

STRUCTURE AND FUNCTIONS OF SOCIAL REPRESENTATIONS: THEORIES OF DEVELOPMENT, IMAGES OF CHILD AND PUPIL

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Flament (1987; 1989) and Abric (1984; 1987; 1989) consider social representation as a cognitive structure organized around some elements that are strictly interdependent, and others that are more peripheral. The first elements constitute the central nucleus which performs a creative and generating function since it attributes meaning and value to all the other elements contributing to its construction.

The nucleus of social representations is determined on the one hand by the nature of the object represented and on the other by the relation between the subject and the object. In other words, it is the dynamic interplay between the subject and the object that determines its central elements.

That a representation is always a reconstruction of an object filtered through the relationship between two individuals is acknowledged by all the theoretical approaches in which this concept is used, whether it regards cognitive elaboration or the affectivities reconstructed in psychoanalysis. As regards social representations, the knowledge activated, produced and shared introduces a value dimension into the representation which determines its degree of centrality dependent upon the social characteristics of the object and its normative meaningfulness within the system.

For these reasons, the object of the studies on social representations always centers on topics relevant to specific groups of individuals: for example, health and disease (Herzlich, 1969), the ideal group (Flament, 1982), intelligence (Mugny and Carugati, 1985) and child development (Emiliani and Molinari, 1993a).

The more recent literature about maternal beliefs on child development shows that mothers make attributions for offspring outcomes mainly to three elements: child-rearing practices, genetics and environment. In a recent study, (Himelstein, Graham and Weiner, 1991), the authors show that mothers are more likely to endorse dispositional attributions if they have more than one child and when they need to account for their child's academic failure.

In a previous study of ours (Molinari, Emiliani and Carugati, 1992), the importance of two consistently organized themes was pointed out regarding representations shared by mothers. The first one refers to the theory of character, viewed as a natural gift and grounded on the belief that individuals are not equally endowed by nature, especially as regards intelligence and autonomy. In this view, learning is seen as a process of spontaneous maturation, a sort of non-learning. As a consequence, mothers endorsing this view feel they are unable to affect their child's intelligence or sense of autonomy. The second theme centers on the theory of social interactions which favors an interactional explanation of development. According to this perspective, social abilities and learning skills are largely dependent on the proper balance between family and school relations. Those sharing this view believe that they can be influential in the development of these characteristics in their own children.

Of the two theories described above, the natural gift theory is the one which is constructed in a more articulated way, as it originates in the mother's belief that she has 'no alternative explanations' to account for the child's development. The idea of character as a natural gift therefore performs a precise function: it explains the mysterious problem of the differences between children.

Following the same line of research, we carried out the present study with the aim to test the following *four hypotheses*:

a) whether there exists a shared structure of the social representation determined by the social insertion which we consider to be the strongest, namely being a mother, and which highlights the connections between theories of development and images of one's own child;

b) whether this structure varies according to the working situation of the mother, in other words with being a teacher, an office-worker or a housewife;

c) whether there exists a central nucleus of the representation which is stable and common to all structures;

d) whether in the group of mothers-teachers the structure changes when the pupil is placed alongside one's own child, thus evoking the dual salience of their role as educators.

Methodology

A questionnaire was distributed to a sample of 381 mothers of children from 4 to 8 years of age. Given the importance of the mothers' occupation for our hypotheses, these women were chosen from three categories: full-time mothers (housewives, $n=69$), mothers who have a dual educational role, at home and at school (teachers, $n=110$) and mothers who have a full-time job outside the home (office-workers, $n=202$).

The level of education of these women was controlled: only mothers with a secondary to higher education were included.

The questionnaire was built around three parts, each concerned with a specific target: the child in general, the mothers' own child and the pupil. Each part comprised a list of 24 items presenting six types of explanations regarding the development of four characteristics in the target, namely, autonomy, intelligence, order and obedience.

The levels of explanations proposed in the questionnaire centered around three aspects: 1) the intraindividual level, which comprises a) the natural or biological disposition and b) the inner motivations; 2) the interindividual level, which considers a) the relations based on affection and empathy (for the three parts of the questionnaire, the following relations: adult-child, mother-child, teacher-pupil respectively) and b) the relations based on the role, where it is clear that the above mentioned adult has power and authority over the child because of his/her specific social role. The third level of explanation (societal level) concerns a) the environment (society, family and school for the three targets respectively) and b) the values that adults attribute to the four characteristics.

A final remark concerns the third part of the questionnaire, referring to the pupil: in the questionnaire distributed to housewives and office workers, the target was the pupil at school and his/her relations with the teachers, while in the questionnaire submitted to mothers who were also teachers the accent was on their own pupils and on themselves as teachers. This

was done in order to make these women focus on their concrete experience both as mothers and as teachers.

Statistical Analysis

After a series of exploratory analyses with SPSS, we carried out a confirmative Factor Analysis (LISREL) on 36 variables corresponding to the items concerning the child in general, one's own child and the pupil, which in the exploratory analysis had the highest loadings on 9 factors (for the items composing each factor, see: Emiliani, Molinari and Schadee, 1993; Emiliani and Molinari, 1993b).

The results of the Factor Analysis were then used in subsequent statistical analyses with the following procedure. For each of the 9 factors, a score for the subjects was calculated by summing the items composing the factor; this number is used as a new variable. To avoid confusion, we make it clear that these are not factorial scores.

We then carried out two sets of analyses. Firstly, we used only the first 7 factors (corresponding to theories of development and images of one's own child), in order to test the first three hypotheses (a-c). The correlation matrix was calculated among the 7 new resulting variables. As statistical analysis, we used the model of covariance selection introduced by Dempster in 1972 (cfr. Edwards, 1989a; Whittaker, 1991) called MIM (Edwards, 1989b), which takes into account the partial correlations for each pair of variables, controlling for the remaining variables. We carried out 4 analyses: the first on the three subgroups together (the shared structure) and the others on each of the subgroups of mothers: housewives, teachers and office workers (the differentiated models). A model is a specific proposal that certain partial correlations among variables are zero if the other variables are controlled (for further specifications on the statistical analyses, see Emiliani, Molinari and Schadee, 1993).

In the second set of analyses, we considered only the group of teachers, and introduced the last two factors, corresponding to the images of pupils. The same statistical analysis was then used.

In Figures 1 through 5, ovals represent the theories of development, while rectangles are used for the images of children (own child and pupil). All the variables are used at the same level in the statistical procedure.

Theories of Development, Images of Child and Pupil

The Factor Analysis confirmed the presence of 9 factors; the first four factors are organized around different types of explanations:

A) the "*theory of character*": being intelligent, autonomous, tidy or obedient is a gift of nature, which is scarcely influenced by the social environment and has a genetic mark;

B) the "*theory of social role*", which underlines a double source of explanations: the importance of the adult's authority and the fact that society must place value on obedience, order and autonomy so that children will develop these traits;

C) the "*theory of affective interactions*", which underlines the idea that, to make a child intelligent and autonomous, it is necessary to establish a good relationship with him/her,

D) the "*theory of the value of order*", which considers this characteristic as the core in the child's evolutive organization.

Factor 5 to 7 depict salient images of one's own child, that is:

E) the "*intelligent and autonomous child*", a child that is able to do things by him/herself and shows his/her intelligence in different circumstances;

F) the "*disobedient and stubborn child*", who does not want to take into any account the mother's help or advice;

G) the "*tidy child*", who likes to put his/her own things away .

Finally, the last two factors describe two images that the teachers have of their own pupils:

H) the "*intelligent pupil*", motivated to learn new things and encouraged by the social environment;

I) the "*obedient and tidy pupil*", where order and obedience are explained in particular by authority and values.

We will now present the models resulting by the covariance selection analysis.

The Importance of Being a Mother: the Shared Structure

The shared structure of the mothers' social representations presents the most articulated model of the possible links between the theories of development and the images of one's own child (Figure 1).

The shared model renders explicit a structure consisting of two parts: it is the only one which will be found in the models of the subgroups. By controlling the theory of character (A) and the theory of social role (B), which may be expressed in the opposition innatism-environment, two systems of independent ideas emerge: on the one hand, the theory of affective interaction (C) connected with the intelligent and autonomous child (E), and on the other, all of the themes associated with order (D and G) and with the disobedient and stubborn child (F).

A further datum regards two images of the child explained by the same theories: the tidy child (G) and the disobedient and stubborn child (F) linked with the theories of character (A) and of the value of order (D). This means that on the one hand valuing order produces a tidy child but may also produce a disobedient and stubborn child, while on the other it means that both of these images of the child are produced by character, seen as an innate and natural fact.

The image of a positive, intelligent and autonomous child (E) is instead in contrast with an innatist explanation (A), whereby the child is seen as being endowed with these characteristics by nature, and becomes the result of child-adult interactions, especially affectively connotated ones (C), but also those which are marked by authority (B).

Finally, it may seem surprising that there is no connection between the disobedient and stubborn child (F) and the theory of social role (B): this may suggest that the adult's authority in the role of mother or teacher is not linked, either positively or negatively, with disobedience in a child.

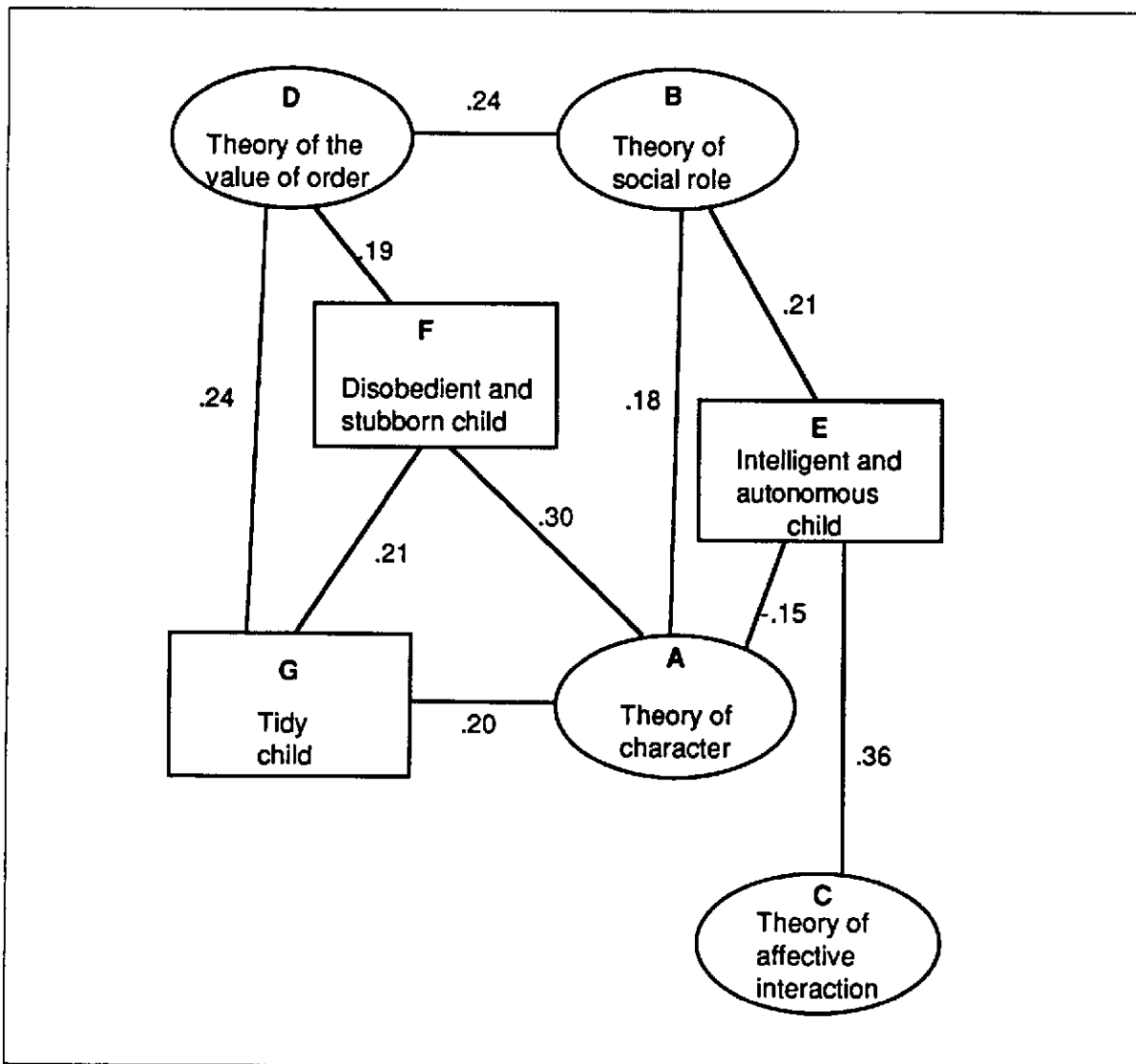


Figure 1.

Shared model (ABE, AFG, BD, DFG, CE), $\chi^2(67)=74.0$, $N=381$.

The Regulation of Social Insertions: Differentiated Models

If we analyze the structure of *working mothers* (Figure 2), we note that it is very much like the structure we have described above. The only connection which does not emerge in this group is the one between the theory of the value of order (D) and the disobedient and stubborn child (F), while the strongest link expressed by this group is the one between this same theory and the image of the tidy child (G). These mothers, who spend a great deal of time outside the home, seem sure that one can have a tidy child by valuing order.

Instead we find again the relation between the theory of character (A) and the images of the disobedient and stubborn child (F) and of the tidy child (G), and the connection between the theories of affective interactions (C) and of social role (B) and the image of the intelligent and autonomous child (E).

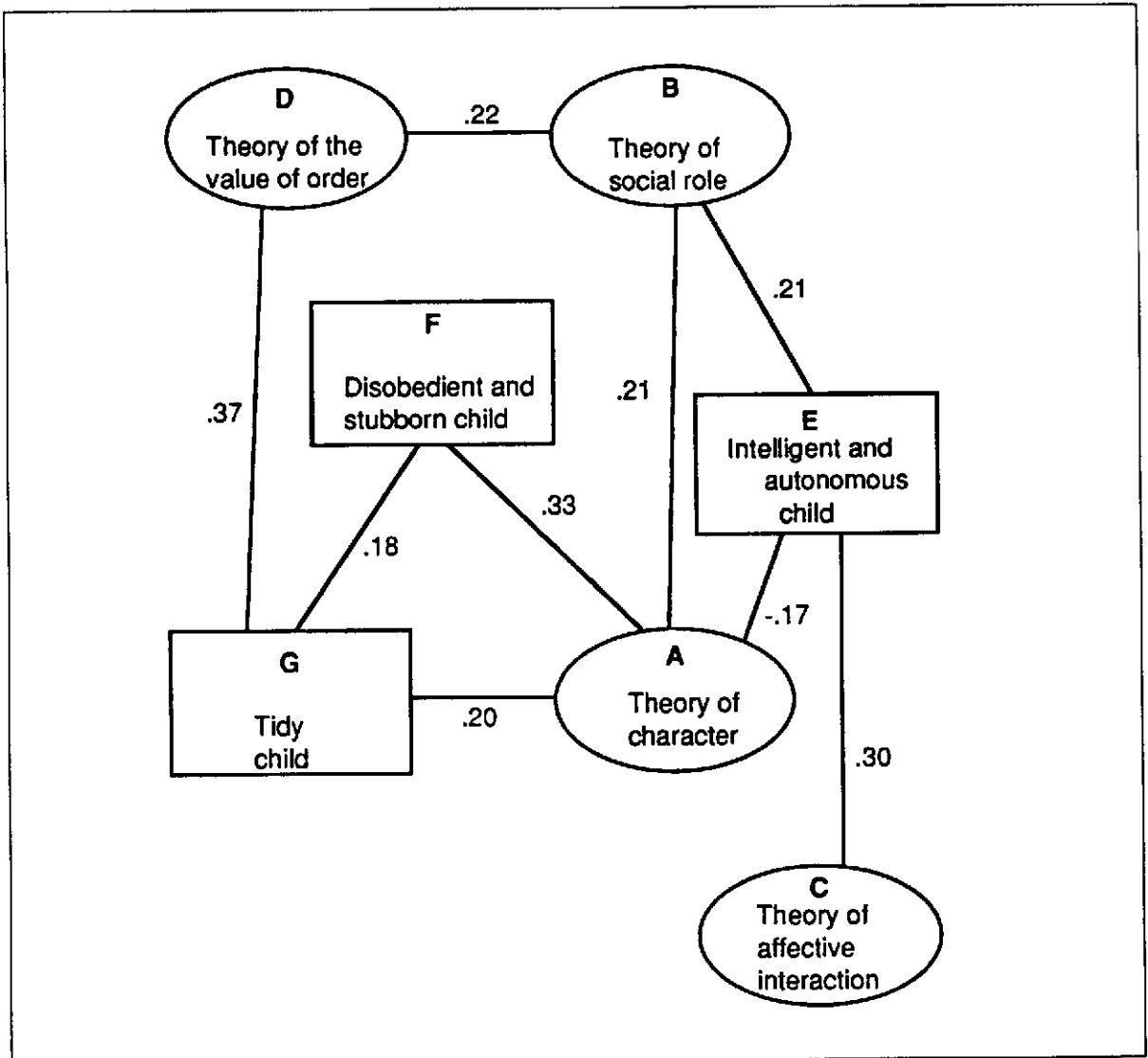


Figure 2.
Office workers (ABE, AFG, BD, DG, CE), $\text{Chi}^2(12)=13.7$, $N=202$.

The structure characterizing the group of *teachers* (Figure 3) is particularly interesting. The connections found in the group of office workers prove to be much weaker in this group, in particular the one between the theory of the value of order (D) and the image of the tidy child (G), and between the theory of character (A) and the disobedient and stubborn child (F).

The relation between the intelligent and autonomous child (E) and the theories of affective interactions (C) and of social role (B) and the connection between the theory of social role (B) and the theory of the value of order (D) instead appear to be very strong. Undoubtedly, the authority of the teacher's role and the importance ascribed to order are two crucial points of the educational function of these women.

In addition, this is the only group in which the theory of character as a natural gift (A) does not correlate with other theories, but it remains an explicative criterion of the apparently contrasting images of the disobedient and stubborn child (F) and the tidy child (G). The

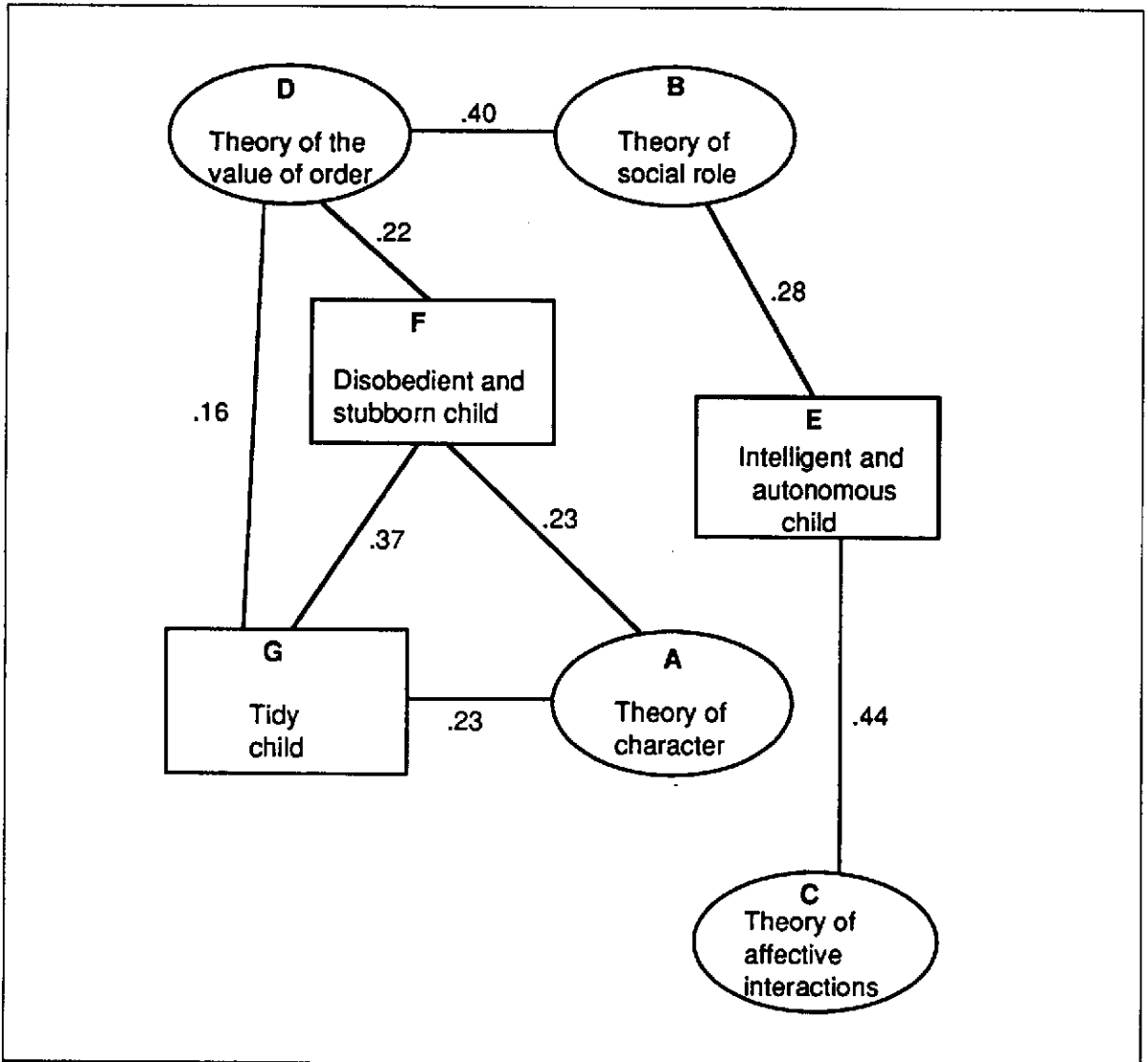


Figure 3.

Teachers (AFG, BD, DFG, CE, BE), $\text{Chi}^2(13)=21.8$, $N=110$.

significant relation between two images seems to be the result of the teachers' daily contact with children, rather than the expression of an explicit theoretical elaboration.

Finally, Figure 4 shows that the structure of *housewives* is decidedly simplified compared to the preceding structures. In this group, the organization of the representation appears clearly divided into two unrelated parts: in one the intelligent and autonomous child (E) is once again connected with the theory of affective interactions (C) and appears as a powerful but isolated element, while in the other the disobedient and stubborn child (F) is connected with the theories of character (A) and of the value of order (D). The pivot of this structure in fact seems to be the image of the difficult child with whom housewives have to cope daily in their attempt to have an orderly child at last.

Typical of this group is the total lack of a connection between the theory of the value of order (D) and the tidy child (G). Housewives seem unable to explain what need to be done to have an orderly child.

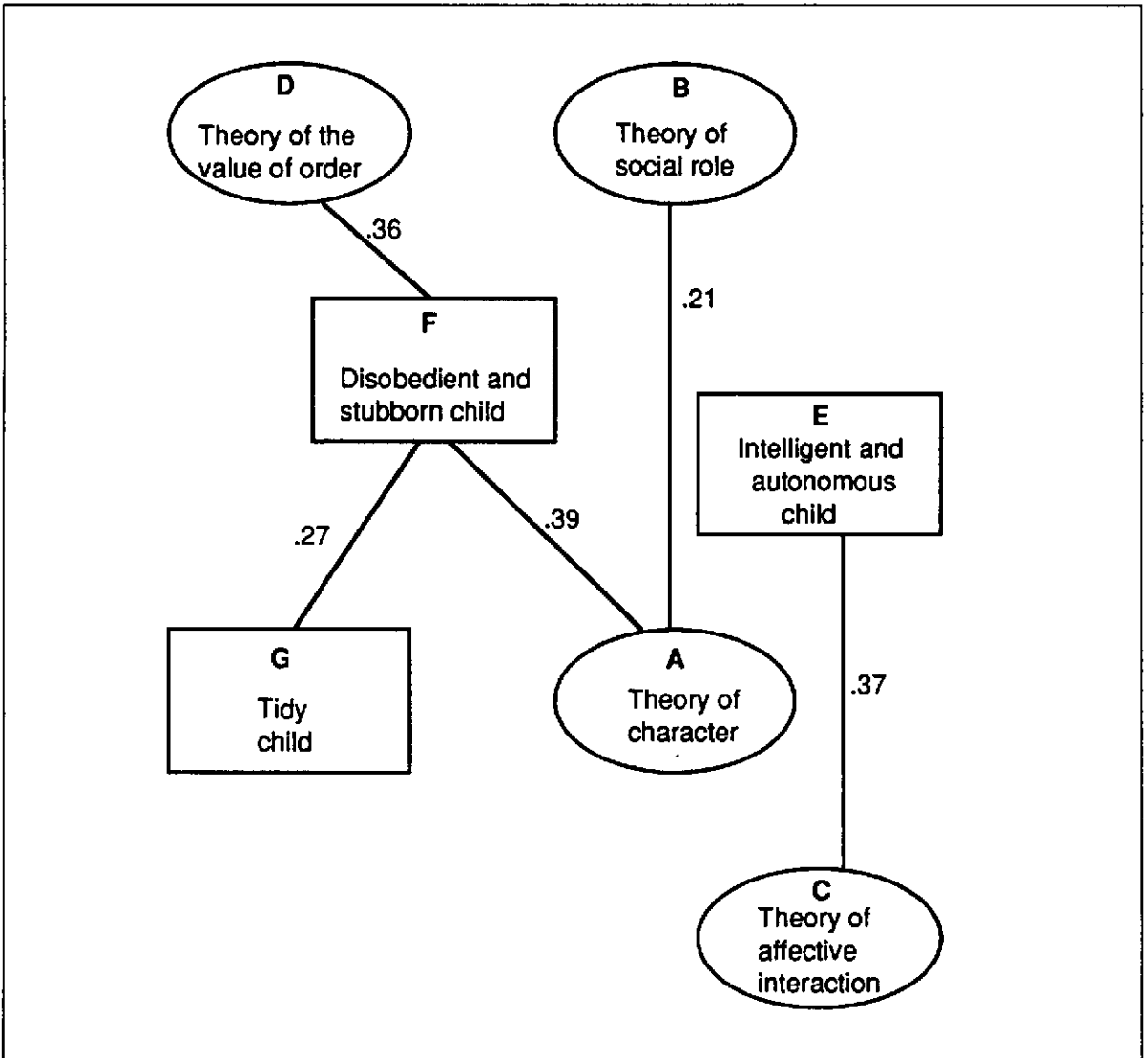


Figure 4.
Housewives (AB, AF, DF, CE, FG), $\text{Chi}^2(16)$, $N=69$.

Children and Pupils: the Case of Mothers-Teachers

As a final step of our work, we selected the sample of teachers ($n=97$) and carried out the Covariance Selection Analysis introducing in the model two images of the pupil: the intelligent pupil and the obedient and tidy pupil (the reduction of the sample is due to an increased number of missing cases). In this way we can examine whether the structure of social representations in this group changes when evoking at the same time a dual salient relationship: with one's child and with one's pupils.

The first datum which emerges from Figure 5 concerns the stable tendency to link the intelligence of one's own child (E) and of pupils (H) to the theory of affective interactions (C); this means that these women systematically attribute to themselves the child's success when referring to intelligence.

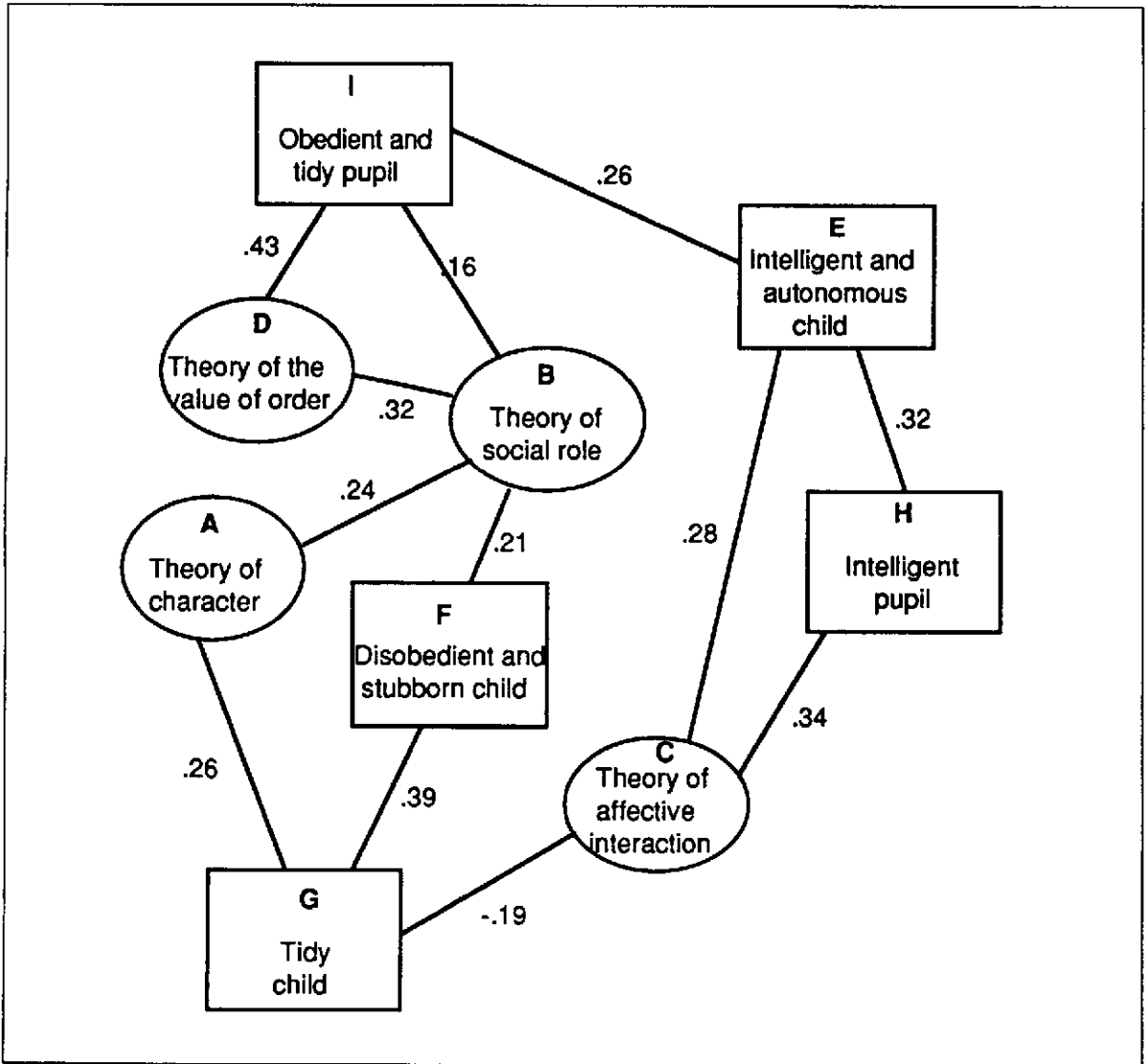


Figure 5.

Teachers (AB, AG, CEH, CG, EI, BF, FG, BDI), $\chi^2(24)=27.8$, $N=97$.

Secondly, and quite unexpectedly, we notice the absence of the link, which we previously found in all models, between the theory of character (A) and the image of disobedient and stubborn child (F).

Moreover, the theory of social role (B) is on one hand linked to the image of the obedient and tidy pupil (I), but more strongly to the theory of the value of order (D), which is also significantly correlated to the same image of pupil. In other words, the teacher who, on the basis of her own role, value order can obtain an obedient and tidy pupil. On the other hand, the same theory of social role (B) towards one's own child is directly linked to the theory of character (A) and to the image of disobedient and stubborn child (F), which are also related to the tidy child. When teachers are brought into question as mothers, they admit that order is a matter of character and it implies the child's disobedience and stubbornness.

Discussion

Let us first discuss the set of results concerning the models centered on the theories of development and images of one's child (Figures 1-4).

Our main aim in this phase was to point out the existence of a shared structure of social representations. Our findings confirm that the theories of development and the images of one's own child are interconnected by a set of links shared by all the women sampled. Within this structure, *three main themes* emerge which prove to be constant in the differentiated models: i) one of these themes links the image of the positive, intelligent and autonomous child with the theory of affective interactions; ii) the second accounts for the difficult, disobedient and stubborn child by making reference to character as a natural fact; and iii) the third refers to the absence of any link between the theory of social role and the image of the disobedient and stubborn child.

These findings confirm what other authors (Himmelstein, Graham and Weiner, 1991) have defined 'hedonic bias', i.e. the tendency to take credit for success and deny self-attribution for failure.

We have also pointed out that the mothers' occupational status and the dynamics thus activated modify the relations among the different elements of the representation and these different organizations of representational content underlie and highlight the social dynamic in the mother-child relationship

Considering this set of systematic elements characterizing both the shared structure and the differentiated models, we suggest that the central nucleus of the mothers' social representations is in fact the link between the theory of character as a natural gift and the image of the difficult child. The reason for this interpretation lies primarily in three criteria: statistical, functional and the fact that it expresses a socio-cognitive regulation. In fact, the characteristics proper to the object (a negative child) and the relation between subject and object are so implicative and involving as to acquire, in our view, the status of centrality. The function performed by the theory of natural gift is an indispensable one because it allows the mother to cope with her child's failure. That this function is the pivot of their socio-cognitive regulation is highlighted by the fact that the traits explained by recourse to an innatist theory (disobedience and opposition) bring into question a relation, and as a consequence produce a 'contradiction in terms'. These first results therefore seem to underline that for a mother it is important to be able to avoid personal blame for the child's negative outcomes.

When considering our second set of results, concerning in particular the mothers-teachers facing the dual images of child and pupil, the picture varies: we do not find again the link which we previously interpreted as the central nucleus of representations, that is, the connection between the theory of character and the image of the negative child.

When focussing on the topics concerning social rules (order and obedience), these women attribute to their role as teachers the success obtained in classroom (an obedient and tidy pupil), and at the same time they admit that their authority as mothers can fail with children at home, provoking their disobedience and opposition to the mother's requests. In this case, therefore, they seem not to deny self-attribution for failure.

On the other hand, characteristics like intelligence and autonomy, which delineate the positive and desired child and pupil, are explained on the basis of an interactional theory.

The results of this final analysis call into question our previous interpretation concerning the central nucleus of social representations: when changing the dynamic interplay, evoking at the same time two salient relationships, we find that in the group of mothers-teachers self-attribution of success is kept stable when referring to the relationship with the pupil and to the characteristic which they consider most important, namely intelligence. At the same time, they seem to accept to be responsible for the child's negative outcomes in the case of characteristics concerning social rules, namely disobedience and opposition.

In conclusion, the need to keep self-efficacy on those aspects which one considers most relevant in a child development and which refer both to the nature and to the relationship with the object reveals to be the central socio-cognitive dynamic which regulates and organizes the construction of social representations.

References

- Abric, J.C. (1984). A theoretical and experimental approach to the study of social representations in a situation of interaction. In R. Farr & S. Moscovici (eds.), *Social representations*. Cambridge: Cambridge University Press.
- Abric, J.C. (1987). *Cooperation, competition et représentations sociales*. Cousset: DelVal.
- Abric, J.C. (1989). *L'étude expérimentale des représentations sociales*. In D. Jodelet (ed.), *Les représentations sociales*. Paris: Presses Universitaire de France.
- Dempster, A.P. (1972). Covariance selection. *Biometrics*, 28, 157-175.
- Edwards, D. (1989a). Hierarchical interaction models. *Journal of the Royal Statistical Society, series B*, 52, 1, 3-20.
- Edwards, D. (1989b). A guide to MIM 1.7. Research report: Statistical Research Unit. University of Copenhagen.
- Emiliani, F., Molinari, L. (1993a). From the child to one's own child: social dynamics and identities at work. *European Journal of Social Psychology*, 23.
- Emiliani, F., Molinari, L. (1993b). Theories of development, images of child and pupil: social representations of teachers. Paper presented at the 5th Conference of the European Association of Learning and Instruction, Aix-en-Provence, France.
- Emiliani, F., Molinari, L., Schadee, H. (1993). Una prospettiva psicosociale allo studio delle rappresentazioni: immagini di figlio e teorie dello sviluppo. *Giornale Italiano di Psicologia*, 3.
- Flament, C. (1982). Du biais d'équilibre structural a la representation du groupe. In J.P. Codol & J.P. Leyens (eds.), *Cognitive analysis of social behavior*. La Haye, Londres: Martinus Nijhoff.
- Flament, C. (1987). *Pratique et représentations sociales*. In J.L. Beauvois, R.V. Joule & J.M. Monteil (eds.), *Perspectives cognitives et conduites sociales*. Cousset: DelVal.
- Flament, C. (1989). *Structure et dynamique des représentations sociales*. In D. Jodelet (ed.), *Les représentations sociales*. Paris: Presses Universitaire de France.
- Herzlich, C. (1969). *Sante et maladie. Analyse d'une representation sociale*. Paris: Mouton.
- Himelstein, S., Graham, S., Weiner, B. (1991). An attributional analysis of maternal beliefs about the importance of child-rearing practices. *Child Development*, 62, 301-310.
- Molinari, L., Emiliani, F., Carugati, F. (1992). Development according to mothers: a case of social representations. In M. von Cranach, W. Doise & G. Mugny (eds.), *Social representations and the social bases of knowledge*. Bern: Hans Huber.
- Mugny, G., Carugati, F. (1985). *L'intelligence au pluriel*. Cousset: DelVal.
- Whittaker, J. (1991). *Graphical models*. New York: Wiley.

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