

Children's Representations of Educational Experience: Comparative Results of Qualitative and Lexical- Textual Analyses of In-Depth Interviews

*Rappresentazioni dell'esperienza formativa dei bambini: risultati comparativi
di analisi qualitative e lessico-testuali di interviste in profondità*

Antonietta Migliore

Dept. of Social Sciences, via S. Ottavio 20, 10100 Torino, antonietta.migliore@unito.it

Arjuna Tuzzi

Dept. of Sociology, via Cesarotti 10-12, 35123 Padova, arjuna.tuzzi@unipd.it

Riassunto: Il *corpus* in analisi è costituito da interviste a bambini di quinta elementare focalizzate sulle rappresentazioni dell'esperienza formativa (organizzazione dello studio, relazioni con compagni ed insegnanti, ruolo della famiglia, prospettive future, etc.). Un primo studio sociologico ha analizzato gli effetti del complesso bagaglio culturale e sociale ereditato dalle famiglie su queste rappresentazioni. Con questa seconda esperienza si vuole valutare attraverso un approccio di tipo lessico-testuale in quale misura i risultati e le categorie di analisi dello studio qualitativo si ripresentano in altra forma nei risultati dell'analisi statistica.

Keywords: lexical-textual analysis, content analysis, in-depth interviews, children's representations, children's educational experience

1. Introduction

The methods aimed at content analysis according to a lexical-textual approach and the more traditional methods based on qualitative analysis are not necessarily mutually exclusive and their combined use is viable to achieve a more thorough understanding of social phenomena. Attempts aimed at the combined implementation of both approaches proved fruitful (Tuzzi 2003, 2000). The present case-study deals with the connection between the definition of theoretical models and the data provided by a lexical-textual analysis. The study is based on the analysis of a limited number of ideal-type interviews; consequently, it is characterised by all the drawbacks deriving from a limited corpus and a small number of cases. Nevertheless, it proves a meaningful example to promote an interdisciplinary dialogue on the opportunities provided by statistics as a confirmative method (it should be underlined that in this article technical and statistical aspects remain in the background and readers should refer to the specific bibliographical references).

2. The point of view of children: the qualitative perspective

The research project on educational success illustrated herein is based on the analysis of the viewpoint of children, considered as participants in the social relations they develop

both in general and in the specific field of learning and school life. The goal is to go beyond social and cultural determinants connected to the family of origin and understand what factors foster success, starting from the strategies implemented by children when they are learning. The project was inspired by a study conducted in Geneva by Cléopatre Montandon on the point of view of children with reference to education (Montandon 1997), but it is innovative in that it focuses on educational success. The socio-cultural background is a paramount factor in educational success and the continuation of education (Pisati 2002), especially in prestigious and elitist institutions (Terrail 2002). Nevertheless, as stressed by research in the sociology of childhood, children are participants in educational processes (James and Prout 2004, Corsaro 2005, Sirota 1998) and, consequently, also in scholastic learning. The characteristics of parental educational approaches favouring educational success (Pourtois and Desmet 2004) are mainly retrieved from their representations developed by children. Children develop their own metacognitive strategies (Albanese 2003) and learn how to learn (Bateson 1980). It is well known that the social background is not the only factor which determines school results. Consequently, we endeavoured to identify the different modes according to which children experience scholastic learning and to understand how each mode may be related to educational success.

To this aim, two schools were selected in two different areas of Turin, in the north-west of Italy: one of them is located in a working class background, whereas the other is in an upper class neighbourhood. Two groups of pupils were selected attending the fifth year of a syllabus envisaging that on certain days of the week no classes are held in the afternoon. That scheme was selected rather than the full-time programme, although both are currently available in the Italian educational system, in order to have a better view of how children get organised to study at home. All 20 and 18 pupils of the two classrooms respectively were interviewed face to face and in depth by following a set of flexible open-ended questions (Cardano 2003). Oral interviews were recorded and transcribed. The analysis led to the identification of eight different modes (subtypes) according to which children become familiar with scholastic learning and all related activities. The result is not a classification of the 38 children interviewed, but rather the identification of eight ideal types: some children may belong to one subtype in terms of certain features, and to another subtype in terms of other features. 17 children may be considered “pure” since they are excellent representatives of the subtypes selected for the present study. The following dimensions were assessed within each subtype: parental educational approaches with reference to educational success; study methods and learning strategies; investment in scholastic success and success factors (internal or external causes); social interaction at school; self-esteem and self-effectiveness.

Three main models were developed, including eight sub-types, according to whether education plays a major role in the lives of children and their relatives, whether it plays a minor role or whether it is considered a challenge in the transition to adulthood (table 1). Such three models and eight subtypes provided analytical categories which were only partly derived from the available literature: the interviews were not developed to include respondents into various models/subtypes, but to gain insight in more general issues. The interviews were conceived as open-ended questions and models/subtypes were developed at a later stage, starting from the qualitative analysis.

1. According to the model attributing a “major role” to education, the family and individual life of the child fully pivots on learning. In the “educational role” subtype, this leads to personal satisfaction and contributes to creating an identity based on educational success. School results are excellent. In contrast, in the “scholastic performance” subtype, the central role played by learning is illustrated by a stressful

effort to achieve the brilliant results expected by both children and parents alike. Such high expectations and the efforts made to achieve the expected results lead to emotional repercussions, but educational success is generally achieved. Finally, the central role played by learning in the “instrumental role” subtype is shown by the strong efforts made to obtain an educational qualification that will ensure a better job as compared to the child’s parent.

Table 1. *Three models and eight subtypes (the number of interviews is reported below)*

1. <i>Centralità dello studio</i> 1. Education plays a major role			2. <i>Studio in posizione marginale</i> 2. Education plays a minor role			3. <i>Studio come sfida di transizione all'età adulta</i> 3. Education is considered a challenge in the transition to adulthood	
<i>valore formativo</i>	<i>performance scolastica</i>	<i>valore strumentale</i>	<i>centralità vita sociale con legami deboli</i>	<i>centralità vita sociale dai confini invischiati</i>	<i>ripiegamento su famiglia o quest. personali</i>	<i>tipo culturale dell'autonomia</i>	<i>tipo abbandonico</i>
educational role	scholastic performance	instrumental role	priority to social life with weak ties	priority to social life with very close social ties	withdrawal into the family or personal matters	cultural model of autonomy	abandonment type
2	2	2	1	2	2	3	3

2. In the second model implemented in the research project, learning plays a “minor role” in the lives of children and other factors are considered relevant, such as the relations characterising the most socially active members of the upper classes and involving numerous contacts and acquaintances to maintain their high social status, or very close relations within the family. Finally, children may consider learning as playing a minor role in their lives since they need to solve other problems they deem more urgent. This model envisages three subtypes which, albeit characterised by peculiar features, all share a marginal role played by education: “priority to social life with weak ties”, “priority to social life with very close social ties” and “withdrawal”.

3. Finally, in the third model learning is considered “a challenge in the transition to adulthood” and children need to manage on their own at school and in life in general. Its two subtypes - the “cultural model of autonomy” and “abandonment model” – differ in that in the first case children are supported by their families, who are jointly striving to improve their standards of living, and the ethnic group they belong to, in which the marked independence of children is considered a value. In contrast, in the second subtype children lack reference points and this is even exacerbated by their disagreement with the cultural models prevailing in their environment.

3. The corpus: the statistical perspective

The corpus for content analysis includes 17 interviews (only the respondents’ texts are considered) classified into eight groups according to qualitative criteria (table 1). From a statistical point of view our corpus includes $N = 59.764$ word-tokens (statistical textual units) and $V = 4.018$ word-types (items). A word-token is a particular occurrence of a word-type and N measures the size of the corpus. The vocabulary includes the list of V different word-types and the frequency of occurrence of each word-type is given by the number of corresponding word-tokens repeated in the corpus. A statistical approach makes sense only in the case of large corpora. The Type-Token Ratio (the index obtained by dividing the vocabulary size V by the corpus size N) and the hapax percentage (the index obtained by dividing the number of word-types that occur only once in the whole corpus by the vocabulary size V) measure lexical richness

and also help assessing whether the corpus is sufficiently large. A Type-Token Ratio (6.7%) lower than 20% and a hapax percentage (48.7%) lower than 50% allow to establish the viability of a statistical approach (Bolasco 1999).

In order to increase the amount of information conveyed by statistical textual units, we can recode the corpus and work with complex textual units (CTUs) instead of simple word-types. Simple word-types are ambiguous because they are isolated from their context of use and CTUs may contribute to solve this problem at least partially. A CTU can either be a simple word-type (e.g. '*madre*/mother', '*genitori*/parents'), or a compound (e.g. '*bacchetta magica*/magic wand', '*buoni voti*/good marks), or meaningful repeated strings (e.g. '*durante la scorsa settimana*/during the last week', '*sono fiero del mio lavoro*/I'm proud of my homework'). The aim of this coding procedure is identifying all word strings that receive a new meaning or change meaning if considered as a whole and, more generally, all sequences that make sense and are repeated several times within the corpus. This procedure can be easily performed by means of the Taltac software (Bolasco 2000, 2002, web pages: www.taltac.it).

The analysis also allows to distinguish among different kinds of CTUs: topic textual units, i.e. CTUs that are relevant for a specific topic (e.g. keywords concerning parents); specific textual units, i.e. CTUs that are peculiar to a group of interviews because they are repeated much more frequently in such interviews than in the rest of the corpus; exclusive textual units, i.e. CTUs that occur in a document and never in the others. In order to identify specific CTUs, we resorted to the traditional method (Lebart *et al.* 1998) based on the hypergeometric model. All CTUs which show a high probability of over-usage within a group ($p < 0.025$) are considered specific of that group.

In order to obtain a graphic representation of the system of relations existing among groups and between groups and CTUs, correspondence analysis techniques were implemented (Greenacre 1984). A two-ways contingency table was developed including rows named after the selected CTUs and columns named after the eight groups: the cells show how many times each CTU was repeated in each group. A comprehensive multi-dimensional representation would be very complex (dots on a 7-dimension hyper-space). Therefore, considering two axes at a time may provide a better solution (bidimensional point of view or dots on a Cartesian plane). Moreover, only a sub-set of CTUs was reported on the plane, in practice those which play a prominent role in determining the geometrical setting and facilitate reading of the graph.

4. First attempt: critical aspects of open-ended answers

At the beginning of the research project the opportunity was considered to analyse the open-ended answers given by the 17 "pure" children grouped according to their eight subtypes (table 1). The goal was studying their peculiarities and possibly identifying similarities among subtypes belonging to the same model. During the transition from word-types to CTUs, the analysis of repeated patterns immediately showed a very peculiar feature of the corpus: the repetition of very long meaningful strings (table 2).

If we consider that we are dealing with open-ended answers provided by children, the language used sounds too complex and the repetition of such long strings looks rather suspicious. To ascertain the nature of those anomalies, a preliminary analysis was carried out on the full corpus containing both the children's statements and the interviewer's prompts. The in-depth interviews of the present study include a core of topics dealt with by the interviewer according to a set of open-ended questions.

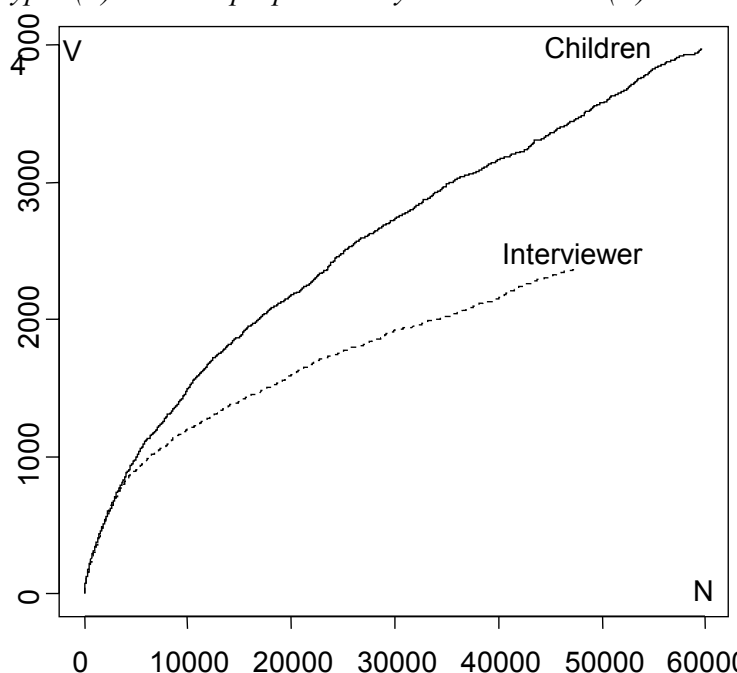
Although questions are not always the same, they tend to be repetitive. Figure 1 shows how the number of different words increases proportionally to the total number of words included in the corpora of the interviewer's prompts and the children's answers, thus showing the greater variety in the children's texts and the attempt made by the interviewer to limit her influence.

The analysis of both questions and answers included in the full corpus showed that the majority of the "suspicious" segments identified in the answers provided by the children are also present in the interviewer's questions. More precisely, it can be stated that such expressions were prompted by the interviewer's questions, of which the respondents reproduced whole chunks. As already noticed in other studies, the prompt provided by an open-ended question often leads to the reproduction of parts of the question in the answer. In other words, the interviewer's vocabulary "corrupts" the respondents' vocabulary (Tuzzi 2003, 150); most certainly, this influence is even more apparent when children are interviewed. The texts of answers to open-ended questions always provide peculiar material in terms of statistical/textual results, since data relating to the presence/frequency of words/expressions may be misleading. Such aspects are often neglected during content analysis, but they should be considered carefully.

Table 2. *Examples of "suspicious" repeated strings*

"quando l'insegnante stimola la discussione in classe"	"when the teacher stimulates discussion in the classroom"
"capire come mai certi bambini non riescono tanto bene"	"to understand how there are children who are less successful"
"se avessi una bacchetta magica"	"if I had a magic wand"
"l'insegnante si sbaglia e punisce un compagno che non ha fatto niente"	"the teacher makes a mistake and punishes a classmate who hasn't done anything"
"un compagno che sta per fare qualcosa che non è permesso"	"a classmate who is about to do something that he is not allowed to"
"i compagni in genere apprezzano le mie idee"	"my classmates generally appreciate my ideas"
"gli insegnanti apprezzano il mio comportamento in classe"	"my teachers appreciate the way I behave in class"
"non sono molto capace di organizzare il mio studio"	"I am not very good at getting organised when I study"
"so che se mi impegnassi a fondo potrei riuscire in tutte le materie"	"I know that if I really tried I could be successful in all subjects"

Figure 1. *Word-types (V) increase proportionally to word-tokens (N)*



To achieve more reliable results through the analysis, the passages in which the interviewer's influence is more marked should be eliminated from the answers included in the corpus. This is not an easy task since there is a danger of eliminating spontaneous expressions produced by children, or expressions reproduced by the interviewer at a later stage. Nevertheless, a qualitative approach calls for a selection, since the most structured passages of dialogues do not include useful elements to identify the profile of each subtype. Consequently, an analysis was opted for only including the children's answers (i.e. the interviewer's prompts were excluded) after having eliminated the passages including the most standard question-answer sequences from the corpus.

Despite that selection and the ensuing elimination of the most "suspicious" segments, the analysis of the children's answers did not reveal the peculiarities distinguishing each subtypes from the others nor common features shared by the subtypes belonging to the same model. A further analysis of the 17 children does not lead to any interesting patterns, i.e. the results obtained in terms of specificity, clusters, etc. are not easily interpreted from a sociological viewpoint. One fundamental lesson may be drawn from this first attempt and should be borne in mind every time the results of a qualitative analysis are assessed through a lexical-textual approach, especially when dealing with answers to open-ended questions: in a statistical analysis conducted at a later stage, identifying the criteria which have justified the theoretical foundation of models during the quantitative analysis is a very difficult task. One of the most obvious problems lies with the fact that qualitative analysis only focuses on certain information contained in an interview and tends to highlight more meaningful text chunks to the detriment of others. Furthermore, the interaction emerging during the interview between the interviewer and the child is also based on extra-textual information: implicit remarks, non-verbal elements, etc. (i.e. the child lies and states "I am a good student", but then he blushes, refuses to answer, contradicts himself, etc.). In contrast, the statistical analysis of contents according to a lexical-textual approach tends to provide a general picture of the language used, does not focus on certain passages to the detriment of others and is not affected by the "background noise" caused by the interview (interrupted sentences, hesitations, remarks understandable only in the light of contextual information not provided in the text, etc.). A lexical-textual analysis of interviews may highlight the importance of peculiarities which are not considered in a qualitative analysis. For example, stylistic or grammatical features may emerge which are difficult to detect through a qualitative analysis. Furthermore, some features may as well be interesting for linguists, but they also prove of little use within a specific sociological study (although they may prove useful at a later stage).

5. Second attempt: a combined keyword-driven approach

One of the obstacles preventing lexical-textual analysis from retrieving elements within texts that are consistent with the criteria which guided the development of the eight subtypes is connected to the choice of the CTUs to be considered for analytical purposes. Although experts might find it self-evident, it should be noticed that the traditional statistical selection criteria (frequency threshold, coverage rate, specificity, correspondence analysis) cannot take into account the theoretical rationale of ideal types. Consequently, to succeed in emulating the qualitative analysis process and compare and contrast the results obtained from both approaches, a more viable solution might entail a statistical analysis on a reasoned selection of topic textual units, i.e.

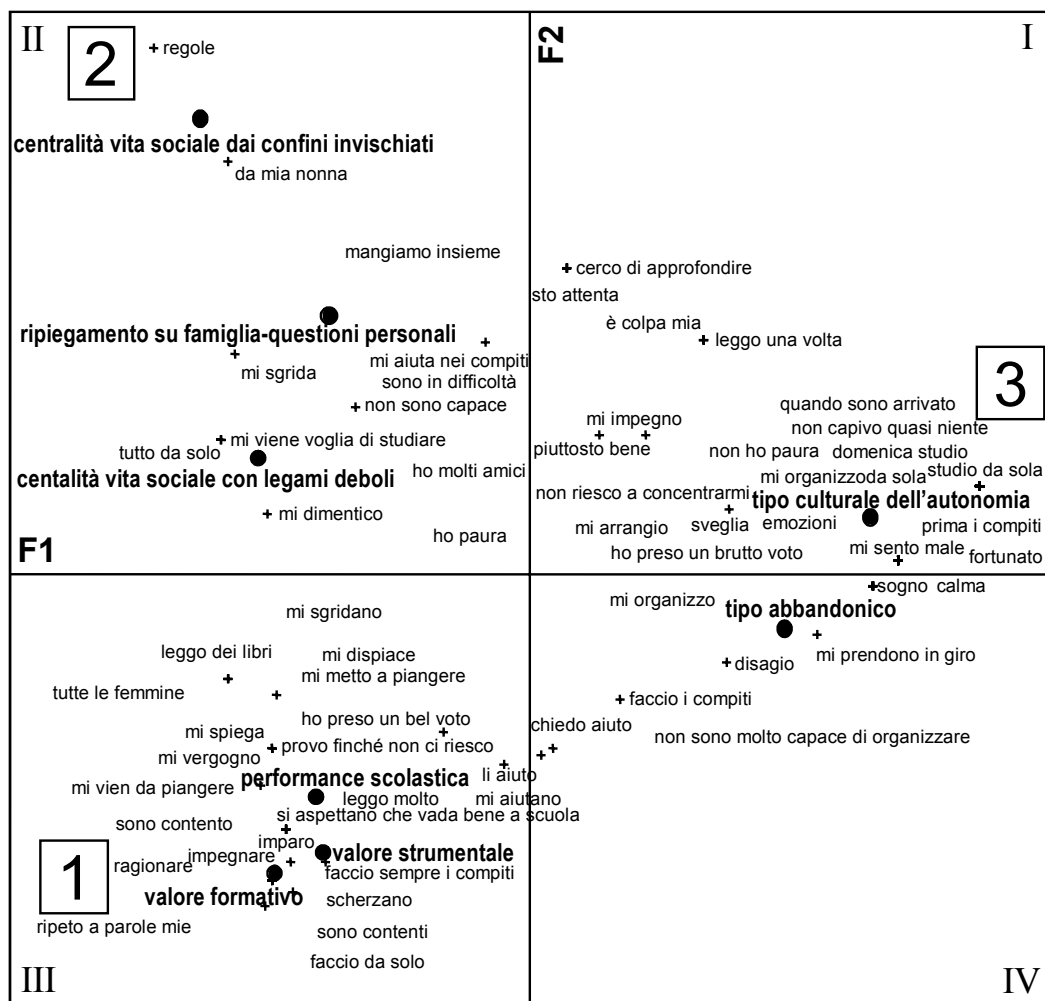
CTUs that can be considered keywords for each subtype. Based on the qualitative analysis results and the description of each subtype, the corpus was coded according to keywords and expressions including such keywords. The analysis of the vocabularies and the list of repeated segments allowed to manually select lexicalised keywords and key-expressions. During the first stage, the process involved only CTUs which were repeated at least twice in the text, totalling 140 CTUs (some examples are reported in table 3).

Table 3. *Examples of selected key-CTUs*

	Keywords	frequency
<i>piuttosto bene</i>	quite good	10
<i>imparo</i>	I learn	9
<i>chiedo aiuto</i>	I ask for help	7
<i>ho paura</i>	I'm scared	7
<i>ho capito</i>	I understood	5
<i>mi dispiace</i>	I'm sorry	5
<i>mi sgridano</i>	I'm scolded	4
<i>provo finché non ci riesco</i>	I try until I succeed	4
<i>aiuto</i>	help	3
<i>mi metto a piangere</i>	I start crying	3
<i>mi organizzo</i>	I get organised	3
<i>mia mamma mi sgrida</i>	mother scolds me	3
<i>quando sono arrivato</i>	when I arrived	3
<i>scherzano</i>	they are joking	3
<i>sono contenti</i>	they are happy	3
<i>tanti amici</i>	lots of friends	3
<i>tutti insieme</i>	all together	3
<i>regole</i>	rules	2
<i>emozioni</i>	feelings	2
<i>faccio da sola</i>	I manage on my own	2
<i>ho molti amici</i>	I've got many friends	2
<i>leggo molto</i>	I read a lot	2
<i>mi aiuta nei compiti</i>	He/she helps me with the homework	2
<i>mi arrangio</i>	I manage	2
<i>mi organizzo da sola</i>	I manage on my own	2
<i>non ho paura</i>	I am not afraid	2
<i>si aspettano che vada bene a scuola</i>	they expect me to get good grades	2
<i>sono da sola</i>	I'm on my own	2
<i>sono in difficoltà</i>	I find it hard	2
<i>sto da sola</i>	I'm alone	2
<i>studio da sola</i>	I study on my own	2

The graph of the correspondence analysis (figure 2, labels in table 1 and table 3) of the lexical contingency table containing CTUs frequencies within each subtype (matrix of dimensions: 140 rows and 8 columns), immediately shows the patterns of the three models (identified by numbers 1, 2 and 3 on the graph) on the first factorial plan. The three subtypes referring to model “1” (centralità dello studio/education plays a major role) are located in the 3rd quarter, the three subtypes of model “2” (studio in posizione marginale/education plays a minor role) are located in the 2nd quarter and the two subtypes of model “3” (studio come sfida di transizione all’età adulta /education is considered a challenge in the transition to adulthood) are located between the 1st and 4th quarters. Therefore, the analysis of the frequencies of only the key-CTUs selected previously according to qualitative analysis criteria leads to the correct grouping of subtypes. Moreover, with reference to the factors which fostered the interaction between the two methods, it should be stressed that the differences emerging within the three subtypes of the second model (education plays a minor role) according to a qualitative analysis description (§2) are seized by the correspondence analysis: all three subtypes of the second models are located in the 2nd quarter, albeit further apart than the subtypes of the other two models.

Figure 2. Correspondence analysis (Factors F1 and F2, 40% in. exp.)



Following this initial solution based on a limited number of CTUs, a second stage saw the inclusion of additional 378 key-CTUs occurring only once in the text (hapaxes), totalling 140+378 = 518 CTUs. Hapaxes do not play a prominent role in determining the geometrical setting of the graph, since they are located next to the subtypes to which they refer; however they can prove extremely useful to interpret results. As shown in table 4, they provide a thorough outline of the characteristics of each subtype, closely matching the narrative presentation typical of the qualitative method. To provide an example of that correspondence, a detailed description is reported of the first subtype of the third model (the “cultural model of autonomy subtype” of model 3), including chunks of interviews and, in inverted commas, the segments which were highlighted by statistical analyses (H means that it is a hapax from table 4, G that examples are not hapax and are reported in figure 2). According to this subtype, the children’s independence is valued. Parents often lead hard lives and are very busy working to improve their standards of living. However, even though their workloads and cultural models limit their presence in the school environment and tend to emancipate their children, they are interested in their children’s successful school careers.

«mi dicono sempre - quello che è più importante..., che “è importantissimo leggere_H”»
 «they always tell me what is important..., that “reading is very important_H”»

Children take on great responsibilities within the family:

«mah, per la casa...eh...visto che mia mamma e mio papà arrivano tardi, e se non c'è neanche mio zio, "faccio le pulizie_H". Magari gli "preparo qualcosa da mangiare alla mamma_H". Perché quando arriva tardi ha fame. E "vado a comprare il pane_H". E "faccio anche della spesa_H"... Eh..., "so cucinare" pizza, pasta.»

«well, at home...er...since mum and dad come home late, if uncle is not there, "I take care of the cleaning_H". Sometimes "I fix something to eat for my mum_H". Because when she comes back late, she is hungry. And "I go buy bread_H". And "I also do the shopping_H"... er..., "I can cook_H" pizza and pasta.»

According to their children's age, parents encourage them to be autonomous:

«mia mamma prima sì mi sgridava, ma adesso "mi dice che mi devo arrangiare_H" (...) ho capito io che i miei genitori hanno capito che "io me la devo cavare da sola_H" perché ormai sto crescendo»

«my mother used to scold me but now "she says I have to manage on my own_H" (...) I realised that my parents think that "I need to manage on my own_H" because I have grown up»

The family life is loosely regulated since children are expected to learn how to behave on their own:

« "Faccio la pasta mi arrangio da sola_G" (...) "non ho un orario_H" cioè...se mangio, sto un po' a riposare, poi, se ho sonno, dormo, mi sveglio, non troppo...(...) non ho problemi a stare "da sola_G" a casa, "c'è il gatto_H": l'abbiamo comprato apposta»

«"I cook pasta I manage on my own_G" (...) "I don't need to stick to a timetable_H", I mean...when I've eaten, I rest a bit, then, if I'm tired, I sleep, I wake up, not too much...(...) I have no problems with "being home alone_G", "we have a cat_H": that's why we bought it»

When studying, children develop their own method and get organised autonomously.

«no, perché "studio da sola_G", "mi organizzo da sola_G", il mio metodo è...»

«no, because "I study on my own_G", "I get organised on my own_G", my method is ...»

Those children consider scholastic success very important:

« [E senti, quando prendi un brutto voto cosa succede?] "mi sento male_G" »

« [Listen, when you get a bad mark, what happens??] "I feel bad_G" »

Despite bad memories of the first period spent in the host country, owing to language problems:

«parlavo molto, però "non capivo quasi niente_G" (...) all'inizio, cioè, "io non sapevo bene la lingua_H" (...) "quando sono arrivato_G", dimenticavo tutto »

«I spoke a lot but "I did not understand almost anything_G" (...) I mean, at the beginning "I didn't know the language very well_H" (...) "when I got here_G", I forgot everything »

their self-esteem is good:

« "mah, per me sono bravo_H" »

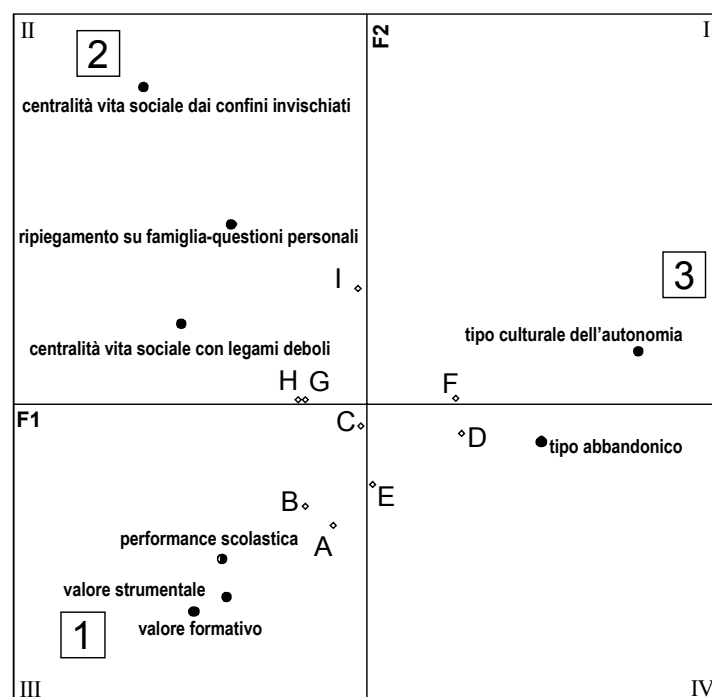
« "well, I think I'm pretty good_H" »

A correspondence analysis proves useful for classification purposes when the 17 ideal-type children grouped according to models/subtypes are used to develop a Cartesian plane where additional subjects may be reported as supplementary units (i.e. without affecting the geometrical setting of the graph) and attributed to one of the subtypes. Although this was not meant as one of the goals of the qualitative study, we conducted tests to assess whether the inclusion of "non-pure" subjects allows to assign them to the various subtypes and discovered that the factorial structure locates them in intermediate positions (figure 3, labels in table 1). Interviews A and B are assessed as belonging to model "1", interviews F and D are included in model "3" and interview I to model "2". According to a qualitative analysis, interview E was assessed as included in model 3, whereas according to the new approach it is a borderline case between models 1 and 3. A more thorough analysis shows that the subject classified as an "abandonment case" displays features in terms of scholastic success and commitment that are shared by model "1". Interviews H, G and C are difficult to interpret since they actually share elements which belong to different models. The majority of the remaining interviews are located at the origin: such "non-pure" subjects were known in advance to include elements belonging to subtypes of different models.

Table 4. Hapaxes located next to each subtype

1. Centralità dello studio - Valore formativo: "a me non è mai capitato di essere in difficoltà", "aiuto io", "cerco il lato positivo", "l'educazione è una cosa importante", "mi organizzavo da solo", "riesco ad organizzarmi con i compiti", "se prendo un brutto voto mi invoglio", "tutti allegri", "tutto allegro".	1. Education plays a major role – Educational role: "I have never experienced difficulties", "I am the one who helps", "I look for the positive side", "education is important", "I get organised on my own", "I manage to get organised with my homework", "if I receive a bad mark, I feel stimulated", "everybody's cheerful", "I am cheerful".
1. Centralità dello studio - Performance scolastica: "cerco di capire tutte le vie", "chiedo aiuto ai miei compagni", "chiedo aiuto alla mamma", "devo imparare a ragionare bene", "dice di essere fiero di me", "guardo meglio e cerco di capire", "io sono contento della mia famiglia", "me l'hanno insegnato i genitori", "mercoledì faccio schema", "mi spiega un sacco di cose", "mio padre me l'ha insegnato", "prendo un bel voto sono orgoglioso", "si aspettano che io vada bene a scuola", "sto attento".	1. Education plays a major role – Scholastic performance: "I try to understand all possibilities", "I look for my classmates' help", "I look for mum's help", "you need to learn to reason well", "I am happy with my family", "my parents taught me", "I practice fencing on Wednesday", "he explains loads of things to me", "my father taught me", "I get a good grade and I feel proud", "they expect I get good grades", "I pay attention".
1. Centralità dello studio - Valore strumentale: "mio compito è soltanto quello di studiare", "il voto te lo devi meritare", "impegno a scuola", "mi dice leggi un libro", "mi faccio interrogare da mio padre", "ho molta paura di studiare con lui", "mi impiccio sempre di tutto", "ovviamente un lavoro", "un lavoro più bello di quello dei miei genitori", "se ne fregano di studiare", "studio e poi mi faccio interrogare", "sufficiente vuol dire che hai fatto male", "una forza per ricominciare ad essere bravi".	1. Education plays a major role – Instrumental role "studying is my job", "you need to deserve your grades", "hard work at school", "he tells me: read a book!", "I ask my father to test me", "I am very much afraid of studying with him", "I always mind other people's business", "a job, of course", "a better job than my parents", "they couldn't care less about school", "I study and then I take the exams", "D means your results were poor", "the energy to achieve good results again".
2. Studio in posizione marginale - Centralità della vita sociale con legami deboli: "ciò sto benissimo a scuola", "ho fatto un party a casa mia", "ho un sacco di amici", "io ho buone idee", "mia insegnante preferita", "non ho la logica".	2. Education plays a minor role – Priority to social life with weak ties: "I mean, I feel very well when I'm at school", "I threw a party at home", "I have loads of friends", "I've got good ideas", "my favourite teacher", "I am illogical".
2. Studio in posizione marginale - Centralità della vita sociale dai confini invischiati: "dice eh... ti devi fare rispettare!", "so a chi picchiare", "leggo solo una volta", "invece leggo più volte sono più confuso", "io ho un'enciclopedia sul computer", "mia mamma non è che sa molto", "mio padre manco", "hanno genitori che gli spiegano più cose", "ho imparato da solo", "perché mi annoio a studiare", "prima cosa mettono delle regole", "ci sono delle regole da rispettare", "si aspettano che io sia brava", "siamo sempre insieme".	2. Education plays a minor role – Priority to social life with very close ties: "he says... well, you have to earn some respect", "I know who I have to beat up", "I read only once", "in contrast, if I read more than once I get confused", "I have got an encyclopaedia on computers", "my mum doesn't know much", "neither does my father", "their parents explain more things", "I learned on my own", "because when I study I get bored", "first thing, they set rules", "there are rules that need complying with", "they expect I get good results", "we are always together".
2. Studio in posizione marginale - Ripiegamento sulla famiglia o questioni personali: "capire niente", "certi cervelloni", "gli altri vanno avanti", "li farei diventare più gentili (i genitori)", "mi chiede di vedere il compito", "mi controlla il diario", "mi dimentico di fare i compiti", "mia mamma mi sgrida", "quando la mamma è stanca grida", "trovo sempre in difficoltà con i compiti", "un po' giocare".	2. Education plays a minor role – Withdrawal into the family or personal matters: "understand nothing", "those eggheads", "the others progress", "I would like them to be nicer (parents)", "he asks me to look at my homework", "he checks my diary", "I forget to do my homework", "my mum scolds me", "when my mum is tired, she yells", "I always find homework difficult", "playing a bit".
3. Studio come sfida di transizione all'età adulta - Tipo culturale dell'autonomia: "a me piace approfondire le cose", "c'è il gatto", "è importantissimo leggere", "faccio la pasta mi arrangio da sola", "faccio le pulizie", "faccio anche della spesa", "io dormo da sola la notte", "io me la devo cavare da sola", "mangio da sola", "mi dice che mi devo arrangiare", "preparo qualcosa da mangiare alla mamma", "quando sono malata sto da sola", "so cucinare", "vado a comprare il pane", "non ho un orologio", "io non sapevo bene la lingua", "mah per me sono bravo", "si aspettano che sia molto bravo a scuola".	3. Ed. is considered a challenge in the transition to adulthood – Cultural model of autonomy: "I like going more in depth", "the cat is there", "reading is very important", "I cook pasta, I manage on my own", "I do the cleaning", "I also do the shopping", "I sleep alone at night", "I have to manage on my own", "I eat on my own", "he tells me that I need to manage", "I fix something to eat for my mother", "when I'm ill I stay home alone", "I can cook", "I go to the baker's", "I have no bedtime", "I couldn't speak the language well", "well, I think I'm pretty good", "they expect I get very good results at school".
3. Studio come sfida di transizione all'età adulta - Tipo abbandonico: "(padre) male perché devi sopportarlo tutta la mattina", "con un brutto voto loro ci rimangono male", "hanno poche cose da fare in casa", "io a casa ho da fare", "la vita deve essere fatta di dispiaceri", "si aspettano buoni voti", "ma nei compiti si aspettano tantissimo", "si aspettano una bambina buona", "sono fiero del mio lavoro scolastico", "sono timida", "perché ho paura delle interrogazioni", "ti mandano alla lavagna", "un compito me lo dimentico totalmente".	3. Education is considered a challenge in the transition to adulthood – Abandonment type: "(father) not well, because you need to bear with him every morning", "if I get a bad grade, they get disappointed", "they have not much to do at home", "I have to work at home", "life must be sad", "they expect good grades", "but they expect a lot from my exams", "they expect a good girl", "I am proud of my homework", "I am shy", "because I am scared of tests", "you have to stand up and talk", "I completely forget about homework".

Figure 3. Location of additional cases on the Cartesian plane in figure 1



5. Results and beyond

The present experiment combining a sociological qualitative method and a lexical-textual statistical method originated from the attempt to assess whether and to what degree the analytical results and categories used in the former may be reproduced in a different shape by the results of the latter. The view that statistical analysis produced useful results only following an arbitrary selection according to key words may well be subject to criticism or considered tautological. However, it is inconceivable that a theoretical model may be reproduced without including it somehow among the hypotheses of a statistical method. The study conducted on the present corpus of interviews shows that obtaining consistent results based on both analytical procedures is difficult if statistical tools are not developed according to the very same assessment criteria implemented in the qualitative approach. However, their combined use is viable and results prove more exhaustive. In terms of the main objectives of a qualitative analysis, which are descriptive in nature, a lexical-textual analysis proves particularly effective to provide a synthesis envisaging an immediate and synthetic graphic representation of models and their contents.

At the beginning of the present study we explained that, during qualitative analysis, the three models and eight subtypes were not derived from a classification of the 38 children interviewed and were the result of the identification of eight theoretical ideal types. Albeit not a priority as compared to the development of the model, the classification of the 21 “non-pure” children through a statistical approach may become interesting at a later stage, since it adds new information and provides the opportunity to test the model and conduct a more thorough analysis.

The repercussions of the present interdisciplinary attempt exceed the mere immediate results:

- 1) qualitative analysis becomes more reliable insofar as it has to account for the needs of statistics: the mere need for making explicit the criteria supporting the theoretical model further clarifies the model itself;
- 2) adjusting the terminology, or rather getting used to developing a metalanguage to allow a dialogue between different disciplines triggers learning processes at various levels;
- 3) since a qualitative analysis is planned with a view to a lexical-textual approach, the collection of information needs to be adjusted accordingly; in particular, the very nature of the interviews needs to be modified immediately when they are conducted (e.g. favouring narratives, avoiding implicit sentences, limiting structured passages or dealing with them separately by means of *ad-hoc* questionnaires, etc.);
- 4) meaningfully, and perhaps paradoxically, in order to take into account this peculiar statistical approach, a sociological analysis apparently needs to move in the opposite direction and encourage qualitative non-standard survey methods.

References

- Albanese O., Doudin P.A., Martin D. (2003, Eds), *Metacognizione ed educazione*, F. Angeli, Milano.
- Bateson G. (1980), *Verso un'ecologia della mente*, Adelphi, Milano.
- Bolasco S. (1999), *Analisi multidimensionale dei dati*, Carocci, Roma.
- Bolasco S. (2000), TALTAC: un environnement pour l'exploitation de ressources statistiques et linguistiques dans l'analyse textuelle. Un exemple d'application au discours politique, *JADT2000*, EPFL, Lausanne 9-11 marzo, tome 2 p. 342-353.
- Bolasco S. (2002), Integrazione statistico-linguistica nell'analisi del contenuto, in: *Metodi qualitativi in psicologia sociale*, Mazzara B. (Ed), Carocci Ed. Roma.
- Cardano M. (2003), *Tecniche di ricerca qualitativa*, Carocci, Roma.
- Corsaro W.A. (2005), *The Sociology of Childhood*, Pine Forge Press, Thousand Oaks.
- Greenacre M.J. (1984), *Theory and Application of Correspondence Analysis*, Academic Press, London.
- James A., Prout A. (2004, Ed), *Constructing and reconstructing childhood. Contemporary issues in the sociological study of childhood*, Routledge Falmer, London.
- Montandon C. (1997), *L'éducation du point de vue des enfant*, L'Harmattan, Paris.
- Pisati M., (2002), La partecipazione al sistema scolastico, in *Vite ineguali. Disuguaglianze e corsi di vita nell'Italia contemporanea*, Schizzerotto A. (Ed) il Mulino, Bologna.
- Pourtois J.P., Desmet H. (2004), *L'éducation implicite*, PUF, Paris.
- Sirota R. (1998), L'émergence d'une sociologie de l'enfance: évolution de l'objet, évolution du regard, *Éducation et Sociétés. Sociologie de l'enfance* 1, 2, INRP De Boeck Université, pp.9- 33.
- Terrail J.P. (2002), *De l'inégalité scolaire*, La Dispute, Paris.
- Tuzzi A. (2001), Subjects on Using Open or Closed-Ended Questions, in: *Advances in Classification and Data Analysis*, Borra S., Rocci R., Vichi M., Schader M., Springer Verlag, Berlin 177-184.
- Tuzzi A. (2003), *L'analisi del contenuto*, Carocci, Roma.