of reality, the social meanings attributed to forms and codes, the socioeconomic categorization of individuals, group representations, and so on. As Morin (1991) says, the ideal approach considers that linguistic forms live in society and in culture which, at the same time, live in linguistic forms. We are thus on the way to expressing the non-fragmentation of reality, the non-separation of elements and their contexts.

The ecological vision enables us to bring together elements which appear to be separate, while at the same time maintaining a degree of autonomy for each distinct part. So we can now leave behind us the image of linguistic codes as separate from the other components of reality, though this idea of separation has presided over most of the field of linguistics for many years. This perspective provides a much clearer understanding of language change and shift. Without any hesitation on theoretical grounds we can relate modifications of form to the decisions of speakers or to changes in their demolinguistic, sociological or economic contexts. The 'life and death' of languages – to be metaphorical again - are much better understood from an ecological perspective. The use or neglect of language varieties is the consequence of developments in other relevant sociopolitical aspects that comprise the sociocultural ecosystem as a whole: any change in ideologies, values, economic or political organization, waves of migration, technological innovations, which disrupt stability of the ecosystem are likely to lead to respective changes in the forms and codes of linguistic communication between humans. Languages, then, like biological species, never live in a vacuum; they are fully integrated and adapted to their sociocultural ecosystem and to the other elements inside it. Substantial changes in certain key aspects of their habitat may signify their replacement or neglect, and so eventually their gradual extinction.

Certain precise conceptualizations of biological ecology are of great heuristic use to us, in particular with regard to our understanding of developmental phenomena. For example, the findings of the bioecologists that have preceded us will deepen our understanding of the contacts between different linguistic groups. The contact between two species, they tell us, is never purely binary. A third element is always present: the environment in which the contact takes place. The application of this perspective to the field of sociolinguistics is extraordinarily productive. In the contact between two linguistic groups, we should not focus solely on the groups involved but also, and indeed above all, on the broader context in which the contact takes place. As in biological species, the context may tend to favor one group over the other,

and so the third element may have a decisive impact on the situation's development (see Bastardas 1993).

The ecological metaphor is extremely useful for our theoretical representations. It is also very valuable at the **ethical level**, that is, in our consideration of the responsibility of humans for their linguistic systems. In recent years public awareness of the danger of loss of biological diversity has risen dramatically; every day more people lament the disappearance of animal and plant species. The crisis of biodiversity is a topical theme in the press and the media. Politicians and citizens' groups call for decisive action in favour of conservation. The crisis of linguistic diversity, however, is treated very differently. Linguistic groups all over the world are abandoning their ancestral languages, condemning them to gradual extinction. The spread of the nation-states and the processes of industrialization and globalization have caused irreparable changes in the historical ecosystems in which these languages have subsisted and reproduced (see Junyent 1998 and Mühlhäusler 1996).

The ecological perspective – or perhaps more precisely the 'ecologist' perspective – is a useful focus for linguists who call for measures to reverse this trend of language shift and extinction. If we value *biological* diversity and strive to protect it, surely it is equally important to take moral responsibility for the conservation and development of *linguistic* diversity. Why sentence to death hundreds of languages and cultures which may contain the seeds of creativity and innovation for the whole of humanity? How can we ignore the suffering of minority groups forced to abandon the use of their own codes in order to survive?

Reversing this trend is a particularly difficult task. Our efforts have only just started. The resistance from economic and political powers may be strong. Only the creation of international, planet-wide organizations able to make themselves heard can help speakers of minority languages make the required changes in their environment. As they develop economically and culturally, they should also conserve their languages and cultures, and guard against a total, uncontrolled assimilation by the dominant languages and cultures in the contemporary world.

The task of harmonizing economic 'development', international communication, and maintenance of languages is one of the great theoretical and practical challenges of the **political level** today. If we do so in terms of ecological intervention, what should our political commitment aim to achieve? Is the solution to turn back the clock and return to a traditional sociocultural organization with its limited technical and economic resources? Probably not, because once individuals have experienced the benefits of 'western' technology and civilization they will neither want, nor be able, to give up its perceived advantages. How then can we

ensure that the adoption of new economic, political, mediatic and ideological organizations does not lead to the extinction of the planet's linguistic diversity? (see Bastardas 1997 and 1999).

Biological ecology has interesting things to say on this. In many cases it is impossible to reconstruct a particular species' traditional habitat which would allow its 'natural' conservation and reproduction. The changes to environments, in most cases brought about by human activity, are often irreversible. So what can be done? Attempts to recreate ecological systems must accept the fundamental problem that many old systems have lost their context. Without the right environment, the organization that maintained the species breaks down; the species enter a spiral of degradation and decline. So the main principle of restorative management in biological ecology is this: *the most effective management strategy is to recognize how the context has failed, to identify the services the context would have offered, and to provide support for the unit we aim to maintain and/or recover, so as to recreate as far as possible its earlier natural context* (see Allen & Hoekstra 1992).

Applied ecologists are also clear that this intervention is not an attempt to return the system to its original state, but rather to establish a "sustainable" situation. This sustainability is only possible if the intervention draws on the underlying processes of the system, incorporating them rather than working against them. The ideal, then, is an intervention that does not force the system to act in a highly prescribed way. It should use processes that arise spontaneously, encouraging their development rather than opposing or fighting it.

Applied ecology clearly accepts the need for an ecosystem-based approach that takes into consideration the ecological, economic and sociopolitical systems that coexist in a particular situation. The solutions it proposes require coordinated action at all these levels, i.e. on the context as a whole, and not only in the strictly biological sphere, so as to create a dynamic of normal maintenance and spontaneous development. The key idea is, again, the role of the context, and the need to alleviate and compensate for its loss (see Allen & Hoekstra 1992).

The value of these ideas in the area of language is enormous, in spite of the difficulty of applying them in the situations of linguistic discrimination in which many human groups find themselves. As we have said, the crisis of language diversity is the result of the destruction of ecosystem-based contexts which over centuries allowed its development. It is this breaking down of the socio-politico-economic habitats of human groups that oblige many to change their traditional linguistic behaviour in an attempt to adapt – and to ensure that their children adapt – to new contexts.

A context-based approach is key to intervention strategies for the preservation of linguistic diversity. But, as in the case of biological ecosystems, the intervention should be based not so much on measures focused on language itself, as on aiding the creation of new contexts which adapt to the new situations generated, and give their speakers reasons and functions for continuing to use their own linguistic varieties.

Can it be said that linguistic groups that have become minorities because of their politicoeconomic subordination lack a historical context? In these cases, minority groups do not seem to see intergenerational transmission of the language of the parents and ancestors as 'normal'. What is there in the new context that causes parents to renounce transmitting their first language – their language of normal use – to their children? If parents whose first language is 'x' decide to transmit 'y' as the L1 to their children it is probably because they consider that 'y' is more useful than 'x' in their particular context. Again, the context is central. How do we account for this parental behaviour? Very probably the environment will have changed – the traditional local economy will have been replaced by modern technological methods, very often in the hands of outsiders and within a political framework of subordination – which leads to the neglect of 'x' and the adoption of 'y'. In this situation, 'y' is seen as more necessary, better adapted to the future. Reciprocally, 'x' is seen as old-fashioned; it is devalued, dispensable.

Clearly in this case the ideal solution is to intervene at the politicoeconomic level, persuading the group that their code will still be valid in the future and that it can be used legitimately and habitually in the immediate present. It is because of this security that majority linguistic groups do not think about the language they should transmit to their children, even though the children may later need to learn many other languages. The intervention at political level is fundamental to the recovery and/or maintenance of the linguistic group, and economic intervention is essential to ensuring that the group has a sufficient degree of economic control.

If for whatever reason this general contextual change cannot be made, the intervention should aim to bring about at least a sustainable situation in which the image and the value of linguistic varieties are perceived as positive, and in which these varieties have important, prestigious public functions – in addition, of course to their informal interpersonal functions. One possible strategy for less ideal situations grants exclusive functions to the code that is losing ground. Although it may not be possible to recreate a context in which the group communicates totally in the autochthonous language, the exclusive attribution of a solid nucleus of public functions may reestablish the language as useful and necessary and, as far as the parents are concerned, worthy of intergenerational transmission. So, though the group may not have a complete range of functions for its own code, the code has certain uses that are widely accepted; this in itself

makes a language a functional, useful one, and makes it necessary for the present and the future, thus ensuring the sustainability of a balanced situation.

1.2 Limits of the analogy

We have seen how the use of the metaphor of ecology outside its normal sphere of application – in biology – can be suggestive and creative for sociolinguistics in general and for linguistic policy and planning in particular. As is the case of all metaphors and analogies, we must be careful not to overstate the similarities of processes and elements which may initially appear to be comparable but may in fact correspond to rather different dynamics.

So, in identifying **theoretical** correspondences between biological and linguistic/ cultural ecology, we must first of all establish the levels at which the two spheres operate. Biological ecology looks at the level of natural organisms, and linguistic/ cultural ecology at a different level of phenomena which emerge in a subset of these organisms and their sociocultural organization. Biological ecology deals with animal and plant organisms with, at the most, very low levels of self-awareness and awareness of their interrelation with 'material' elements of the ecosystem; linguistic/ cultural ecology deals with human beings, their behaviours, cognitions and emotions, and their demographic, political, economic, sociocultural, ideological, linguistic and mediatic contexts. However many analogies we find, or comparisons we draw, we should be aware of the substantial differences between these two ecologies, and of the danger of making inadequate and counterproductive theorizations.

One of the fundamental differences at the level of the conception of objects is the fact that human beings possess *minds*. Even though many aspects of their material contexts are already determined, the mental possibilities of humans people mean that they are more creative in their relations with their environments. Unlike beings with lower levels of awareness and intelligence, they are in a position, for example, to challenge the pressures of the context and to try to adapt it to their own ends. So, in the case of humans, the level of determinism is lower, and the actors involved in sociocultural processes are able to influence and redirect them.

So our approach cannot be purely 'context-based' – as in the case of animal species without minds – but must also consider the level of social representations, narratives, and practices, and the values that inform our experiences. An excessively bioecological perspective may lead to misconceptions; this is the case of certain proposals from the domain of sociology that ignore the mind and present people more as externally determined automata than as individuals able to

think and to transform their environment. So we need to construct a sociocognitive and historical ecology which considers contextual influences, seeing them in dynamic terms and bearing in mind as well the mental possibilities of the subjects, with all that this implies. The work of Edgar Morin (1991) seeks, via an ecologization of thought, to construct a perspective of complexity which is able to integrate individuals and their contexts, the micro and the macro, and the historical dynamics in which events take place.

The existence of the mental capacity in humans makes the processes in which they intervene more complex than those involving less evolved organisms. The categorizations of reality, emotions and feelings, the organization of social relations, the historical narratives of the endogroup, the stages in the processes of cognitive developments, value systems, and attitudes to existence all influence each other mutually inside a sociocultural ecosystem of which as yet we know little.

From the **ethical** point of view the possibility of intervening in sociolinguistic processes is also complex. Taking action to try to save a species from extinction does not have the same implications as trying to keep a language alive or to recover it. In attempts to save species the explicit desires of the participants are not an issue (it is taken for granted that they are in favour) but in attempts to defend a language it would be amoral and anomalous to ignore the wishes of the people affected. However justified conservationist linguists may feel, we cannot oblige a human group to maintain particular linguistic behaviours without their voluntary, active participation, still less against their will. Sociolinguistic ethics takes as its starting point the equality of all languages, and aspires to preserve linguistic diversity that our species has created; it cannot ignore the need for acceptance and adherence on the part of the social actors in meeting these objectives. We cannot create artificial linguistic 'reserves', even though this might allow the maintenance of a specific linguistic variety. Ecolinguistic ethics must always bear in mind the people involved and their autonomy; it is they who must be its centre and its fundamental reason for existing.

This ethical dimension obviously introduces important differences at the **political level** between applied bioecology on the one hand and applied socioecology or ecolinguistics on the other. The intervention measures must be democratic and be implemented at all times with due respect for dissenting voices. Achieving the social consensus necessary among the people affected is not always easy. Typically, minority linguistic groups are faced with the dilemma of utility and identity, in which the choice they must make is either to abandon their language and adopt the dominant language, or to ignore the dominant language and maintain the collective identity even though this may not be economically advantageous view. Obviously, bioecological

interventions do not face these difficulties; it is enough to construct a natural habitat adapted to the requirements of the species. The species adapts deterministically if the conditions are suited to its survival and continuity.

In comparison with animal species, humans may find it particularly hard to adapt to contexts devised to preserve linguistic continuity. Even though political and other measures may well be fully accepted by the population, they may not have the desired effects on the society as a whole. The fact that sociocultural behaviours are less environmentally determined than genetic mechanisms may mean that the (re)constructed context is unable to preserve the language; the preservation of the material existence of an organism presents fewer problems. For biological species, a microcontext providing sufficient nutrients for its existence and reproduction may be enough, but in the case of small linguistic groups it is less likely that they will be able to construct totally suitable microhabitats, if the level of contact and interrelation with the other dominant group(s) is continuous in everyday life. Linguistic 'species' and sociocultural 'organisms' are, then, of a different nature and in all probability, require a theorization and a conceptualization that are different from those applicable in the biologic domain, even though biology is a suggestive analogy.

In fact, effective intervention is much more difficult in the case of humans. For example, a majority human group may react positively to the adoption of policies to preserve endangered animal or plant species, but the same group may not feel so well disposed towards preserving linguistic diversity in particular regions of a state in which it is dominant. As well as having a lower ethical awareness of the idea of linguistic preservation, their ideologies and interests may promote not linguistic difference but the assimilation of territorial groups into a homogeneous unit. In the case of language, we may thus find that the majority groups are unwilling to help minority groups to preserve their language. In this situation, interventions in favour of the creation of contexts of cultural continuity may be impracticable in spite of the active requests of the minority group, which, without control over its own social environment, may find itself condemned to a slow but irreversible extinction as a specific linguistic group. In these conditions, at a planetary scale, saving linguistic diversity may well turn out to be a more difficult task than saving biodiversity.

2. THEORETICAL FRAMES: 2. THE DYNAMIC COMPLEXITY PERSPECTIVE

2.1 The hologram metaphor: integrated auto-eco-organization of wholes and parts

Having examined the opportunities and the risks of the classical bio-ecological approach, I will now turn to one of the developments, or expansions, of this traditional ecological perspective. The classical viewpoint holds that a specific element forms part of one ecosystem, and sustains relations with the rest of the constituent elements of an open system or subsystem; these relations may explain and co-determine different presentations or states of the phenomenon under observation. Applying this perspective to the linguistic/communicative domain it is clear that we can conceive of an ecodependent vision of the verbal message. Linguistic productions exist inside the framework of interactional intentions and sociocognitive situations, and this environment can exert a considerable influence on the selection of the linguistic elements in the production in question and on their interpretation by the interlocutors (or spectators) of the communicative relation. Some lines inside contemporary linguistics already successfully exploit this classical perspective.

An even more interesting development is found in the field of contemporary theoretical physics, and has repercussions for the understanding of all human communication. The metaphor of the hologram¹ introduces us to the understanding of open, co-dependent systems, which not only exchange energy and information (see Margalef 1991), but existentially are *mutually dependent*, interweaving parts of a particular whole². In the case of languages, they are not only IN an environment, but the environment is in languages; that is, language exists WITH the environment, as part of an irreducible, inseparable fact. Linguistic elements are simultaneously part of the mind and of social interaction and situations, all of which – in one way or another – are part of the linguistic element. Languages do not develop outside the mental and sociocultural milieu, nor do the mental and sociocultural milieu develop outside language. This is an important contribution of the notion of ecological complexity: *de même que la qualité de l'image hologrammatique est liée au fait que chaque point possède la quasi-totalité de l'information du tout, de même, d'une certaine façon, le tout en tant que tout dont nous faisons partie, est présent dans notre esprit. La vision simplifiée serait de dire: la partie est dans le tout. La vision complexe dit: non seulement la partie est dans le tout; le tout est à l'intérieur de la partie qui est à l'intérieur du tout!* (Morin, 1992:117). Languages, then, are inside socio-significative reality, which in inside languages.

¹ ¹A hologram is an instrument that makes a photographic recording of the pattern of interference of the light waves coming from a particular object. The fundamental new feature is that each of its parts contains information referring to the whole object (...), so it can be said that the form and the structure of the entire object are folded inside each region of the photographic recording (BOHM, 1988:247).

² ² In fact, this change of perspective seems to correspond to one of the basic principles of the new ecology described by MACKEY (1994): the *notion of an ecosystem as a network or web rather than as a hierarchy* (p. 35).

A similar perspective is adopted by the theoretical physicist David Bohm. Starting from the fact that *science itself is demanding a new non-fragmentary concept of the world*, Bohm proposes the *non-divided whole in flowing movement* as a new form of observation. From the awareness of the observer and the concept that *a theory is, first and foremost, a way of forming an idea, that is, a way of seeing the world* (p. 22), Bohm sees in the hologram *a new notion of order* which he calls *implicate*, in which everything is folded inside everything else. The implicate order contrasts with the *explicate* order, in which *things are unfolded in the sense that each thing is only in its particular region of space (and time), and outside the regions that belong to other things* (p. 247). Bohm believes that *what exists is holomovement*, that is, *a wholeness of sets, all present at the same time, in an ordered series of stages of folding and unfolding, which in principle intermingle and interpenetrate mutually and completely throughout space* (p. 256).

Bohm exemplifies the implicate order and reality as flowing through music and through vision, since *if we listened to the same set of notes far enough apart in time so that there were no (...) reverberation, this sensation of a non-fragmented whole, of a live movement which gives meaning and strength to what we are hearing would be completely destroyed* (p. 275). Equally, in the cinema, if the photograms are seen with a long interval between them, we would not see them as forming a continuous, flowing reality (p. 277). It is not hard to see that the communicative interaction between humans also needs to be understood from the point of view of these parameters, since a communicative movement seen as separate from its situation and the movements that precede it may appear incomprehensible and absurd. It is in the conversational and social flow in which we understand – and therefore, seek to explain – the verbal (and non-verbal) constructions of humans. In the reverberations of conversational turns with others, of linguistic forms with others, or of sounds and intonations with others, and in the auto-eco-organizational transversality between the parts involved, and the parts and the whole produced, using the implicate order and ecological complexity as our guides, we can try to gain a better understanding of the mechanisms of everyday human communication¹.

6.2 The dynamic of complexity

Just as science uncovers the ecological interdependence of phenomena, it also rediscovers time and the need to study unstable dynamic systems. Fritjof Capra, a physicist who supports the new paradigms, states this clearly: *the properties of the basic models - the subatomic particles – can only be understood inside a dynamic context, in terms of movement, interaction and transformation* (1985:96). We thus *reach the conclusion that there are no static structures in nature. There is stability, and this stability is the result of a dynamic equilibrium* (p. 97).

Prigogine, one of the great participants in this revolution, says: *Every state is itself the result of an evolution (...); correlatively this instant designates an essentially open future* (1986:24-25). The auto-eco-organized sets are not, then static unchanging wholes, but formations that live in time; and as the sociologist Robert Nisbet has indicated, it is as important to understand the changes in these formations as to understand their (relative) stability. The development of the various organizations of linguistic communication of humans should be studied from this dynamic and processual perspective that takes into account how the interdependences between different levels of reality lead the system to a (more or less durable) stability or to change or large-scale modifications in the organization of verbal communication. *It is no longer the stable situations and permanences that interest us most, but the evolutions, the crises and the instabilities. The object of our study is not only what persists, but what transforms as well* (Prigogine, 1986:36).

This also spells trouble for the ecological theory centred on the idea of equilibrium in the stationary sense (see Flos, 1995:133). Now, *in the theory of systems (...) evolution tends to move away from equilibrium and develop through interaction and creation. In addition, the theory of systems bears in mind that the environment is a living system that can adapt and evolve. In this way, the centre of attention is no longer the evolution of the organism but the coevolution of the organism and its environment. The classical vision ignores the notion of this mutual adaptation and coevolution due to its tendency to concentrate on linear, consecutive processes and to forget transactional phenomena, which affect each other reciprocally and occur simultaneously* (Capra, 1985:334).

This dynamic notion of ecological systems will aid our understanding of the processes of linguistic change. Margalef considers two types of change in nature or in the ecosystems, which should be studied together: 1) slow changes, which can be considered as self-organizing, directed from inside the system, and 2) rapid changes, which are unpredictable inside the framework of the system, are appreciated as disturbances, and followed by reorganization (see Flos, 1996:197). In the linguistic domain there are very probably two types of processes: change in the structure, brought about by language use, without external disturbance, and change due to events in principle external to the system but which ultimately have important repercussions for it (e.g., contact of individuals with other linguistic forms in political or economic contexts or via large-scale interpersonal exposure). The ecological succession, then, is the historical framework of linguistic change and stability. Little can be understood of the dynamic of linguistic systems if we ignore the metabolism of the intergenerational replacement of populations, and, in the case of alterations due to external causes, the modifications of their most immediate contexts.

So how best to represent the sociocultural phenomenon, from the perspective of dynamic complexity? One possible starting point which would allow us to understand the whole while recognizing the role and the property of each of the parts might be, as we have implied, the image of music or singing. In the orchestral or polyphonic score the evolutions of each of the instruments or voices are observable, as is the evolution of the whole resulting from the organized superposition of each of them in the interpretative sequence of the work, which is what the composer wanted to exist, and is what the perceiver hears. The behaviour of each instrument has no sense and cannot be explained by itself; it can only be explained as a participant in a global, orchestral and polyphonic consensus. If one of the instruments or voices changes its contribution systematically the overall musical accord will disappear, but it may be reconstructed – though, thinking of improvisations, perhaps not as the composer had foreseen – if the other instruments or voices adapt to the new interpretation, achieving a new global harmonic consensus which is pleasing to the hearer. The events, then, can be described as independent melodies or as harmonic accords between different melodies. Seen linearly, they may appear to be single, isolated melodies that seem to respond to this linearity³. But seen as harmonic accords, each fragment of the melody of each instrument or voice, for example, is determined by its relations with the other sounds which co-exist *simultaneously*. Clearly, then, we must beware of considering that only ‘harmonies’ can be ‘melodies’ (see Bastardas, 1996).

This working metaphor – which obviously does not aspire to being an exact copy of social reality, but rather a heuristic tool, which may be improved on or rejected – allows us to try to understand in an organized fashion and at the same time separately and interrelatedly the elements that do most to determine the linguistic behaviour of humans in situations of diversity and contact. If we like, it is no more than a dynamic application of the vision of systems, in which each level – in spite of its individuality - forms part of a multiple, interrelated set, and the cooperation of all the levels generates a particular behaviour or product capable of being perceived by a human being and able to influence him. Our score might initially contain the line of the minds, the line of social interaction, the line of human groups and of political power, assuming at all times that it is attentively perceived and heard by human beings who are, in the final analysis, the only ones who can grant it existence and justification and who act - for example, dancing in one direction or another, to the rhythm – in accordance with the evolutions - harmonic or otherwise –of the whole.

Behind this musical metaphor lies the fundamental idea that linguistic diversity and contact and their effects must be explained within the framework of ecosystem-based relations between the

³This is what habitually occurs in the study of human languages:[*They*] are often

linguistic phenomenon and other factors of reality. Speaking, then, is seen as a subset of social action, with characteristics of its own, but also subject to the general determinations of any social behaviour. Language use is conceptualized as a socio-cognitively regulated eco-dependent activity. Precisely for this reason its nature changes in response to events which human groups generally experience. Linguistic behaviours can live in harmony with the rest of the socio-cultural domains but they have to adapt in general to the changes that may occur in the set of the other lines of the score⁴. These changes, for example, may be in social representations and values, in the ways of relating to one another, in the group composition of society, in economic and technological aspects or in aspects of political organization. They have repercussions in all areas of the linguistic domain and will oblige humans to readapt in terms of their forms of communication, and may create an atmosphere of tension before achieving a new balance that avoids a traumatic or radical readaptation with respect to the previously existing order. In conflicts with major linguistic repercussions, codes are not only means of communication but accentuate the status of *means of communion* (Le Page, 1964), and can become conscious, symbolic objects that are highly influential over behaviour.

From this perspective, in which relationally complex ecology do the phenomena of linguistic policy and planning take place? What orders intervene, and how do they mutually modify and determine each other? A first basic distinction can be made perhaps between the psycho-socio-cultural order and the socio-political order, in the framework of which the systems of linguistic behaviour and communication exist. It is in these two orders that the communications that Corbeil (1980) calls 'individualized' - informal and more spontaneous - and the 'institutionalized' - formal and more planned - take place. Each of these orders contain different systems interrelated internally and externally, to varying degrees of intensity. For example, in the psycho-socio-cultural order, the mind does not exist independently of the social and political framework in which individuals live, and in the socio-political order none of its institutions are possible without individuals with minds that sustain them and are influenced by them. This means that in general the existing linguistic behaviours are the result of these mutual influences. Their preservation and continuity depend on the endurance of the structure of the contexts that produce them. The changes that occur in either of the two orders in this structure may influence

studied as specialized items divorced from human beings (Elias, 1991:41).

⁴ So, according to Lieberman, *language behavior is viewed as a form of adaptation to a set of institutional and demographic conditions in the society, namely, population composition, both linguistic and ethnic, the degree of segregation, the occupational forces generated by the industrial structure of the society, and age* (1970:14). Lieberman does not include the school here, because he considers it to be a factor partially influenced by the other factors listed; I would question this assumption, taking into account the cases of political subordination that none of the variables mentioned can explain: for example, the absence of the code in the educational system.

the other and cause changes in the existing organization of the ecosystem, leading to a different configuration through stages characterized by unstable equilibria. A specific linguistic policy may lead to a major alteration in individualized communications in a particular direction, or the arrival of new groups from elsewhere may have repercussions for the domain of linguistic policy.

The existence as cognitive categories of the two orders mentioned appears to be a constant, at least in economically advanced societies. The interventions of explicit linguistic policy are situated naturally in the socio-political or 'institutionalized' and it is here that they will tend to have their most direct influence. In contrast, in the psycho-social or 'individualized' order, the influence of political power – though inevitably present – is more indirect, gradual and subtle, and in certain circumstances, may even be consciously resisted at the individual level. Discovering and understanding the dynamic of the interaction between these two broad categorial orders is in fact one of the themes still to be addressed by linguistic policy and planning and by sociolinguistics in general.

7. CONCLUSION

With the hologramatic perspective of complexity, the 'ecological' vision of linguistic policy and planning is no longer a simple analogy, and becomes a global, dynamic, inter- and transdisciplinary approach to reality. The field thus opens out, as our initial macroquestion required, not only towards specific policies and their direct effects, but also towards the processes of formation and decision-making of these policies, the correlation of forces between the groups in contact or conflict, and towards the battle for predominance between the discourses of the different positions in society.

Equally, from the perspective of complexity it seems clear that the interventions that seek to influence the linguistic domain must act not only in this domain in the stricter sense but also on the context as a whole, looking at the effects and the feedback between the interrelated dimensions of the ecosystem. The actions of linguistic policy and planning should not focus solely on linguistic elements per se but should act globally on all the aspects of the sociocultural ecosystem able to intervene positively to preserve and develop linguistic varieties. As Carme Junyent wrote (Junyent, 1998), it is time to abandon traditional approaches to linguistic policy and planning and to adopt a global ecolinguistic vision which, from the perspective of complexity, can intervene effectively to aid the sustainability and development of human linguistic diversity.

Given the dynamic nature of reality, linguistic policy and planning should not longer be seen as a static field but a processual, evolutive phenomenon, in which global measures of intervention and the self-organizing evolutive dynamics of human societies influence each other mutually and seek new equilibria. Nor can linguistic policy and planning forget the psycho-socio-cultural order, assuming that it will readapt automatically and immediately to the changes caused by the interventions in the sociopolitical order. As is clear today in the case of Catalonia, there is not always a mimetic relation between the two orders of reality. The psycho-socio-cultural order – with routinized interactional expectations and with functional, and subconscious social norms of linguistic use – can remain relatively independent of the sociopolitical order, in certain conditions. The paradox (only an apparent paradox, in fact) is that a relatively stable state may have institutionalized communications that are performed in 'x' and at the same time individualized functions that are performed mainly in 'y'.

Linguistic policy and planning, if it is to be effective in favour of linguistic diversity, cannot neglect its role at the level of social representations and at the level of interindividual linguistic behaviours. Its perspective must be one of information and persuasion; it must be absolutely democratic and show all due respect for individual decisions. Laws and regulations are not the only arms of linguistic policy and planning; equally important are ideas and discourses that reject ideological subordination and favour equality and the dignity of human linguistic groups, making speakers of minority languages aware of detrimental linguistic behaviours and their culturally destructive effects.

So we have seen how the ecological metaphor and the perspective of complexity can be productive and inspiring for sociolinguistic approaches and for linguistic policy and planning. Developing this approach further to understand and explain sociocultural phenomena and among them sociolinguistic developments and processes will allow us to promote more ethical principles in the field of linguistic diversity, and, as well, to propose interventions of all kinds - political, economic, ideological – that can contribute more effectively and extensively to the preservation and development of the linguistic and cultural richness of the human species. In an era of planetary solidarity, it is our duty to promote worldwide organizations that take responsibility for the maintenance of diversity, promote the understanding of its value, and ensure that smaller linguistic groups in positions of weakness should benefit from favourable sociopolitical ecosystems, upholding universal cooperation and brotherhood at all times. Ecolinguistics then is our starting point for the construction of reality – as Edgar Morin, the great advocate of the perspective of complexity, desired: *Il nous faut donc affronter les deux*

injonctions contradictoires: sauver l'extraordinaire diversité culturelle qu'a créé la diaspora de l'humanité et, en même temps, nourrir une culture planétaire commune à tous (1993).

BIBLIOGRAPHY

Allen, T. F. H., & T. W. Hoekstra (1992), *Toward a unified ecology*. Nova York: Columbia University Press.

Bastardas i Boada, Albert (1993), "Llengua catalana i futur: notes des d'una perspectiva eco-sistèmica", *Revista de llengua i dret* 19 (juliol), pp. 81-93.

Id. (1996), *Ecologia de les llengües. Medi, contactes i dinàmica sociolingüística*. Barcelona: Proa.

Id. (1997), "Substitution linguistique versus diglossie dans la perspective de la planétarisation", a: Bouchard, G., & Y. Lamonde (dirs.), *La nation dans tous ses états*. Montreal/París: Harmattan, pp. 111-129.

Id. (1999a), "Manteniment diglòssic i substitució lingüística: notes per a una continuïtat de la linguodiversitat", *Homenatge a Jesús Tuson*. Barcelona: Empúries.

Id. (1999b), "Lingüística general y teorías de la complejidad ecológica: algunas ideas desde una transdisciplinariedad sugerente", a: (diversos), *Lingüística para el siglo XXI*. Salamanca: Universidad de Salamanca, pp. 287-294.

Id. (2000), "De la 'normalització' a la 'diversitat' lingüística: cap a un enfocament global del contacte de llengües", *Revista de llengua i dret* 34, pp. 151-165.

Junyent, Carme (1998), *Contra la planificació. Una proposta ecolingüística*. Barcelona: Empúries.

Margalef, Ramon (1991), *Teoría de los sistemas ecológicos*. Barcelona: Publicacions Universitat de Barcelona.

Morin, Edgar (1991), *La Méthode. 4. Les idées. Leur habitat, leur vie, leurs moeurs, leur organisation*. París: Seuil.

Mühlhäusler, Peter (1996), *Linguistic ecology. Language change and linguistic imperialism in the Pacific region*. Londres: Routledge.

Wilson, Edward O. (1998), *Consilience*. London: Abacus.

ⁱ It is common to apply in these cases the maxim 'the whole is greater than the sum of the parts'. This is habitually true given the phenomenon of 'emergence' of a new order of reality and meaning frequently produced by the union of previously unconnected parts from other dimensions. Nonetheless, some researchers state that the maxim is not always literally true, as it may be the case that the whole is 'less' than the sum of the parts, given the possibility of reducing previous functions or properties of the part considered in isolation so as to produce a coherent and harmonious whole. Perhaps the best solution is 'the whole is different from the sum of the parts' (see MARGALEF, 1991).