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Ethnography as complexifying lenses for sociolinguistic analysis

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Anna De Fina

The notion of complexity has attracted a great deal of attention thanks to the adoption of Complexity Theory in many diverse disciplines, such as mathematics, physics, computer science, biology, neuroscience, climatology, and so forth. In recent years applications have started to gain momentum also in the social sciences (see Byrne 2014). Linguists have been slower to follow the trend. Indeed, reflections on complexity in linguistics until recently have been confined to issues of structural and developmental differences between languages and how those may affect language acquisition and learning (see for example Givon & Shibatami 2009, Kusters 2008, Miestamo et al. 2008). The questions asked within this approach are of interests mainly for researchers involved in creolization, indigenization, contact and historical linguistics who work within structuralist and functionalist perspectives. However, more recently, complexity theory and its implications for the study of language in society have also been introduced to sociolinguists and applied linguists in the light of a more general theoretical-methodological rethinking in the area. I will refer in particular to work by Larsen-Freeman (1997) and Blommaert (2014) who have offered stimulating reflections on the implications of complexity for socio and applied linguistics. In this paper I take up such insights to further illustrate how the study of sociolinguistic issues can benefit from a complexity angle (rather than strictly from complexity theory), but also to exemplify what such approach may mean when applied to sociolinguistic data showing how a complexity inspired analysis can open new perspectives on the issues observed and allow for a more in-

depth understanding of sociolinguistic processes and phenomena. I will also argue that ethnography is the best tool for such 'complexification' process since it forces us to critically assess many assumptions that we, as sociolinguists make about aspects of our research. In the following sections, I provide some general background on complexity theory and discuss its applications to socio cultural linguistics, then I present my project and the data analysis. Finally, I discuss some implications for sociolinguistics.

Complexity theory and linguistics

It is notoriously difficult to define the term 'complexity' and also to distinguish technical and everyday uses of it. 'Complex' in technical terms does not equate 'complicated.' However, definitions are not easily found. Gell-Mann and Lloyd (2013 p. 387) offer a useful angle when they propose to talk about "effective complexity" rather than "complexity". They define the effective complexity of an entity as "the length of a highly compressed description of its regularities." As an intuitive example, they propose to picture a novel with many characters, scenes and subplots such that a simplified representation of it would appear reductive. Complexity, however, is not equal to abundance of random detail, given that, on the contrary, the objective of the analysis is to find regularities in the data.

But why do we need complexity theory at all? The reasons that have led to the development of this theoretical framework lie in the dissatisfaction of scientists with linear models and simple causal links in the explanation of a variety of phenomena that go from physical changes in the environment to economic flows. According to Sherry (2015) for example, from the mid 20th century on scientists started to notice the existence of phenomena, such as superconductivity or bird flock patterns that

may not be explained through these simple models because they involve complex interactions and unpredictable behaviors. Explaining events and actions of this type involves “dealing simultaneously with a sizable number of factors which are interrelated into an organic whole.” (Weaver 1948, p. 51, quoted in Sherry 2015:27).

A number of issues become apparent when studying complex systems:

1. The behavior of the whole cannot be explained simply in terms of the behavior of its parts, but needs to take into account all the different relationships established by actors in the system. Many systems of this kind are ‘self-organizing,’ that is their behavior is not influenced by external factors. Thus, flocks of birds form certain patterns independently of external conditions for flying.
2. These systems seem to experience sudden and dramatic changes that appear to be caused by very small actions. The classical example here are events like avalanches or landslides that seem can be started by a small incident like the movement of one single rock.
3. Complex systems are highly dynamic and interdependent in the sense that they appear to be structured through complex nodes and networks rather than through linear or hierarchical relations (Johnson (2011)).

Theoreticians have provided a number of criteria to distinguish complex systems from other systems. Flake (1998:4) for example, provides six criteria: collections, multiplicity, parallelism, iteration, recursion and feedback.

Like other social scientists, linguists have started to consider the insights that complexity theory can offer for the study of language since arguably in many ways languages can be regarded as complex systems: they are spoken by a multiplicity of actors, their use and development are subject to a great many factors interacting at different levels, they exhibit recursivity and iteration in many of their processes, they

are sensitive to feedback by users. Applications of complex/chaos theory to language studies have been proposed by Larsen-Freeman (1997) (but see also Larsen-Freeman and Cameron 2008 for further developments). She suggested that Second Language Acquisition itself can be seen as a complex system because of the many interacting factors that characterize language development and the non linear nature of its paths on the one hand, and because of the alternations between order and chaos in inter-language systems on the other hand. However, rather than trying to fully develop the idea that SLA represents a complex system, Larsen-Freeman uses chaos/complexity theory more as a perspective on the study of language acquisition issues. Thus, she argues that, for example, developing learners' grammars should be conceived of as open systems that are made much more unpredictable if individual creativity and social interaction are factored in. Similarly, she points to stability and instability not as polar opposites, as implied by the privileging of stability in their assessment, but rather as co-existing characteristics of interlanguage.

Further reflections on this theme come from Blommaert (2014), who talks about the notion in relation to language in use. Blommaert sees the complexity and chaos theories as a source of inspiration for rethinking our approach to sociolinguistics, thus the recourse to this concept is an integral part of a theoretical rethinking of basic assumptions about language that have come more and more under fire with the development of a sociolinguistics of globalization. Blommaert sees sociolinguistic systems as complex in the following ways:

- They are in perpetual change due to the action of internal and external forces
- They are centrality defined by mobility as a force at all levels so that semiotic resources, practices, meanings and indexicalities are subject to change as they move in time and space and across scales

- They are the field of simultaneous actions of different scales and different historicities
- They are subject to the impact of different scales and involve different indexicalities in different times and places
- They are playing fields of semiotic and communication processes where remote and recent temporalities are at play together in such a way that for example speakers use linguistic elements and media that have a very stable and unchanging history together with new linguistic elements and media, or combine historically stable with historically instable elements and media.

As it should be clear from the above, neither Larsen-Freeman nor Blommaert advocate embracing complexity or chaos theory as a tool for studying linguistic systems. Such a move would be unwarranted as no matter what the similarities are between complex systems and language systems, the objectives and methods of complexity theory and of qualitative approaches to language are entirely different. Complexity theorists are trying to create models that can predict change in systems, they use mathematically based algorithms and apply them to large amounts of data so that they can be computerized and studied quantitatively. This type of investigation represents a far cry from the type of research practiced by linguists interested in language use, as their methods are centrally defined by ethnographic and ethnomethodological approaches, which defy computerized analyses of large data. What they suggest instead is that complexity theory can become a source of inspiration to develop new ways of looking at linguistic phenomena and new instruments to analyze them. Indeed, social scientists are increasingly claiming that in order to build strong theories, we do not necessarily need traditional scientific

models but may need theories that are “complex, defamiliarizing, rich in paradox” (Ofori-Dankwa and Julian 2001, p.416) and unsettle existing frameworks.

In the case of sociolinguistics, such enterprise involves, from my perspective and based on much recent work in sociolinguistics, essentially a rethinking of binary oppositions and one-to-one correspondences between language variables and social categories in favor of simultaneity, coexistence and dynamism, a bringing in of different dimensions of space and time in the analysis of language data and, most of all a reflexive awareness on the way we as linguists apply categories of analysis to our data. In the rest of this paper I will argue that central to this program is the use of ethnography as a kind of ‘complexifying lenses’ on linguistic phenomena that allow for capturing emerging trends in the way linguistic repertoires are used and new indexicalities are created.

Study: background, data and methodology

The data that I use to illustrate the above points come from an ethnographic study conducted in the Spring 2011, in a 5th grade elementary school in an inner city area in Palermo: the Istituto Statale Comprensivo Turrisi Colonna. The study consisted of intensive participant observations of classroom activities and breaks, video and audiotaping and interviews with children and teachers. I carried out my observations between January and March 2011, but tape recording continued until May 2011 with the teacher self- recording during some lessons in April and May of the same year for a total number of 36 hours of recordings.

My role in the classroom was that of a participant observer. For the most part, I sat next to the children or the teacher taking notes and recording. I however, often also helped the children do their work in class. I placed one recorder on the teacher’s

desk and another recorder on a student's desk moving it from time to time so that recordings reflect both face-to-face interaction with the teacher and student/student conversations. During breaks I either conducted interviews with children and teachers or went around the classroom observing and recording different groups and taking notes. My presence, after causing much interest in the first two or three hours of observation, was soon accepted as part of the routine.

The focus of the study initially was on the insertion of migrant children in Italian schools. In particular, I was interested in observing classroom interaction among peers and with the teacher to understand how immigrant children or children of immigrant origins fitted in Italian schools both linguistically and socially. Turrisi Colonna was chosen because of the high enrolment of foreign born children in the school. Migration of foreign workers in Palermo has been increasing dramatically in the last 20 years as changes to migration flows have brought thousands of new migrant groups and refugees to the island, so there are now about 15,000 foreign students in the city schools. In Turrisi Colonna about one third (28,57%) of the students are immigrant or immigrant origin children. Students originate from 12 different countries including Tunisia, Morocco, Bangladesh, Mauritius, Pakistan, Sri Lanka and China. As is the case in many other schools in Palermo, teachers and administrators struggle to accommodate for the needs of such diverse population, but they also deal with the very complex social reality of inner city areas.

The classroom that I observed was composed of 18 students all between 10 and 11 year old: 10 boys and 8 girls. Of these, 11 (7 boys and 4 girls) were born in Sicily of Italian parents, 5 (4 girls and 1 boys) were born abroad of foreign parents and 2 were born in Sicily of Tunisian parents. Among the foreign born children, 3 girls were

from Bangladesh, 1 was from Sri Lanka and 1 boy was from Morocco. Among the Sicilian children, 1 girl was a special needs student (see table 1).

TABLE 1: CLASS COMPOSITION

Born in Italy	Born abroad	Born in Italy of parents born abroad
7 boys	1 boy (Morocco)	2 boys (Tunisia)
4 girls	4 girls (3 Bangladesh 1 Sri Lanka)	

The classroom teachers, two females, taught respectively science and math and Italian, history, English. There was also one female teacher devoted to the special need student.

Complexifying categories and data through ethnography

My initial focus was, as mentioned earlier, on the insertion of immigrant children in school and therefore I was particularly interested in the ways linguistic repertoires and linguistic resources were used around the class, but also in attitudes towards the different languages and their speakers in the classroom as emerging in interactional exchanges among participants and interviews. The first problem that my ethnographic observations revealed about my approach was the simplistic nature of my categorization of participants, which in turn rendered my initial framing not useful at all. I had set out to study ‘immigrant children’ and ‘local children’, under an implicit assumption (due to years of sociolinguistic ‘habitus’) that related categories such as those of ‘native’ and ‘non-native speakers’ would immediately become relevant when studying migrants versus locals. Of course, I soon realized that the

category 'immigrant children' included children born in Palermo, children who had come to Palermo 7 or 8 years earlier, and children who had been in the country for a year or less. As a consequence, the categories of 'native' and 'non native' were totally inadequate to capture differences among children and between children and teachers in terms of linguistic behavior and attitudes. Indeed, children belonging to the 'immigrant' category exhibited markedly different behaviors and attitudes first of all because some of them had greater competence in Italian than others and such competence did not necessarily correlate with time spent in Palermo, and secondly because of many other group internal differences. For instance, there were children who were completely comfortable speaking in Italian, children who never used their parent's native language and children who constantly used it (at least in certain spaces of the classroom), children who also used other languages in the repertoire of the classroom and children who did not.

The group of 'native speakers' also exhibited great variability in terms of language repertoires, attitudes and uses. Indeed, languages that were part of the repertoire of individual children in this classroom included Italian, Sicilian, Bangladeshi, Sri-Lankan, Tunisian, Moroccan Arabic and English, with some children sharing some of these languages and others not sharing them. For example, two of the Bangladeshi girls spoke both Bangladeshi and Italian and (as we will see) made attempts at speaking Sicilian, another Bangladeshi girl spoke Bangladeshi, but very little Italian and made no attempt at speaking Sicilian. They all spoke English much better than Sicilian children. Among the Tunisian boys and the Moroccan boy only Italian and Sicilian could be heard with different degrees of preference among them. Sicilian girls spoke almost exclusively Italian and Sicilian boys spoke a great deal of Sicilian and some Italian, with different degrees of preference.

My observations on language use led me, however, to also 'complexify' the division between Italian and dialects. Without touching upon the amply debated question of whether varieties called 'dialects' can be regarded as such and not as entirely separate varieties, the problem remains of separating 'codes' on a linguistic continuum that goes from more or less locally marked Italian to Sicilian dialect. Such enterprise is notoriously difficult because while individual utterances can sometimes be characterized as 'Sicilian' or 'Italian', what happens in many cases (and certainly with the children I observed) is that speech can be placed on a continuum on which one can distinguish agglomerations of resources sometimes more closely associated with dialect and sometimes with more or less regionally marked varieties of Italian. This difficulty is amply recognized in studies of spoken dialects (see Berruto 1985) and spoken Sicilian as well (see Matranga 2007).

These observations lead to the obvious conclusion that the only way to make sense of language use in this community is to look at how participants treat language varieties and language resources in order to understand how indexicalities are created and emerge. In this case, for example, my observation of classroom interactions pointed to the fact that Regional Italian (let's call it Italian for the sake of simplicity) and Sicilian were treated in some cases as distinct codes while in other cases elements from both languages gave rise to mixed repertoires that had themselves an unmarked status. To be more concrete, often interaction among the boys involved the use of this hybrid form in which Sicilian and Italian elements were blended and breaks into unmixed utterances were not marked in any way. See the following example, where the children are playing with the tape recorder. The children involved are Carlo, Antonio, Medhi and Rym (all names are pseudonyms). The first two are Sicilian born while Mehdi and Rym were born respectively in

Morocco and Tunisia. Utterances and words in dialect are in cursive and glosses of utterances are in square brackets.

(1)

- 1 Carlo: Antonio lo metti da capo?
2 Antonio: See:::!
3 Mehdi: Così la maestra *nni fa i* complimenti
4 Rym: Se:::!
5 Medhi: Siamo molto cretini e molto scemi(...)
6 Antonio: (...) *'ca chi state dicienzo viero che l'â*
7. *fermari?*

Translation

- 1 Carlo: Antonio can you start it again?
2 Antonio: Wha:::t!
3 Medhi: So the teacher *gives us* compliments! [praises us]
4 Rym: Wha:::t! Wha:::t! Stupid *that we are!* [we are so stupid!]
5 Medhi: We are very stupid and very silly.(...)
6 Antonio: (...) *what are you talking about? Isn't it*
7. *true that he has to stop it?*

In (1) children are producing utterances in Italian (1 and 5), mixed with elements of Italian and Sicilian (3 and 4) or entirely in Sicilian (06). Let us not discuss the grey areas for the sake of brevity as there are elements that could be attributed to Italian

or Sicilian such as the noun phrase “i cretini” (4). It would be extremely artificial to try and attribute specific meanings to each switch between ‘codes’, first of all because no marked frame change is occurring here, and secondly because these types of patterns recur throughout the recordings. Thus, it can be said that the children (at least the boys, and I will come back to that) in normal conversation use elements associated with Sicilian and Italian as part of their repertoire of resources.

On the other hand, transitions from Italian to Sicilian and vice-versa may be marked in other interactions, for example when it is one of the teachers (the only one who occasionally uses Sicilian) who produces them. This is because the teacher shows a strong preference for Italian and enforces the use of Italian-only in class and also because the great majority of utterances in dialect by the teacher are associated with mocking, joking and scolding. Thus, when the teacher uses Sicilian, her switches are always meaningful.

On the other hand, dialect seemed to be treated by the children also as a specific code separate from Italian when interactions were particularly marked, that is when they were not neutral but involved heavy mocking or confrontations, for example when insults were exchanged and fights broke. In those cases, the use of utterances in dialect escalated particularly for boys who exchanged insults. In those cases, Sicilian seemed to be associated with increasing verbal violence and aggression since children who initially uttered turns or part of them in Italian switched entirely into Sicilian:

(2)

1. Marco: Nino è uh Nino è ignorante ignorante
2. ignorante!

3. Nino: (...)
4. X: (...) *stu strunzu* Marco: E' ignorante
5. Nino: *Pensa a ttia!*
6. Marco: ((singing)) *Mariella mariella*
7. (...)
8. X: *Pari me nonno!*
9. Gianni: *Pari me ziu!*
10. Marco: *Nino è na nieghia! è na munnizza*
11. (...)
12. Gianni *To' zio? Chi è bиеeddu!*
13. Nino: *Tu u canusci a me zio?*
14. Gianni: *Mario io si! To' zio fa u scurpiune!*

Translation

1. Marco: Nino is uh Nino is ignorant ignorant
2. ignorant!
3. Nino: (...)
4. X: (...) *that idiot* Marco: he is ignorant
5. Nino: *Think of yourself!*
6. Marco: ((singing)) *Mary! Mary!*
7. (...)
8. X: *He looks like my granddad!*
9. Gianni: *He Looks like my uncle!*
10. Marco: *Nino is good for nothing and trash*
11. (...)
12. Gianni: *Your uncle? He is beautiful!* [he is ugly]
13. Nino: *Do you think you know my uncle?*

14.Gianni: Marco I do! *Your uncle is a scorpio!*

As seen in (3) boys went from Italian (lines 1 and 2) to mixed utterances (line 4) to an almost exclusive use of dialect as the fight escalated, and therefore it seems that dialect becomes one of the tools for the expression of manliness. Thus, Sicilian dialect seemed to have different potential indexicalities when used in peer group and when used in interactions with the teacher, as while in peer interaction it may or may not give rise to indexical associations (which were anyway specific to the kind of interaction and agents involved), in student teacher interactions it was basically always marked.

Another important discovery that came from my observations on the use of dialect in peer interactions was the saliency of gender categories vis-à-vis other categories such as that of native and non-native speaker to understand linguistic behavior. A general count of uses of utterances with Sicilian in them yielded the following results

TABLE 2: DISTRIBUTION OF TURNS IN DIALECT PER LESSON

Day	Turns by boys in dialect	% with Sicilian	Turns by girls	Turns by girls with Sicilian	% with Sicilian
2-7	12	15%	2	0	0
2-9	10	5%	148	0	0
2-11	81	30%	276	11	4%
2-15	68	13%	131	0	0
2-17 rec. 1	41	8%	107	3	3%
2-17 rec.2	16	19%	111		4%
3-16 rec. 2	132	43%	168	0	0
total	360	18%	943	19	2%

As noted in this table, while in general turns in Sicilian were notably rare on the whole among girls (2% of total), they were not rare at all for boys (18% total but with high points of 43% in one lesson). The table also shows that girls only used Sicilian during some of the lessons observed, while boys used them in all the lessons.

The table and utterance count give us a big picture which as such would confirm general sociolinguistic findings about gender differences between boys and girls in linguistic behavior in classrooms (see among others Marcato 2007, Kyratzis 1999, Sheldon 1990). But again, the big picture explanation does not tell the whole story and ethnographic observation allows for a complexification of this data. When we look at dialect utterances by girls, we notice that they are all, except for one case, produced by two of the Bangladeshi girls, Nandita and Bani, within sequences in which they are joking, playing or fighting with each other. An example follows:

(3)

1. Bani: Bella Sena! Sena!
2. Nandita: Tu non sei bella!
3. Bani: Se tu non-
4. Nandita: (...) non sei bella
5. Bani: @@@@
6. Nandita: AH! *scimunnita tu si' scimunnita!* Tu
m'hai
7. fatto questo! (pointing to a scratch on
her arm)

Translation

1. Bani: Beautiful Sena! Sena!
2. Nandita: You are not beautiful!
3. Bani: If you don't-
4. Nandita: (...)You are not beautiful
5. Bani: @@@@
6. Nandita: AH! *Stupid! you are stupid!* you did this
7. to me! (pointing to scratch on her arm)

Here Nandita experiments with an utterance in Sicilian dialect in connection with an insult to Bani. Nandita and Bani were also caught on tape using dialect in pretending to play a game that is actually never played by girls but continuously played by the boys.

The other two girls of foreign origins do not use Sicilian in the recordings at all, which could or could not be due to their limited competence in Italian. However, the Sicilian girls in class are also not heard speaking Sicilian, except for one case. This lack of interest could very well be explained by the fact that Sicilian is an integral part of the language repertoires spoken in their homes and neighborhoods since they come from poor families living in this inner city areas and in Palermo in quantitative terms the use of dialect in everyday life still largely correlates with class.

In this way, both Nandita and Bani are showing a use of linguistic resources that is different from the rest of the girls. These differences do not end here as they are also frequently caught on tape engaging with the different languages in their repertoire and showing a keen interest in sharing such resources with others in class. So, for example, they very often translate instructions and homework for Parveen

and Sena in order to help them, given the latter's more limited command of Italian and they developed a kind of 'foreigner talk' that they only used with Sena in order to coax her into speaking Italian. They also engaged in various forms of translanguaging with the Arabic speaking boys, often in connection with fighting through the utterance of insults which each party uttered in their own language or as responses to active requests from the boys to learn (mostly) bad words in Italian. There is no space to fully develop the topic of translanguaging here, but I will give an example of how varied the use of languages and the extent to which they engaged in language play in the case of Bani and Nandita. Both of them engaged in what could be called "language teaching" in their interactions with Sena:

(4)

1. Sena: Che cos'è?
2. Bani: *Anda sunda munda mala* e poi cosa c'è? Sena
3. dillo! *anda sunda munda mala?* e poi?
4. Sena: *Andu? Ara,*
5. Bani: *Andu?*
6. Sena: *Ara.*
7. Bani: *Andu? ara* significa sei cinque e sei *andu,*
8. *ara, facile: anda sunda munda mala.*
9. Sena: Facilissimo ((...)) non lo so che cos'è.

Translation

1. Sena: What is that?
2. Bani: *Anda sunda munda mala* and then what?
3. Sena! say it! *anda sunda munda mala?* and then?

- 5.Sena: *Andu? Ara,*
- 6.Bani: *Andu?*
- 7.Sena: *Ara.*
- 8.Bani: *Andu? ara means six five and six andu, ara*
9. *easy: anda sunda munda mala.*
- 10.Sena: *Very easy ((...)) I don't know what that is.*

In this fragment Bani is teaching the numbers in Bangladeshi to Sena (who is a speaker of Sri Lankan) and making sure she repeats them correctly. From Sena's answers it is clear that she has been already taught some of these numbers because she responds correctly to Bani's prodding.

Practices, spaces and indexicalities

To sum up the arguments presented up to now, the examples discussed point to the existence of a variety of language repertoires, uses and practices in class. It has been observed first, that appropriation and uses of language resources is not easily correlated with single social variables such as speaker's identities, particularly big social identity categories such as 'immigrant,' 'native speaker', 'female.' Rather, we have seen that language choices interact in complex ways with identities and other aspects of the context. Secondly, the different treatment given for example to dialect by actors involved in different activities and spaces shows that the classroom is a playing field for the emergence and functioning of different orders of indexicality underlying semiotic practices and interpretations. As I will argue, such orders of indexicality are also anchored to the distribution and division of classroom physical and metaphorical spaces. Indeed, in order to capture the full implications of language

use and language attitudes in this community of practice we need to attend to its characteristics as a complex community, in a certain sense, a complex system of its own, which is at the same time multilingual and polycentric, is made up of actors who enter into reciprocal relations that are regulated by networked connections and whose actions are distributed within and across spaces and times. If we recognize such complexities, then we also need to attend to the relationships between different spaces and different scales in the management and interpretation of linguistic resources and their deployment.

Such spaces are both physical and metaphorical. Goffman's (1959:106-160) notions of 'front' and 'back' regions of everyday life prove useful to describe them. Goffman conceives of these regions as adjacent spaces where rules for behavior are completely different and which often enter in such as to contradict each other's rules. This classroom presents a front stage space, which coincides with the whole space of the room in teacher-fronted activities. But of course within this space other spaces open in which peer-to-peer interactions and activities such as games, music listening or cell phone use can take place. Such spaces may be located in different desks where the children sit, but take over when the class is in recess or during parties and breaks of all kinds, although mostly when the teacher is absent, as the virtual space of teacher-student interaction is always potentially relevant, due to the differential power in relationships. When class is not in session however, chairs and tables can be moved, giving rise to a different physical environment. Also, different rules of engagement are at work in spaces external to the classroom such as the computer room, to which children are taken once a week and of course the corridors and the school lunch room.

Spaces and times are also related with each other since not only do different orders of indexicality lie behind semiotic activities in different spaces, but spaces (and therefore the potential indexical fields related to them) change configurations across times. It must also be noted that there are many types of potentially relevant spaces for the use of language resources and indexicalities. For example, nodal networking spaces, that is places where groups of people tend to conglomerate, are important sites of observation for the ethnographer. In this class one such space was a desk in the back right corner where Nandita and Parveen almost always sat together. At this desk Bangladeshi was spoken as much as Italian, Bangladeshi food was eaten and DVD of Bangladeshi movies were exchanged.

The teacher-fronted space had implicit but very clear rules of language use. It was conceived as a basically monolingual Italian space where use of other languages (unless they were part of the curriculum, such as English) was discouraged and openly opposed to by the teachers who enforced the Italian only rule. See for example the following exchange (in translation):

(5)

1. Bani: *If you use this color would it look nice?*
2. *Use light color on this one and dark color*
3. *on the other.*
4. Parveen: *This one is too dark*
5. *it is too dark,*
6. T1: *Ehi! What language are we speaking?*
7. Bani: *The way you have to color.*

The teacher question “what language are we speaking” here is to be interpreted as a request to stop using Bangladeshi and switch into Italian and indeed Bani responds by immediately switching into Italian and summarizing her conversation. Thus, using languages other than Italian in this space was regarded as a break of the rules and uses of Bangladesh carried potential second order indexical associations with lack of discipline. It is noteworthy that students themselves sometime enforced the ‘Italian only rule’ by transporting the rules of the public space of the classroom into their own peer to peer interactions in order to suit their own communicative objectives. Thus resources and indexicalities change as they travel across physical and virtual spaces and also involve identities at different scales such as that of peer group member, student, teacher, etc.

It would however, be a mistake to regard spaces and indexicalities as entirely separate since resources are constantly being transported, reinvented, redrawn, contested and also confirmed. In that sense, we would not be able to account for language uses and attitudes in a community of practice if we did not regard it as a group with a complex ecology. For example, if we privilege the strictly monolingual space of teacher fronted interaction we may be led to minimize the impact that children from non Sicilian cultural backgrounds and speaking different languages are having on educational environments like the one we have been considering. Indeed, we would be unable to explain why a Sicilian girl like Martina would exclaim during a break “I wish I was a Muslim!” if we did not consider the leading role played by Bani and Nandita in the classroom. Such role was not apparent so much in the official space as male children took up a lot of the teachers’ attention. But on social occasions and during breaks the girls were a focus of intense attention. For example, during the Carnival celebration, the three Bangladeshi girls went to school dressed in colorful

sarees and the teachers asked them to dance and sing in their language in the midst of general admiration. Their home food was also a focus of positive comments by teachers in conversations with each other during breaks. As a consequence of all of this, Sicilian children showed a great deal of curiosity also about Bangladeshi, as demonstrated by requests of translations and words in this foreign language, even though they were not allowed to express it during class time.

While processes at different local scales are illuminating of interactional and semiotic practices in the classroom, the potential impact of other scales having to do with historical and long term processes is also evident in this data. For example, the historical status of the Sicilian dialect as both a very widely used and a dis-preferred language variety indexical of low social status is evident both in the limitations posed to speaking it in class fronted interaction by the teachers and in the interviews that I conducted with the children. The status and perception of Sicilian in this classroom mirrors and reinforces processes of exclusion and vilification of local languages that have been enforced by the Italian state since the 1800's and that are particularly discriminatory in regions like Sicily, where the social divide between rich and poor is enormous. The impact of processes at higher scales was also evident when children verbalized what could be regarded as implicit "language hierarchies" in which Tunisian Arabic was at the bottom of the scale consistent with the situation of Northern African immigrants to Sicily

Besides the impact of spaces and scales, the analysis has also shown how spheres of linguistic engagement that have to do with the expression of emotions and desires which have been neglected for years in linguistic analysis (see Kulick 2003 for a discussion) also exert their own complex influences on local interactions. Here, for example, we have seen that exclusionary ideologies against both dialects and foreign

languages coexist with inclusionary and jocular practices in which such varieties or resources drawn from them are used for fun and experimentation.

Conclusions

I have argued in this paper that complexity is a useful metaphor for explaining language use and change pointing ethnography as particularly useful lenses for complexifying the study of linguistic phenomena. Indeed, ethnographic observation offers the tools to reject simple explanations and correlations between language resources, identities and events focusing attention instead on the simultaneous presence of contradictory phenomena (such as alignment with stereotypical expectations and expressions of desires), on the variability of indexical associations that the same resources can give rise to in different spaces and, on the interactions between different identity, time and space scales within the same community. For this reason, the ethnographic study of communities of practices appears as a powerful antidote against simplification since it allows researchers to deal simultaneously with a ‘sizable number of factors’ which interrelate in forming the ecology of particular communities. The question that arises is: does taking all of these elements into consideration make linguistic analysis unmanageable? Are we simply adding a lot of detail and foregoing the search for regularities? I don’t believe so. Communities like this one can be regarded as vantage points to observe linguistic and social linguistic change and therefore they demand painstaking and detailed analysis on the part of sociolinguists. Thus, ethnography constitutes a necessary instrument for the development of new forms of thinking about our data, particularly in periods, like the one we are living in, of great social change.

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