Space for Thought: Representation of Body Boundaries and Intellectual Efficiency in Children

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Abstract

Aim: The psychoanalytic theories of Bion, Anzieu, Berger and Gibello postulate that the development of thinking depends upon the formation of a psychic space. This thinking space has its origin in the body and in our interpersonal relations. This study aims to validate this psychodynamic hypothesis.

Method: A group of 8- to 14-year-old children participated in this research. The presence of a thinking space was operationalized by the "barrier" and "penetration" scores on the Rorschach's Fisher and Cleveland scales and intellectual efficiency was measured using a short version of the WISC-IV.

Results: Results show that extreme scores on the "barrier" and "penetration" variables predict a lower intellectual level than average scores on the same variables.

Conclusion: The development of thinking and personality are undoubtedly linked and the "barrier" and "penetration" variables are useful measures when evaluating the development of a space for thought.

Keywords: body image, intelligence, Rorschach, WISC-IV

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Introduction

Thinking is a complex mental process, a prerogative enabling humans to adapt to their environment. The thought process is not inborn: it develops and builds up through assimilation and accommodation (Piaget & Inhelder, 1966). Thinking is not a solitary process - it is part of a cultural context and grows through socialization with others (Vygotsky, 1933; Bruner, 2002). Without denying the definite influence of organic foundations (Paillard, 1999), we deem it important not to overlook the weight of psychoaffective factors in the development of thought. Indeed, it has been acknowledged that anxiety or depression may – often temporarily – deprive a child or adolescent of their cognitive potential. However, our purpose is to review, upstream from such symptoms, the foundations of identity, and more specifically – with a psychodynamic outlook - the development of a psychic container within which thoughts may develop.

Psychoanalysts originally investigated psychic contents. Yet the issue of the container was already raised in the Freudian notions of "psychic apparatus", "contact barriers" and "protective shield" (Anzieu, 1995). Klein's research - in particular her description of projective identification –, however, contributed to the development of such notions as "psychic space", "psychic envelopes" or the "skin ego" (Frédérick-Libon, 2005) as metaphors to describe the psyche's containing function exerted by interrelating and transforming psychic contents (Ciccone, 2001).

In the model put forward by Bion (1962, 1963, 1967), babies feel and are sometimes overwhelmed by unmetabolized bodily sensations ("beta" elements), which generate great anxiety. The parent's role is to accept these expressions of anxiety, transform them into a meaningful experience ("alpha function") and give them back to the child in a more tolerable form. Repeating the process gradually enables infants to integrate this "alpha function" in order to metabolize distressing bodily sensations on their own. According to Bion, once acquired, this function constitutes an initial psychic container from which the child's first thoughts may emerge.

In line with Bion, Anzieu developed the concept of the "skin ego", which he defined as a figuration the child's ego makes use of during the precocious phases of its development to represent itself as an ego containing psychic contents based on its experience of the surface of his body (Anzieu, 1995). Anzieu considers that this initial self-image is supported by the various functions of the skin. Indeed, through feeding, infants experience various sensations

linked to the surface of their skin at a very young age. As they are touched, caressed and held and feel emptiness and fullness through satiety, these sensations help them to perceive their skin as an interface between inside and outside. The functions of the skin ego are thus to provide a protective shield, to individuate and to manage intersensorial correspondences by ensuring a coordinated functioning of sensory organs (Ciccone & Lhopital, 2001). According to Anzieu, foregoing the primacy of touch in interaction and communication (what he calls the "prohibition of touch") serves to transform a concrete tactile experience into figurative, then symbolic representations. In other words, the skin ego turns into a thinking ego (Anzieu, 1994).

Close to the notion of skin ego, Berger defines "thought containers" as the internalization of all the physical and psychological experiences enabling a subject to acquire a self-image that is unified in space (the sense of bodily continuity), in time (the sense of continuity of experience), emotionally (the sense of continuity of psychic life itself and the desire to live) and cognitively (the sense of the relative invariability of the world, which introduces predictability in perceptions, actions and thoughts) (Berger, 1996). According to Berger, these containers develop based on inborn archaic reflexes during the pre-symbolic or pre-verbal stage when the child enjoys positive somato-psychic experiences. Failing this, there might be no containers, or defective ones, and psychic contents will be devoid of meaning and impossible to retain or organize.

Gibello made an in-depth exploration of the hazards of what he terms "disconcerted thinking" (*pensée décontenancée*) (Gibello, 1995), i.e. a reduced, uncreative, reiterative form of thinking which affords little pleasure. He considers that the thought process is a powerful regulatory system which, like the circulatory, central nervous, immune or endocrine systems, with which it interconnects, provides regulation which is indispensable to a person's proper functioning. However, thought contents can only develop if rooted on a base ("*fond*") (Gibello, 2003) drawn from memorizing the effects of early motor and tonic postural activity. Innate reflexes are this base's raw materials, gradually complemented by the echopractic imitation of movements. These movements induce tonic changes whose memorization constitutes the early mental matrix. Without this matrix, the development of representations (e.g. of space or time) is jeopardized and the child displays what Gibello (2009, 2010) terms pathological cognitive disharmonies - dysgnosia, dyspraxia or dyschrony.

Aim of the study

From this various psychodynamic research, one may postulate that the quality of thought is linked to the quality of development of a psychic container. Although pleasant and clinically eloquent, this hypothesis has been but little tested in the field of psychoanalysis. Psychoanalytical thought, whose subject is neither visible, nor even rarely conscious, is not well suited to empirical operationalization. However, an effort should be made in this direction as the results might contribute to a better understanding of the link between cognitive development and the stages of personality development.

The connection between the development of a psychic container and the development of thought - the issue raised in this study - seems to answer major clinical stakes. Indeed, thought disorders (Berger, 1996; Gibello, 2009) and the resulting school difficulties and failures, might be partly treated not only through educational, but also therapeutic interventions aiming at facilitating the gradual development of the subject's own containment ability.

Operationalizing the ability to think is relatively easy since there are many existing measures of intellectual efficiency in children. We selected the fourth edition of the *Wechsler Intelligence Scale for Children* (Wechsler, 2005) for its validity and the possibility of using a short version (Grégoire, 2007). Operationalizing the quality of development of a psychic container is less obvious. Ciccone (2001) warns against considering the representation of a function – containment – as an object, which would confine us to an uninquisitive symbolic equation. Berger (1996) further explains that no thought container exists in itself; it rather refers to an unconscious representation of the subject as an enveloped, unified self. In our opinion, this representation may be partly understood using the Rorschach test, which Rausch de Traubenberg (2004) described as evaluating first and foremost an integrated body image. Rausch de Traubenberg's hypothesis, repeatedly verified in clinical experiments (Sanglade, 1983), assumes that the quality of responses to the Rorschach depends on the quality of the subject's representation of their own body.

In this study we shall limit our investigation to the Barrier and Penetration indices of Fisher and Cleveland (1958). As a reminder, in the 1950s these authors identified specific contents in Rorschach responses in a group of rheumatoid arthritis patients. Indeed, these patients tended to hypercathect the qualities of the surface, boundary, contour or periphery of percepts, be they human, animal, objects, etc. Fisher and Cleveland concluded that with the Rorschach, the quality of body image, which is difficult to assess through traditional

interviews, essentially translates into how content boundaries are represented. Definite and firm boundaries ("Barrier" responses) evidence a relatively solid body image, whereas weak, vague, permeable or damaged boundaries ("Penetration of Boundary" responses) denote a poorly constructed or fragile body image. The authors broadly conceive body image as a base of operations from which an individual may collect and integrate past experiences, act, position him/herself and – we would like to add - think. The validity of the Barrier and Penetration indices is largely discussed and evidences are still lacking in order to demonstrate the link between these scores and the characteristics of the "ego" (Sultan & Porcelli, 2004). This lack of empirical results, particularly for assessing psychopathology (Levin, 1990), may be due to the general ability or inability (for subjects with psychiatric pathologies) to give enough responses and various contents to the Rorschach task.

In our opinion, the "barrier" and "penetration" indices cannot be interpreted in a linear fashion. The presence of several "barrier" type responses (on average 4 per protocol according to Fisher and Cleveland) certainly bears witness to the construction of a relatively well-defined body image (it should be recalled that this index must always be interpreted taking into account the other Rorschach data and the assessment). However, a high score on "barrier" responses raises issues of hypercathexis or a rigid representation of body boundaries. In a study on connections between body image and creativity, Perruchon (1983) considers that Fisher and Cleveland's normative criteria indicate a proper cathexis of boundaries, whereas too high a number of "barrier" responses stresses a certain defensive rigidity reducing creativity in favor of a hypercathexis of the concrete world. Conversely, a massive emergence of "penetration" responses with few "barrier" responses evidences a deficient defense system and a thinking invaded by primary processes and destructive fantasies. Frédérick-Libon (2005) concurs, observing a particularly high "barrier" index in children displaying an autistic functioning, whereas those suffering from psychosis with noisy symptomatology tend to score a high "penetration" index. Lastly, in the framework of research on change processes in adolescence, Emmanuelli (2001) considers that boundaries are poorly cathected when the "barrier" index is lower than the norm and that there is an intensive work of narcissistic protection above this normal threshold.

We therefore postulate, in this study, that the relationship between the "barrier" and "penetration" indices and intellectual efficiency is of a quadratic, rather than linear nature. More specifically, we consider that an excess or lack of "barrier" responses (stressing a hypercathexis or non-cathexis of body boundaries) is detrimental to the development of an

ability to think. Similarly, it seems to us that a normal "penetration" index (evidencing non-disorganizing permeability) favors the development of intellectual efficiency.

Method

Procedure

Having secured approval from the school authorities, we contacted the parents of 580 children. Eighty parents (13.8 %) returned the screening *Strengths and Difficulties Questionnaire* (SDQ, Goodman, 1997) and agreed to their child participating in the study. Finally, 66 children (whose parents noted no major problem) were retained for the research. The data were collected by trainee psychologists in the child's school, using a specially appointed room reserved for this use. Excluding the 14 children displaying some difficulties in the SDQ seemed the most appropriate solution for us in the framework of this study, so as to avoid unnecessarily burdening them.

Participants

The population in this study is made up of 66 nonpatient children from 8 to 14 years old (mean: 10 years and 4 months; standard deviation: 1 year and 6 months), of whom 38 girls (57.6 %) and 28 boys (42.4 %). The International Socio-Economic Index of Occupational Status (ISEI, Ganzboom & Treiman, 1996) shows that our sample is characterized by an intermediate socio-economic level (mean: 51.6; standard deviation: 18.7). Moreover, 75 % of children live in a united family (married or cohabiting parents).

Instruments

The *Rorschach,* one of the most widely used tests by clinical psychologists (Camara, Nathan & Puente, 2000), is made up of 10 plates with inkblots. For each plate, presented in a standardized order, the child is asked what the inkblot calls to mind (Rausch de Traubenberg, 2004). Various methods of both quantitative and qualitative analysis serve to form hypotheses as to the psychic functioning of the subject tested. In this study, we shall restrict ourselves to rating the two indices by Fisher and Cleveland (1958). Contents referring to protection, a boundary or a container (e.g. clothing, houses, animals whose skins are distinctive) are rated "barrier" while contents referring to weak, permeable, broken or damaged boundaries (e.g. open mouth, parts of a body or object which are broken, fractured, damaged, etc.) are labeled "penetration". The "barrier" and "penetration" scores simply relate to the number of responses

in each category. These indices are relatively easy to rate and yield an interrater reliability ranging from .82 to .97 (Masling, 1999).

The fourth edition of the *Wechsler Intelligence Scale for Children* (WISC-IV) is a reference test to assess intellectual efficiency in children and adolescents aged 6 to 16 (Wechsler, 2005). According to the author, intelligence is an individual's capacity to act purposefully, to think rationally and to deal effectively with his environment. This test, which includes fifteen subtests, serves to obtain composite scores (indices) reflecting the child's cognitive functioning in the following fields: verbal comprehension (VCI), perceptual reasoning (PRI), working memory (WMI) and processing speed (PSI). When the child's abilities are not too heterogeneous, one may calculate a Full Scale IQ (FSIQ) which represents overall cognitive ability. For the purposes of this study we shall use a short version (Grégoire, 2007) in which each dimension is assessed using the most representative subtest: Similarities for the VCI, Matrix Reasoning for the PRI, Letter-Number Sequencing for the WMI and Symbol Search for the PSI. The sum of standard scores obtained in these subtests may be converted into an intellectual quotient (Short IQ) thanks to a conversion table put forward by Grégoire. The mean and standard deviation for this short form are respectively 100.02 and 14.98, close to the values obtained with the 10 core subtests. The short version displays a correlation of .92 with the full version and a reliability coefficient of .91. However, one should keep in mind that the Short IQ is just an estimate and that significant differences (higher than or equal to 10 points) between this Short IQ and the IQ in the full-scale WISC-IV may occur in 8% of cases.

Statistical Analyses

The statistics presented in this paper were processed using the open-source R software (R Development Core Team, 2009). Initially, we briefly characterize the distribution of the three key variables: "barrier", "penetration" and Short IQ. In a second stage, we review all correlations between predictor variables – "barrier" and "penetration" – covariables – Gender, Age and Number of Responses to the Rorschach test (R) – and the response variable – the Short IQ. To measure the strength of linear dependence between two quantitative variables we use Bravais-Pearson's r coefficient; when one variable is quantitative and the other qualitative, we use the η coefficient which equals the positive square root of the correlation ratio.

In a third and last stage, we build two quadratic models: one which defines intelligence as a function of the "barrier" variable and the other as a function of the

"penetration" variable. In both cases, so as to prevent false interpretations, we introduce three control variables: Gender, Age and Number of Responses to the Rorschach test (R). We then examine to what extent each model fits the data. Finally, for the sake of completeness, we build from each of both full models the most parsimonious. To this end, we resort to a progressive method (*stepwise selection*) in an attempt to minimize Akaike's information criterion AIC (1973).

Results

Description of Variables

The distributions of the "barrier", "penetration" and Short IQ variables are summarized numerically in Table 1.

Table 1

Characteristics of the "Barrier", "Penetration" and Short IQ Variables

	"Barrier"	"Penetration"	Short IQ
Minimum	0	0	64
First Quartile	1	0	98
Median	3	1	106
Third Quartile	5	1	113
Maximum	13	7	147
Mean	3.333	1.045	107.1
Standard Deviation	2.483	1.462	15.7

The distribution of the "barrier" scores may be likened to a normal distribution, as proved by the Kolmogorov-Smirnov test ($D = 0.144$, $p = 0.128$). The center of this distribution is slightly lower than that of the distribution produced by Fisher and Cleveland (1958). It should be noted that one child obtains an extreme score of 13 "barrier" responses. Grubbs' test (1950) confirms that this is a statistically unusual score ($G = 3.894$, $U = 0.763$, $p = 0.001$). Moreover, the subject in question provided a very specific Rorschach protocol with a high total number of responses (R = 42), many instances of animal kinesthesia (kan = 25) and animal responses (A% = 81). We therefore decided to remove this child from our analyses, which reduces the sample size to 65.

The distribution of the "penetration" scores is not normal ($D = 0.285$, $p < 0.001$), asymmetrical and skewed to the right. Over three out of four children obtain a 0 or 1 "penetration" score.

The distribution of intellectual quotients (Short IQ) is normal ($D = 0.141, p = 0.146$). The center of this distribution is above 100 ($t(65) = 3.663, p < 0.001$); however its standard deviation is 15 ($\chi^2(65) = 71.158, p = 0.561$). Although the shape and dispersion of the distribution are adequate, our sample is not quite representative of the general population, since for this purpose the average short IQ should have been 100.

Correlations between Predictor Variables, Covariables and Response Variables

Correlation coefficients are presented in Table 2.

Table 2

Correlations between the Gender, Age, Number of Responses to the Rorschach (R), "Barrier", "Penetration" and Short IQ Variables

	Age	R	"Barrier"	"Penetration"	Short IQ
Gender	0.019	0.082	0.074	0.044	0.054
Age		-0.083	0.010	-0.129	0.140
R			0.557**	0.409**	-0.153
"Barrier"				0.256*	-0.029
"Penetration"					-0.198

* The critical probability p is less than 0.050.

** The critical probability p is less than 0.001.

In the population surveyed for our study, neither gender nor age seem to impact the specific R, "barrier" and "penetration" variables in the Rorschach test, or the short IQ variable measuring intelligence.

All three variables R, "barrier" and "penetration" are positively intercorrelated ($p < 0.05$). Thus the higher the number of a child's responses to the Rorschach test, the higher the score on the "barrier" and "penetration" variables. In hindsight, this observation justifies taking into account the effect of the number of responses to the Rorschach test in models describing the dependence between the "barrier" and "penetration" predictor variables and the short IQ response variable.

Intelligence as assessed by the Short IQ variable is linearly independent from gender, age, the number of responses to the Rorschach test and both key "barrier" and "penetration" variables.

Assessment of the Model Parameters

The statistical models which we built are presented in Tables 3 and 4.

Table 3

Models predicting Short IQ according to the score on the "barrier" variable. The full model (including the Gender, Age and Number of responses to the Rorschach test variables) is on the left. The most parsimonious model according to Akaike's criterion is on the right.

	Full Model				Most Parsimonious Model			
	β	*ES*(β)	*t*	*p*	β	*ES*(β)	*t*	*p*
Y-Intercept	101.333	13.583	7.461	0.000**	106.708	1.839	58.019	0.000**
Gender [Boy]	-1.760	3.830	0.460	0.647				
Age [Months]	0.073	0.098	0.740	0.462				
R	-0.164	0.276	-0.592	0.556				
"Barrier"	1.971	18.510	0.106	0.916	-3.631	14.828	-0.245	0.807
"Barrier" × "Barrier"	-38.778	15.588	-2.488	0.016*	-42.244	14.828	-2.849	0.006*
	$R^2 = 0.135$				$R^2 = 0.117$			
	$F(5, 59) = 1.845, p = 0.118$				$F(2, 62) = 4.088, p = 0.021$*			

* The critical probability *p* is less than 0.050.

** The critical probability *p* is less than 0.001.

Table 4

Models predicting Short IQ according to the score on the "penetration" variable. The full model (including the Gender, Age and Number of responses to the Rorschach test variables) is on the left. The most parsimonious model according to Akaike's criterion is on the right.

	Full Model				Most Parsimonious Model			
	β	*ES*(β)	*t*	*p*	β	*ES*(β)	*t*	*p*
Y-Intercept	95.174	13.309	7.151	0.000**	106.708	1.875	56.909	0.000**
Gender [Boy]	-2.134	3.815	-0.559	0.578				
Age [Months]	0.136	0.101	1.352	0.182				
R	-0.249	0.248	-1.004	0.320				
"Penetration"	-14.613	16.745	-0.873	0.386	-24.645	15.117	-1.630	0.108
"Penetration" × "Penetration"	-33.861	15.830	-2.139	0.037*	-25.562	15.117	-1.691	0.096
	$R^2 = 0.128$				$R^2 = 0.082$			
	$F(5, 59) = 1.729, p = 0.142$				$F(2, 62) = 2.759, p = 0.071$			

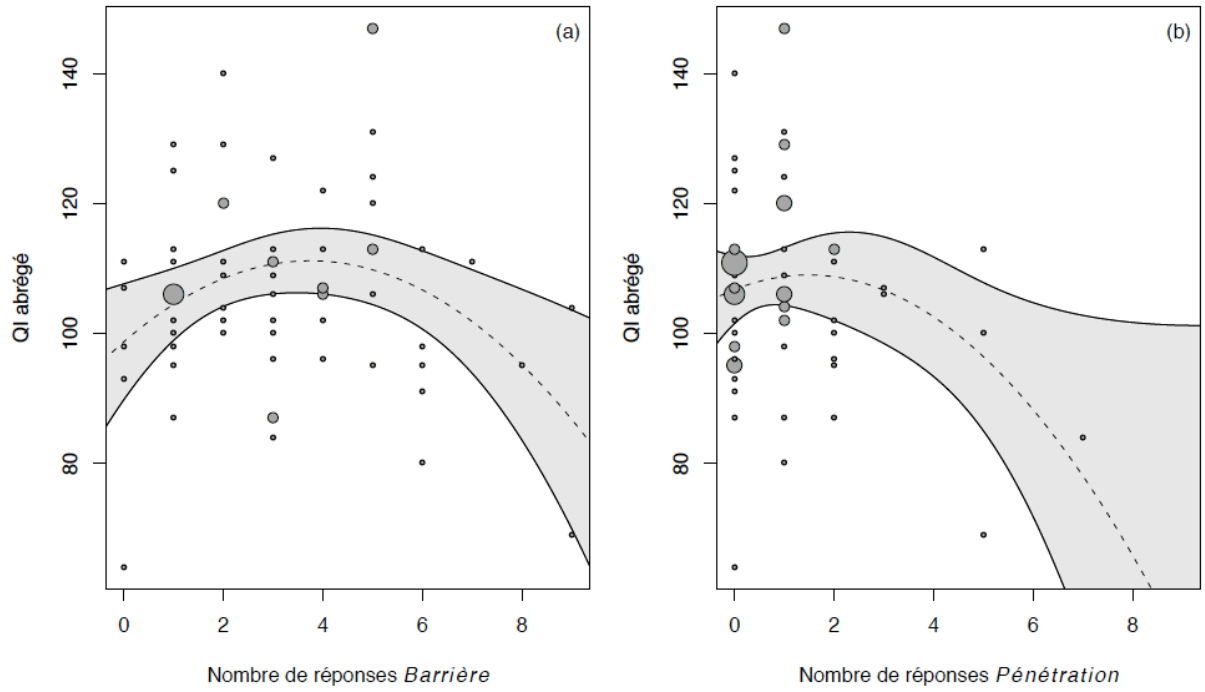
* The critical probability *p* is less than 0.050.

** The critical probability *p* is less than 0.001.

The variance explained by the first model – assessing the impact of the "barrier" variable on intelligence – is 13.5%. Overall, this model is not significant at a threshold of 5% ($R^2 = 0.135$, $F(5, 59) = 1.845$, $p = 0.118$). However, the model does highlight the parabolic influence of the "barrier" variable on intelligence. Indeed, the β coefficient associated with the term "barrier" × "barrier" is significant at a threshold of 5% (β = -38.778, $t(59) = -2.488$, $p = 0.016$) and is unique in this. Thus children with a low score on the "barrier" variable or, on the contrary, a high score, tend to perform less well in the intelligence test (Fig. 1a). This statement is in line with the most parsimonious model which can be built from the global model integrating the control variables (Table 3).

Figure 1

Graph representing the parabolic dependence of intelligence according to: (a) the "barrier" variable, (b) the "penetration" variable. The gray area is the 95% confidence envelope.



The variance explained by the second model – assessing the impact of the "penetration" variable on intelligence – is 12.8%. Overall, this model is not significant at 5% ($R^2 = 0.128$, $F(5, 59) = 1.729$, $p = 0.142$). However, the model does highlight the quadratic influence of the "penetration" variable on intelligence. The β coefficient associated with the term "penetration" × "penetration" is significant at a threshold of 5% (β = -33.861, $t(59) = -2.139$, $p = 0.037$). Children who obtain an intermediate score on the "penetration" variable

(i.e. neither too low, nor too high), tend to obtain better results in the intelligence test (Fig. 1b). Building the most parsimonious model from the global model serves to confirm this finding (Table 4). However, the model's goodness of fit to the data is slightly less when using the "penetration" variable ($p < 0.10$) rather than the "barrier" variable ($p < 0.05$) as a predictor.

Discussion

The significant findings of this study allow us to draw preliminary lessons of a methodological, theoretical as well as clinical nature.

From the point of view of methodology, we observe that the "barrier" and "penetration" variables yield relevant indications of psychic functioning provided that, as advocated by Perruchon, Frédérick-Libon and Emmanuelli, they are not analyzed in a linear fashion. We thus observe that in the Rorschach test, the absence or excess occurrence of responses referring to boundaries is linked to significantly poorer results in a cognitive ability test. However, the "penetration" variable, with its asymmetrical distribution, seems less predictive of the ability to think than the "barrier" variable. We think that this difference is partly due to the nature of our sample. Clinical experience tends to show that responses calling to mind a breach of boundaries (responses labeled "penetration") are observed more frequently in clinical populations, and more particularly in children exhibiting psychotic functioning (Frédérick-Libon, 2005) which, of course, is not the case of our random sample. However, expressing Penetration responses need some degree of symbolic abilities, and children with these capabilities are not so common in the population to account for empirical findings.

Both the "barrier" and "penetration" indices are easy to rate and meet the current criteria for statistical validity and reliability. Although they are often forgotten in projective analyses and literature, it seems to us that these variables should be taken into account not in lieu of, but in addition to other indices (including discourse analysis and test administration methods) drawn from projective tests.

From the theoretical point of view, this study's findings tend to support the hypotheses put forward by classical psychoanalytical authors such as Bion (1962/2003, 1963/1979, 1967, 2001), Anzieu (1995), Berger (1996) or Gibello (1995, 2003, 2009, 2010). Relying on concepts both close and distinctive, all these authors postulated that close links exist between the development of a containment ability – i.e. establishing a differentiated identity – and the development of the ability to think. Bion particularly insists on the role of the environment in

this process. Both Anzieu (1995) and Berger (1996) stress the bodily origin of this psychic container, whereas Gibello (2009, 2010) explained the specific contingencies of the development of thought in relation to the particular psychic functioning of children and adolescents. Throughout these writings, the development of intelligence cannot be dissociated from the child's psychoaffective development. Although this theory may appear rather commonplace, and has indeed been adopted by several educational currents, it remains surprisingly discreet in international research literature. This might be due to recent advances in neuroscience - neuropsychology in particular - which tend to (erroneously) induce the idea that learning disorders are genetically determined (Flynn, 2007; Nisbett et al., 2012). Contemporary psychoanalytical theories do not (or at least, should not) refute the close relationship between biology and psychology, since brain plasticity leaves much room for epigenesis, i.e. the influence of experience on the development of children or adolescents (Changeux, 2008).

Although it may be useful to validate a theoretical assumption, we deem it more important to reflect on the clinical implications of our findings. As we have seen, the data collected in this study tend to prove that the quality of boundary representations (in particular of body boundaries) is linked to the development of thinking. But how can we favor the emergence or restoration of body boundaries, and consequently the development of a psychic container? Corporal mediation therapies, working with the child on thought containers, as well as a "therapeutic presence" provided to the child's circle constitute treatments of choice in our opinion. Among the various corporal mediation therapies, psychomotor therapy is particularly well suited to children lacking psychic containment. For from being restricted to motor rehabilitation for clumsy children, this approach serves to discover through play, supported by the therapeutic relationship, the bodily sensations and boundaries at the root of the sense of identity. Relaxation therapy (Bergès-Bounes et al., 2008) also facilitates the development of representations of various parts of the body and the building of a body base from which one may then position oneself and start to think.

The "Thought Container Development" (*Développement des Contenants de Pensée - DDCP*) method developed by Douet (2001) explicitly aims at establishing an individual space for thought. Half-way between cognitive remediation and psychotherapy, and administered in a group or individually, this method is inspired from Piagetian and psychoanalytical contributions. In a playful atmosphere and by alternating support materials (images, drawings, photos, geometric figures) and activities (exercises, play, miming, role play), the DDCP helps to discover the pleasure of thinking and more specifically serves to form bonds and

associations between the discontinuous elements of the thought process.

Finally, a "therapeutic presence" (Nashat, Solomon & Quartier, 2011) constitutes a psychoanalytic consultation model which favors the integration of a containment capacity. Offered to the child's circle (parents, teachers, institution), the therapist's presence aims, in a Bionian perspective, to contain and metabolize the anxieties which preclude or hinder the environment's ability to accompany the child's affective and intellectual development. In a first stage, a "therapeutic presence" serves to accept the circle's feelings of anxiety or helplessness and, in a second stage, it offers a space to think about, and then possibly change parental, educational or teaching practice.

These various therapeutic approaches should be the subject of further research in future so as to assess their effectiveness. This is what it will probably take to elicit support from the public authorities so that they are offered to those children who may benefit.

This study has several major limitations. The sample is small and selective, since only a low percentage of families agreed to participate. Moreover, the exclusive use of the "barrier" and "penetration" scores to operationalize space for thought remains unsatisfactory. However, the findings of this study encourage us to pursue and refine our investigations. It would be advisable to assess the convergent validity of the "barrier" and "penetration" scores using other indices or psychological tests. Recruiting a clinical sample would also help to shed further light on the trends observed with this random sample of children. For instance, the dispersion of "penetration" responses should be greater so as to develop a more accurate model. In order to do so, we should keep in mind that operationalizing the ability to think using an index of intellectual efficiency is not the optimal solution, as we need – in line with Winnicott's research on "false self" functioning (Winnicott, 1970) – to consider the defensive aspects of a hypercathexis of the intellect.

Thus the smooth development of thinking is a narrow path between cognitive deficit and over-adaptation. Without denying the fundamental influence of biological foundations, developing a representation of body boundaries (and therefore of identity) probably plays a key role in successfully meeting this challenge.

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Résumé – Espace à penser : représentation des limites du corps et efficience intellectuelle

But. – Les théories psychanalytiques de Bion, Anzieu, Berger, ou Gibello postulent que le développement de la pensée dépend de la constitution d'un espace psychique propre. Cet espace à penser s'origine dans le corps et la relation. Cette étude a pour but de valider cette hypothèse psychodynamique.

Méthode. – L'étude porte sur un groupe d'enfants non-consultant de 8 à 14 ans. L'espace à penser est opérationnalisé par les scores « barrière » et « pénétration » de Fisher et Cleveland au Rorschach et l'efficience intellectuelle est mesurée par une version abrégée du WISC-IV.

Résultats. – Les résultats montrent que des scores extrêmes aux variables « barrière » et « pénétration » prédisent un niveau intellectuel plus faible que les scores dans la moyenne.

Conclusion. – Les développements de la pensée et de la personnalité semblent liés et les variables « barrière » et « pénétration » sont des mesures utiles pour évaluer le développement d'un espace de pensée propre.

Mots-clés : image du corps, intelligence, WISC-IV, Rorschach

Resumen – Espacio para pensar : representación de los limites corporales y capacidad intelectual

Objetivo. – Las teorías psicoanalíticas de Bion, Anzieu, Berger o Gibello plantean que el desarrollo del pensamiento necesita la constitución de un espacio psíquico propio. Este espacio para pensar nace en el cuerpo y en la relación. El presente estudio tiene como objetivo la validación de esta hipótesis psicoanalítica.

Método. – El estudio se refiere a un grupo de niños no clínicos de 8 a 14 años. El espacio para pensar es objetivado con las puntaciones "barrera" y "penetración" de Fisher y Cleveland por el Rorschach y la capacidad intelectual se mide con una versión abreviada del WISC-IV.

Resultados. – Se demuestra que las puntuaciones extremas "barrera" y "penetración" predicen un nivel intelectual inferior que las puntuaciones medias.

Conclusión. – El desarrollo del pensamiento parece estar relacionado con el desarrollo de la personalidad y los variables "barrera" y "penetración" son medidas útiles para la evaluación del desarrollo de un espacio de pensamiento propio.

Palabras claves : imagen del cuerpo, inteligencia, WISC-IV, Rorschach