The Ecologic Foundations of Stylistics
in Music as a Language

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Abstract: This contribution suggests that it is possible to describe the transformations of musical style in an analogous way to the transformations of style in language, and also that it can be explained how the 'musics in contact' behave in an analogous way to the 'languages in contact'. According to this idea, the 'evolution' of styles in music and in language can be identified and studied as dynamic exchanges in ecological niches. It is suggested, also, that the idiolectic-ecolectic, and acrolectic-basilectic relationships in music and language are functions of cycles in several 'layers' and 'rhythms'. The presence of stylistic varieties and influences in music and in language may imply that they are part of major sign systems within a more complex ecological relationship.

1. On the concept of 'style'

Based on previous theoretists like Jan LaRue and Charles E. Osgood, Meyer defines that "Style is a replication of patterning, whether in human behaviour or in the artifacts produced by human behaviour, that results from a series of choices made within some set of constraints" (Meyer, 1989:3). Obviously, along with this definition some questions arise about the meaning of the words 'choice' and 'constraint'. This paper assumes that choice, in musical stylistics, results after a negotiation between idiolect and ecolect, whereas constraint can be primarily described as the necessity for coherence through grammar, associated to a certain tradition.

"The identification of different styles can be undertaken in much the same ways as the identification of different dialects of a language: a boundary between two styles can be established on the basis of a bundle of issogloses. Style boundaries may or may not coincide with boundaries of idiolects; one has the general impression that any speaker of a given language is free to make use of different styles depending very much on circumstances and on choice" (Winter, 1960:3). This is very analogous to the style in music, the musical idiolect being determined by the pattern of repetition and variation within one composition; the dialect being determined by the tradition of a musical form and structuration (*cf.* Lidov, 2005:19-20). According to Lidov, music can be understood either as *design* or as *grammar*: "grammar refers to socially established abstractions, while design proceeds from the concrete instance" (*ibid.*, see also Lidov, 1980:55). Resuming this idea, style in music and in language results as a coordination between the *individual* (with its preferences for design and with its idiolectic tendencies) and the *global* (the level of language in which it is mandatory to follow a minimal set of laws, in order to assure a main frame for communication).

Talking about these subjects as capital problems for composition, Carlos Chávez wrote that "It is all right to speak of epochs, and periods and historic currents, and nations, and transculturation. It is all right to get very sociological. But what makes up society, after all? Individuals. [...] The individual is molded in some way by the sociological group or nation he comes from. Every individual is so molded, and in that way he expresses his tradition and collective characteristics; but the tradition and the collective characteristics express themselves through an individual, not through collectivity itself" (Chávez, 1961:17). Nevertheless, collectivity and individual are, more than two positions at different planes, two aspects of a same continuum converging into the styles as succession of diachronic estates. Thus, the idiolect and the ecolect (a dialect immediatelly surrounding the individuals) must exist together.

2. Grammar equals *law*

Plato's conception of harmony between ethics and aesthetics considered the need for social rules based on the observation of nature. Geometric order and acoustic proportions were used as metaphor for this pursuit. However, modern social and legal philosophy rather admits a need for a balance between a 'spontaneous order', the *nomos* which is at the basis of an 'open society' that can be identified as an ecolectic agreement; and the "public law which determines the organization of government", that can be identified as a grammar (Hayek, 1973:31).

All aspects of style can be examined in the light of the contact between at least two grammars, or more precisely, two canonical levels of grammar: the local and the general. This is important because it seems to be a universal aspect determining form and structure in behavioristic as well as in aesthetic and intuitive recursions. And so, it may involve common relations of order and disorder in Umwelten-niches (the social and metasocial structures surrounding the renderings among groups and individuals). The view of these relations can serve to describe a variety of features in music, describing the reciprocity between the Umwelt-niche (the context for general laws) and the *nomos* (local laws); in other words, between culture and particular behavior.

Previous to the Classic period, music already revealed its capacity to transmit an extra-acoustical meaning, by the use of 'topics'. "The topics comprehend also the musical styles issued from earlier periods, like the Baroque counterpoint within the style *gebunden* (with delays), or the *style savant* (learned) […] the style *empfindsamer*, sentimental or emotive, in which the instrumental music imitated the expressiveness of the vocal music. Equally the art of the court, within its elegance, is defined by the bias of a proper and characteristic topic, the style *galant*, with its many ornamentations" (Tarasti, 2006:50-51). From this quote it can be inferred that the musical topic and the social topic are so closely related that they are converted into a same entity. The systematized compilations of musical topics (collected scores from a same period and context; treatises on instrumentation, harmony and melody, etc.) are, as a matter of fact, canonical structures intermediating between the *nomos* (the ecolectic agreement among performers and composers) and the *grammar* (the moral and functional status shared by the public). In its turn, this 'grammar' fits into a more general collection of laws elaborated by the society as a whole. As the style *galant* in music is associated to the 18th century French court, one can as well associate each particular in music (gestures, topics and typologies) to a respective Umwelt-niche.

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3. Ecolect equals *nomos*

There is no absolute separation between grammatical and extra-grammatical elements in language, as there is no linguistic gap between 'intelective' and 'affective' structures. According to Hjelmslev, the affective and the extra-grammatical parts of language may also observe grammatical principles (Hjelmslev, 1928:640). Information characterizing the verbal style through the suprasegmental phonology, the distinctive features and the facultative variants, according to Fónagy, do define codification through the recognition of conventionality in language (Fónagy, 1964). Fónagy also believed that the information composing a message has a mutually untranslatable 'double encoding'–emotive and intellectual. More recently, using cognitive arguments, Damasio explained that even the very rational aspects of the human mind are indissociable from the feelings (Damasio, 1994). Fónagy's double encoding is then assembled as a unity, with no any separation between both strings emotive and intellective. His distinctions of the 'vocal style' (*quotidien, artistique, psychopathologique, ontogénétique*) can be described as idiolectic and ecolectic as well as dialectic and idiomatic modalities with a preverbal background.

Since a vocalization includes distinctive traits conditioned by the phonological level, the speaker introduces his own phonetic features 'coloring' the suprasegmental traits as well as the facultative variants. After observing this, Fónagy explained that the individual melodization precedes the speech articulation. However, it is clear that there is a continuous exchange between idiolect and ecolect, developing the constant poiesis/transformation of language. In resume, there is no breaking point between idiolect and ecolect, neither between suprasegmental traits and facultative variants. Instead of it, there is a permanent contact among these elements, directly affecting the expressions and meanings of language.

If valid, this view of continuity would motivate a revision of the structuralistic dualisms, replacing them by continuous strings of meaning. A step going into this direction was already taken by the sociolinguistic perspective that coined the concept of 'linguistic stratification' (Stewart, 1965, based in Ferguson, 1959). This stratification proposes the labels of 'acrolect' and 'basilect' to describe the extreme positions of code-switching used by speakers of creole languages who also have some fluency in the standard language upon which the contact language is based. Bickerton completed this description with the use of the term 'mesolect' to refer to intermediate points in the continuum (Bickerton, 1975). Thereafter Mufwene used this theorization to explain that languages, like a Lamarckian species, are featured by biological-like processes in which there are periods of linguistic *development* (marked by the assimilation and endosymbiotic acceptance of parasitic associates), *stability* (characterized by a grammatical functionalism), *instability* (characterized by the enrichment and development of idiolectic and ecolectic parasites) and *basilectalization* (the ecolect moves away from a standard grammar and eventually starts to develop a distinct language). As this dynamic relationship is valid for any language, Mufwene believes that all language is a hybrid of previous languages and symbolic systems. Investigating the aspects of second language acquisition, Thomason arrived to akin conclusions observing that there are strings of linguistic change succeeding the stages of *code-switching, code alternation, passive familiarity, negotiation* and *second-language development* (Thomason, 2001).

The view of language as related to biology, and its association to 'birth', 'development' and 'death' is not a new issue. After the influences of Bonnet (1762), Goethe (1790), Lamarck (1809) and Darwin (1871), many linguists fell to temptation of directly applying biological principles to the linguistic matters. This

tendency was gradually replaced by a view of language through mechanical, electromagnetic or computational metaphors, *e.g.* in theories of linguists like Bühler (1934), Whatmough (1956) and Chomsky (1957). The consequence was a model of human language assimilated to the modern human machines, and dissimilar to other living languages on Earth. What is interesting in Mufwene's proposal, is that he–among other contemporary ecolinguists–pursues not a return to any positive naturalistic perspective, but a reformulated conciliation of the human towards the rest of the living creatures able to communicate or to demonstrate certain linguistic skills. Mufwene also refers various *levels of skill*, which can be interpreted as levels of competence regarding a environment, with ecolectic and grammatical repercussions.

In musicology, the use of the terms *acrolect, mesolect* and *basilect* may also provide more precise tools to refer the exchange of what in a centralized view (*e.g.* anthropocentrism, eurocentrism, nationalism, etc.) would not be considered *stylistically correct* (*i.e. statistically coherent*) but 'impure', 'incorrect' or 'eccentric'. Consequently, the many expressions of music that do not represent the 'correct trends' (the acrolectic tendencies of music) should be considered by its correctness as mesolectic or basilectic expressions. No less relevant in this system of layers, the individuals and their idiolects stay on the basis of the renovation and vitality of ecolects, which in their turn contribute to a stylistic selection and consolidation.

4. Idiolect and ecology

The system of sound signs functionally affirmed as an acrolect does constitute a grammar (*public law*). "Mozart could compose with astonishing facility partly because the set of constraints he inherited (and which he partly modified), the so-called Classic style, was especially coherent, stable, and well established" [as a specific acrolect within a stable grammar] (Meyer, 1989:5). In contrast, the system of sound signs coming from the individual poiesis does constitute a idiolect, using the ecolectic recognisable codes (*i.e.* the *nomos*), but also collecting facultative variants and intensional/intentional traits of design (concepts that Metz already used to explore the distinctive features in verbal, individual intonation, *cf.* Metz, 1964).

This approach to musical/linguistic *correctness* and *preference* differs from Lerdahl and Jackendoff generativistic theory, although it may provide complementary views to their hypotheses (thus, both forms of theorization are not necessarily opposite each other). These authors (henceforth L&J) affirm that preference rules are based on the "listener's intuitions" (L&J, 1983:39-42). According to them, there are universal intuitions about grouping and phrasing that affect–although in diverse manners–music and verbal language. This argument might be sustainable provided that 'intuition' is due not only to a innateness (that corresponds to a Universal Grammar in the generativistic sense), but it is also formed by influences and recurrences in the social-environmental context (corresponding to the individuals in societies, in relation to their Umwelten-niches). L&J also agree that *preference rules* "establish not inflexible decisions about structure, but relative preferences among a number of logically possible analyses" (*ibid.*), so they believe that a statistical analysis of musical preferences shall uncover the "most highly preferred" and "the most stable" relations in a musical structure. This kind of analysis would reveal, however, a intuitive surface that by no means could be the same for every listener and in all layers and forms of culture.

The most notorious difference between this proposal and L&J's conception of correctness and preference is that the present work does not preclude a very relevant role of grammaticality in music: "Whereas linguistic theory is highly concerned with grammaticality, music theory is much more concerned with preference among a

considerable number of competing well-formed (grammatical) structures. [...] The well-formedness rules of music hardly approach the linguistic well-formedness rules in complexity. This reflects the much greater role of grammaticality in language than in music" (L&J, 1983:308).

The weight and functions of grammaticality are not exactly the same in all verbal languages, neither are they in all styles of the many languages and in different forms of music. The degree of flexibility/rigidness of rules differs very much depending on the bonds among semio-linguistic features as well as on the Umwelten-niches dynamics, depending on in its turn on the coordinative relations among the idiolect-ecolect and acrolect-basilect levels. Correctness and preference criteria vary so in verbality and in music, also in an analogous way.

Beside these assumptions there must be–necessarily–a correspondence of music to a wider notion of ecology. After Sapir (1912), several anthropologists, linguists and musicologists recognized that music and environment are closely related. Yet when the Sapir-Whorf hypothesis has been proved insufficient regarding a direct, deterministic rapport between environment and language, one must consider a wider conception of environment in some intertwine levels: especially if the metaphor of the house (οἶκος) can be used to relate the body to an idiolect, the familiar environment to an ecolect and the social niche to a grammar. This is meaningful for musical theory only if it can be accepted that the tradition and the collective characteristics express themselves through the individual and through the collectivity itself, on a same time (rethinking Chávez's conception).
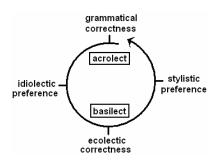
5. The cycles of style

Birdswhistell (*cit.*), Greimas (1968), Sebeok (1977), and Stokoe (2001), among many other specialists in kinesics and proxemics, agree that there is a common capacity in humans sharing the same physical possibilities to perform similar body movements and vocal articulations which are distributed in a variety of social and ecological constraints. Even in very endemic communities and isolated guilds it is possible to distinguish stylistic variants regarding the whole group like an idiom, as well as minor variants characterizing the contact among segments of the same group as an ecolect. As well, it is possible to identify stylistic variants by each individual partaking the community, defining an idiolect in contact with ecolects. As it can be noticed in a choir or an orchestra, by the analysis of functions, properties and trends (respectively equivalent to *reasons, characters* and *emotions* in rhetorics), it is possible to identify individual voices, group voices and their amalgams, as well as the different shades and blurs in a *tutti*. While it is possible to attribute physical relations to each one of these settings, it is also feasible to identify other aspects in the sound production, due to particularities of each singer or musician, as well as the more general features of the groups.

As a rough example of the importance of stylistic variation in the basis of human language, one can mention the politeness formulae which are likely among the oldest systems of styles in idiolectic and ecolectic modalities (*cf.* Sawadesh, 1966:112-114). The politeness formulae are anchored in systems of 'verbal routines' that can be traced back to the communication systems of other primates (Ferguson, 1976:138). The styles of eating and drinking, and the diversity of gestures of flirting and coupling share as well the same origins in the principles of animal meaning and communication. The styles used as conventional gestures have probably similar antecedents, but they are much more variable and unstable through epochs, "they change so much across time that they become unintelligible, as it happens watching old silent movies" (Eco, 1968:13). It is sustainable, then, to say that there are different 'rhythms' within the displacement of styles in their different modalities.

In music, according to an authorized definition on the Baroque style, "Many composers drew a distinction between the chaconne and the passacaglia, the nature of which depended on local tradition and to some extent on individual preference." (Silbiger, 2001). Furthermore, most of the composers preferences are developed unconsciously, as Schoenberg some day confessed: "My technique and style have not been developed by a conscious procedure" (Schoenberg, *c*.1950:110). Whether these observations can be generalized to other aspects of music, it will be useful to describe the coordination between the 'local' and the 'individual', making understandable how the 'correct' is connected to the 'transformed'. The structuralistic view of language already developed a theory to fulfill this purpose.

De Saussure concluded that every language is a complete system of signs. The *parole* is an external manifestation of language, corresponding to the speech of an individual. Hence, the language (*langage*) is the set of actions, values and relations necessary to the speech to be intelligible within a common environment; in contrast, the *parole* is 'what is said' accordingly to the will and individual features of the speakers. Nevertheless, *langage* and *parole* are not two phenomena composing a language, but two stages of the same phenomenon, and their characteristics are not unique as epistemic or cognitive functions; they are descriptions of these functions in the speech. The basis of these functions are found in deeper–nonverbal–properties of the systems of signs, coming from feedback loops or 'spirals' featured by attractors, repulsors and bifurcations (a conceptualization already developed in the field of dynamical systems). The fundamental steps of these spirals can be characterized as relatively unstable stages of *grammatical correctness, idiolectic preference, ecolectic correctness* and a *stylistic preference*, eventually feeding a transformed grammar.

Stylistic spiral. Characterization of the functional cycles of language as stages of relative stability and tendency.

This cycle describes a exchange between the endosigns turning into exosigns, the psychologically egocentric turning into the extrinsic in semiotic and linguistic processes, coming the inner into the outer, from the primary environment (the body) to the local (οἶκος, the 'house') and to the global environment (the language-society). The rigid and the flexible parts composing the linguistic–as well as the musical–strings of meaning, here engage the opposed and the complementary relations in a same system, not through a circle of predictible goals but through a succession of variable targetings, movable according to the possible combinations in each step of a symbolic negotiation. This description may contribute to understand that the traditions do 'change with time', and the interpretation of styles 'across time' cannot remain unchanged, something that Kurkela detected as a constant transformation within the musical styles (Kurkela 1986:35).

The meaningful use of this conceptualization of musical styles into an ecological frame should comprise a reconsideration of musical variety–and this involves cultural and linguistic diversity, as an essential matter for musical practice and musical research on a field that implies the intersection of aesthetics and ethics. Then musicology should learn from the recent experiences in ecolinguistics, since "[…] ecolinguistic initiatives have proved to be particularly successful, so much so that the constantly changing forms of language contact and multilingualism can be described more satisfactorily. [Under these initiatives] more groups are being

included in the traditional autochthonous and allochtonous forms of multilingualism, in addition to the native minorities" (Nelde, 2002:334).

6. Conclusions

In the wake of considering style as a result of dynamic relations in music and in language, it might be questioned whether its cycles are involved into greater systems of biological complexity. If this question is relevant to the semiotic and linguistic investigation, then Mufwene's argument considering language dynamics as Lamarckian species in contact and mutual influence, could engage a major study of language (and music) by its feedback loop effects following a displacement like the here modeled *stylistic spiral*. This outlook suggests that notions like *code-switching, code alternation, passive familiarity, negotiation, attrition* and *grammatical replacement* (Thomason), might connect this approach to language, to an equivalent one in music. This would explain at least general aspects of attraction, repulsion and bifurcation in musical constraints, preferences and correctness rules.

As Robertson points it out, matching to an extensive investigation on musical and linguistic feedback loops, "the two fundamental types of feedback loops, positive and negative, have effects that are radically different: negative feedback tends to produce stability and resistance to change; positive feedback produces instability and even catastrophe. Both types of feedback loops are important in biological systems" (Robertson, 1991:469*ss*). Indeed, there are reasons to consider that styles in music and in language can be stable and resistant to change, or unstable and fusionable, obeying self-organizing principles and following trends that eventually lead to an alternative stage of relations. The investigation of these principles in music may serve to a wider understanding of stylistics as dynamic process.

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