Abstract: Sports objects intended for children are part of children’s material culture. They put into play the child’s body with its actual physical, psychological, intellectual and social characteristics, and representations on the child at the time of the design and production of objects most suitable to each age. The aim of this article was to conduct, through qualitative research, an assessment of sports objects, considering their materiality and influence on children’s bodies, and to unveil ways to signify childhood and sports.

Resumo: Os objetos esportivos destinados à criança são parte da cultura material infantil. Colocam em jogo o corpo da criança, com suas reais características físicas, psicológicas, intelectuais e sociais, e as representações de criança pensadas no momento de concepção e produção dos objetos que convêm a cada idade. O objetivo deste artigo foi proceder, através de uma pesquisa qualitativa, à análise dos objetos esportivos, considerando a sua materialidade e influência sobre os corpos das crianças, bem como desvendar as formas de significar a infância e o esporte.

Keywords: Games and toys. Child. Sports equipment. Cultural characteristics.


1 INTRODUCTION

The world of sport is above all a world of objects, and distinct sports require specific materials. Some objects are essential to certain practices, such as balls, rackets and clubs, while others play complementary roles. We review these materials here, more specifically, sports objects that are designed, produced and marketed for children.

Sports objects for children are a prime example of children’s material culture that simultaneously brings into play their bodies – with their real physical, psychological, intellectual and social characteristics – and representations of children that are considered when objects suited for each age are designed and produced.

Throughout sport’s history, the main criticism found in literature on sports aimed at children focuses on mistakes made in early-age training and competitions. Demands for intensive sports training cause anatomical and physiological damage, while the search for results in sports competitions puts intense psychological pressure on boys and girls, causing numerous problems for children (MELLO, 2006).

However, in the 1960s, improper children’s sports practices began to be overcome by adapting sports, which then started to be tailored to practitioners’ ages. The development of children’s sports practices by sports federations involved material innovations – a condition to make sports accessible to younger children while preserving the specificity of each sport (GARNIER, 2005; 2006).

But if sports are massively practiced by children today, how do sports and sports equipment come into their lives? How are objects integrated at the same time to sports cultures and children’s cultures and what do they cause in children?

In this article, our research attention is focused on sports objects, highlighting what is related to their design, production and marketing, and also what regards their effective uses (BROMBERGER; SÉGALEN, 1996). This led us to “slice” “objects’ social life” (APPADURAÏ, 1986) and focus on the point where the several investments at stake intersect and crystallize, sometimes on objects that characterize sport and sometimes on what they do to children.

Therefore, the analysis of objects is crucial to understand these cultural hybridizations between the world of sports and the world of childhood. In this study, it first includes justifying objects’ central role and showing the theoretical perspectives on the analysis of children’s material culture. Then it is important to show the methodological approaches that govern our empirical research and then present the results from the point of view of technological and semiotic analysis of sports objects for children.

Therefore, this paper was aimed at analyzing sports objects while taking into account their materiality and their influence on children’s bodies, as well as uncovering ways to signify children and sport. In short, it intends to show the double vision of a material culture: materiality engaged in action and meaning-making subject to interpretation.
2 THEORETICAL FRAMEWORK

2.1 Studies on sports objects: between materiality and symbolism

In the area of sport, theoretical interest in objects has been inversely proportional to interest in practice. Such lack of studies also affects the objects for children: does that happen because they are very rudimentary or, conversely, because they are very sophisticated? In any case, the worlds of children’s sports and children's material culture lack recognition and visibility as research subjects.

The few studies on sports objects are related to their use by adults. The primary research object is materiality. Vigarello’s analysis (1988) sees the evolution of materials used in sports devices, forms, series of technical changes that overlap, motor and instrumental logics, and otherwise materials, technological and scientific innovations from the perspective of cultural history. In fact, as a sport is regulated, technical innovation does not happen without conflict as pointed out by Defrance’s (1985) analysis of the adoption of the fiberglass pole in athletics.

The analysis of the transformations of objects pointed out new forms of motor engagement in the practices and new principles of perception and appreciation. That is shown by Duez’s (2009) study of mountaineering instruments particularly with regard to risk-taking in sports. It is the “sensitive body” that can be placed in the foreground of a tangle between sports material and body experience (LEVEL; LESAGE, 2012). The sports object aims at integration within “motor behaviors”, to use Parlebas’s (1967) term for all the dimensions of motricity – motor-sensory, affective, social and significant.

A second perspective of analysis of sports objects has been opened more recently in favor of economic and cultural changes in the sporting world: mass consumer objects transformed into individual and collective identity markers (OHL, 2003). No longer closed inside stadiums and gymnasiums, objects invade every day spaces and times and crystallize in the mediatization of sporting performances and coverage. From this perspective, objects' materiality seems to lose dimension until they are “lightened” in the form of words, images or taxonomies (DAGOGNET, 1996). The object becomes a sign, a support for production of appearances, a surface for sharing emotions and identifications raised by sport.

That materiality is also erased when sports objects are shown as topics of conversation among practitioners, relics that mark individual biographies or items in sports museums. What is left is this fundamental idea of economic and symbolic exploitation of sport that raises those consumer objects to the status of analyzers of cultural categories and changes in the symbolic (DOUGLAS; ISHERWOOD, 2008). The whole point in Douglas and Isherwood’s anthropological approach to consumer goods lies on the close bond that such approach builds between moral judgments, cognitive categories and objects. It is through objects that a culture is realized, acquires stability and consistency, thus becoming visible and convincing. At the same time, objects appear as “markers”, defining the identity of individuals who immediately acquire a moral dimension, and showing through them how they should be treated. Focused on the symbolic dimension of objects, the approach deliberately ignores their materiality and their practical function, just as Baudrillard’s (1968) analysis is criticized for its “semiotism” that reduced objects to signs at the expense of their materiality and their commitment to action (JULIEN; WARNIER, 1999; JULIEN; ROsselIN, 2005).

To overcome this alternative choice between technological and semiotic analyses of objects, we work toward a “semio-technology” of objects, to use Bromberger’s (1979) term. The problem is
not choosing between materiality of culture and its symbolism or, to put it another way, between “intelligence of the situations where action and things merge” and “intelligence that operates on representations and symbols” (WALLON, 1970, p. 95). The real issue is that of a theoretical stance that suggests their coordination, understands their interfaces, sees their conflicts.

2.2 The object “invites” to action

At the heart of complex theoretical relations between the body and objects (DIASSIO, 2009), understanding objects of the sporting world can be easier from a phenomenological viewpoint: “Moving one’s body is aiming at things through it, letting it respond to the request made to it without any representation” (MERLEAU-PONTY, 1978, p. 161). It is considering the object as an invitation to act, a “center for virtual actions”: “the perceived object is immediately coded as a certain set of action hypotheses” (RIZZOLATTI; SINIGAGLIA, 2008, p. 60). It is inviting us to think of the objects as “objects that are made for…”, which means – at least potentially – objects engaged in action.

Undoubtedly, only by examining objects’ actual uses can we define multiple meanings. At the same time, such analysis of uses involves previous qualification of objects. For example, to study the social production of sexual identities through a material culture is to presuppose the existence of objects that are a priori different according to gender, even though they allow different reinterpretations, as well as deviated and even reversed uses (ANSTETT; GÉLARD, 2012).

Just as gender, material culture embodies a priori age differences, particularly distinguishing objects “for children” and “for adults”, between vagueness and rigor of age classification (GARNIER, 2006). This understanding of objects is related to attributes intrinsic to them; it is always located in the repertoires of action, in “doing with”, addressed to different or similar recipients. For Merleau-Ponty, that action of request by objects is related to the way in which, in a “cultural world,” he says that “every object carries an underlying mark of the human action it serves” (1978, p. 162). Therefore, the object can be thought of as something that offers support to children’s activity given their possibilities to act on it, as stated by Gibson (1986), while the object exerts its influence on children.

2.3 Objects for adults, objects for children

Two analytical perspectives on sports objects for adults – based on materiality and symbolic dimension respectively – echo a dual orientation of sociological works on childhood: one is interested in production of adapted or hybrid devices for children, involving bodies (PROUT, 2000) while the other focuses on the notion of “interpretive reproduction” (CORSARO, 2005) through which children appropriate adult culture by assigning their own meanings to it.

In our perception, both are essential to think material cultures and, more particularly, to study operations that allow us to consider sports objects as specifically tailored to children and the way they are influenced by their objects. These operations are necessarily dual, inscribed within objects’ and bodies’ materiality and the interpretation of representations on what physical, recreational and/or sports activity for children.

Thus, objects are not simply intended as external to children, they are indirectly parts of them, within their materiality and the set of representations they specify. They are not limited to conveying preconceived images or definitions of childhood. More radically, they challenge and...
update what children are and what’s good for them. The object is no longer seen as a support for children’s motor and interpretive skills, because it also institutes them, contributing to produce them.

On the other hand, thinking sports objects for children forces one to increase attention to the technical product, its goal of efficacy, through the game’s frivolity and fantasy by changing the framework it operates (BROUGÈRE, 2005). But while “with the game, we pay attention to the device’s for extracting objects’ properties” (THÉVENOT, 1993, p. 98), it is precisely its plasticity, objects’ variable opening to interpretations, which prevents us from drawing clear boundaries between toys and sports material.

3 METHODOLOGICAL DECISIONS

3.1 Production and analysis of a corpus

Each piece of sports equipment for children may be a construction made up of several elements and using different references – some of them anchored in sporting worlds themselves; others are focused on the universe of play and childhood, where motor and interpretive competences may interference and challenge one another. In view of this, this study required a corpus of different series of objects after reflective analysis and categorization of objects, according to different “families” based on the typicality and the possibility of substitution between objects of the same type (HOUDÉ, 1992).

To build that corpus, a survey was conducted with objects in 18 websites of sports companies (6), toy and game companies (9) and price comparison (3). As control and for a better analysis of the objects, six technical observation visits were conducted on businesses that physically trade the same objects found on the websites: two stores of major sports material chains, three major toy stores and a hypermarket.

Twelve series of objects were organized whose referential universes are sports more or less mediatized and institutionalized, and children’s traditional toys: tricycle, scooter, trampoline, wooden horse, frisbee, table football, jump rope, bicycle and others. The survey covered a total of 225 objects.

The qualitative and comparative methodology of analysis included successive interactions between building coding categories and producing the corpus of objects, following a process of continuous and comprehensive comparison of qualitative data (GLAZER; STRAUSS, 2010).

Methodological procedures were complemented by ten interviews with parents of 5-6-year-old children and nine group interviews with same-age children trios, addressing choices and uses of sports objects.

4 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Between sporting universe and childhood; between objects’ dimensions and children’s growth and development

First, we present technological variations, and then the interpretative combinations that are lent to objects, considering the intersections between those two frameworks of analysis that require understanding each object’s uniqueness.
As an example, a small bicycle “dressed” as a zebra (Figure 1) operates the synthesis of a bicycle adapted for small children and its playful metamorphosis into an animal: an object for pedaling, but also for delving into the narrative universe. But if, in comparison, a “mini-tennis” racket (Figure 2) seems to be a simple object, it is as inviting to the different stories and actions as the bicycle. Those two objects illustrate this intersection – unique in every aspect – of the object’s materiality and the universes of meaning in which they are inscribed, thus defining what is best for the child while also “self-defining”.

The objects’ size or more precisely proportionality between their physical characteristics (size, weight, volume) and those of children is the first way to adjust magnitude, setting older children apart from younger ones. It is the first difference to note, the first representations of what is good for the child, when it comes to placing the object within children’s reach. Objects are ordered according to their size or allow adjusting height as children grow, e.g. the bicycle saddle (Figure 1). Indeed, children’s size and weight open space for calculating their age, defined in number of years, and objects’ dimensions both as normative and descriptive measures.

Objects’ successive remodeling within the same series depict children’s development; it occurs either by simplifying an object type, for example, by removing a bicycle’s pedal and brake (Figure 1) or by increasing its complexity. With two, three or four wheels, the scooter illustrates what to do increasingly early, giving children a biomechanical support according to their balance and strength: multiple supports, extended surfaces or reduced arm levers.

Therefore, the “mini-tennis” racket (Figure 2) is not a miniature racket, but a specific device: shorter handle, broadened racket head and flexible stringing. The whole movement orientation can be integrated within the object: for instance, visual references and reduced degree of freedom, which predetermines children’ motricity. Orientation can be “negative”, thus creating obstacles to prevent deviant use, or directed towards “initiation”, trying to favor certain movements (DODIER, 1993). Aimed at children, the object implements especially certain “tolerance”: it allows overcoming certain difficulties or minimizing the consequences of those difficulties.

While adult surveillance is essential, child safety is primarily delegated to objects through rules to be followed: materials (foams, plastics and fabrics), rounded forms or integrated protective elements. Sometimes the object has support for an adult, as a stick-shaped handle that can be connected to push tricycles and allows adults’ forces alternate with children’s. Closely observed, that support for adults indicates that the object is good “for” the child while it is addressed to parents.
Moreover, thanks to integrated elements and the material's elasticity, the object is created with potential to be explored for future mastery, it can respond to requests, for example, of acrobatic use. Like a board in which flexibility must be found under surface stiffness, the object authorizes a leap to future motricity; it holds power for the future as there is potential development of children's competences.

Another frequent feature of objects for children is their versatility, which allows dual use: rackets can be used both for tennis and for badminton, indicated respectively by the ball and the shuttlecock sold together in one package. That versatility can be also obtained with several objects sold together as kits, including balls, racket pairs and frisbees, providing a sample that allows the child to “experiment” with different sports before choosing one in particular.

4.2 Objects and sports initiation

Through multiple adjustments, tension arises between children’s motor limits and competences. There is strong tension between risk and safety, between what the object permits and what one cannot do with it, between children’ strengths and difficulties. Thus, in children's objects included in plastic golf bags (Figure 3), shocks and beatings are sometimes foreseen and softened; then the object can be placed in all hands, but it offers no support for precise and long paths. That is, there is tension between present and future: what allows motricity today can be an obstacle for future progress.

To varying degrees, objects' commitments are all weak. On the one hand, a material for moving, expending energy and distracting; on the other hand, it is the matter of a demanding “face-to-face” where “the object seizes the body at the same time that it is seized” (BESSY; CHATEAURAYNAUD 1995, p. 273).

It is precisely at this point – the object's influence over the child – that space is opened for initiation in a sport, whether it is practiced in a sports club, a school or a community of practitioners with a group of peers. Even if it is not ritual (ZEMPLÉNI, 2007), the whole process of initiation marks the body, imprinting lasting traits. In effect, while initiation is not necessarily synonymous with painful body tests (kicks, blows, bruises, etc.), it goes hand in hand with learning anchored in the creases between things and body. Merleau-Ponty (1978, p. 168) speaks of that ability to incorporate objects: “To get used to a hat, a car or a stick is to be transplanted into them, or conversely, to incorporate them into the bulk of our own body. Habit expresses our power of dilating our being in the world, or changing our existence by appropriating fresh instruments”.

Sports initiation, for its transitivity and its self-reference, calls for separated space and time that break away from the child's home attachments. While parents are the first vectors of sports initiation, that initiation calls for a specialized space, for its own world, more than that of the family. Initiation is also the beginning of “extra” motricity – ordinary motricity that is valid and valuable within the circle of initiated, amateurs and practitioners of a particular sport.

With initiation, another order of magnitude opens, similar to that of age: the one takes the “beginner”, the novice, to the “expert”, the “champion”. In this new situation, aspiration to “high-level” in sport emerges, demanding “scaling” in material – in quality and financial cost – i.e. new investments that are at once economic, social and affective in the sense of attachments and emotions that can be renewed periodically.
On the other hand, the pleasurable activities of initiation and the use of motivational materials are essential to establish links with a sport (MELLO, 2000, 2001).

4.3 Influences and interpretations of the sports universe

Objects lead children to delve into different cultural universes, within which the type of object and the motricity it can materialize are inscribed. Objects signify and make up those universes, progressively forming collections or narratives related to events or situations, in a form of categorization anchored in the experience favored by the child (HOUDÉ, 1994). Thus, for instance, the basketball hoop asks for a ball, but also for special shoes, clothing, equipment, similarly to the NBA, its champions and its derived products – in short, a whole basketball universe.

The list of objects follows geometric progression according to specific sports, according to their specific entanglements with the world that sells them (the “market”) and its mediatization. Each sport represents its own universe, with its self-reference, in which every equipment pieces is, in its turn, symbol, icon, sign. That integration of objects into sports universes is most often intensified by brands, logos, words, images associated with objects, such as the tennis racket. By appropriating the object, children become part of a particular sports universe. So they no longer “play with” a tennis racket; they “play tennis”. Through their rackets, they were placed inside the tennis world and become familiar with its motricity, its lexicon, its codes, its norms and values; they become “tennis players” – characters of that universe. And even if the racket in the child’s does not give materiality to a motricity that is up to “real” tennis, that object can support their interpretive operations and become an essential accessory to sports epics.

What adults can derogatorily see as “toys”, “make-believe” or “simulation” of sport equipment allows those children to exercise interpretive competences. It includes reading keys for objects both in a literal and in a figurative sense, when the object is highly marked, decorated and enhanced by the word designating a sport, such as the golf cart with plastic clubs, in which the word golf is written (Figure 3). The more a sport object looks like an imitation of the “official” object, the more it has a chance to be marked and labeled, as if the weak support given to engagement in a sport motricity could be compensated for its symbolic appropriation: for the child, playing golfer is to play golf.

While sport shops extend their offer to increasingly younger children, toy stores’ departments are filled with more or less realistic imitations of sports equipment that, just like miniature kitchen pots and small cars, participate in the omnipresence of the sporting event in the world that is presented to children’s experience.

4.4 Objects and childhood universe

Objects also refer to a children’s mass culture that, like the sporting culture, represent “immersed universes” and “logical transmedia”, in particular through product licenses (BROUGÈRE, 2008). Some sports objects are marked and colonized by characters moving from one support to another: balls, rackets, scooters, etc. Just like Disney-licensed frisbees (Figure 4) and other sports objects with printed characters, such as Spiderman or Hello Kitty, who, although displaced from the sport universe, are omnipresent in the lives of boys and girls. Through the diversity of characters, colors and accessories (printed on
a bicycle basket for dolls, for example), they are massively loaded with gender differences for the same object or mark different objects.

Through these semiotic combinations, the object is integrated into the narratives, it invites to games that might relativize the motor implication or cause it to lose its self-referential character, for example – causing a doll to ride a bicycle when playing. Therefore, objects become fun, they ignore the seriousness of a sports commitment, avoid it without frontally opposing it and signal towards children's own world, populated with materials that are manifestly for them and, from their point of view, are also “for us.” With printed brands and drawings, sports objects change framework and, resumed as fun games, identify with children and allow them to dominate and become smoothly familiar with the sporting universe.

This production of objects with their brands, in particular through the licenses of children's mass culture, also bears strong age-based differences. Indeed, these tend to be eliminated as object and child grow, as if there were a succession of interpretive, then motor, activities. As they age, all that seems to make way for anonymity due to sport mechanisms claimed by sporting competition.

But, besides the aforementioned marks, objects for children can also undergo a metamorphosis and very often become an animal (Figure 1) close to childhood universes.

The expected distraction of objects, that relaxed way to connect to things (ASSOULY, 2006) is noticed in the accessories associated with them: ringing, music, bright lights, etc. In principle, animated objects by spring-driven mechanics or electronic devices, but also playful inventions done by hybridizing types of objects. There is another criterion that opposes sports' conventional objects: fun – the search for sensations mixing pleasure, surprise, subversion. Perhaps it is in that lack of limits and in that eclecticism that tomorrow's new sports are expressed. In any case, they indicate a bet on leisure through sport as opposed to the world of institutionalized competition. It is within those playful inventions that we also find objects that, at home, can be shared by adults and children.

### 5 CONCLUSION

We must stress that objects do not only mark age differences between adults and children. While serving the latter, they may hold future potential and potential for the future – children's growth and development but also growth toward “high-level” sports are marked by objects, according to different sporting levels and regulations.

Therefore, we distinguish four different ways of making sports objects available to children: production of a material specifically designed for early sports initiation (Figure 2); placing sports material as toys, to support playful simulation of children (Figure 3); the set of objects with features associated with children's mass culture, notably through product licensing (Figure 4); or inventions definitely intended for fun (Figure 1), even outside sports conventions.

Objects allow outlining the representation of different childhoods: some of them about the future, by imitating an adult sporting world; others, by updating children's authentic sports competences; and other, by appreciating children's mass culture or updating the traditional heritage to today's childhood.

In this sense, we complement our analysis by pointing out implications of socioeconomic differences within families that are, in principle, consumers of objects more or less loaded with
technological innovations, more or less marked by children’s mass culture. Those families are concerned with sophisticated designs and what they can financially provide children.

Therefore, objects must become tangible to children’s motor competences, linked to their engagement in action while its interpretative competences are linked to representations of what is sometimes “sporting” or has “its own characteristics”. We insist here on the absence of rigid boundaries that would distinguish “real” sport material from games and toys. Rather, it seems that the offer of products deliberately plays on inaccurate and ambivalent boundaries between the seriousness of sports and the fun of playful cultures. Therefore, such distinction may become the object of debate and negotiations, among both adults and children (GARNIER, 2013).

By closely linking technological and semiological analysis, a pragmatic principle demonstrates the rich abundance of objects that pervade our everyday lives, being a privileged observatory to clarify and restore our cultural worlds, as our way of acting with children. When, in recent times, balls and skates became digital objects and the interface of a movement pickup takes the place of rackets, this theoretical position seems all the more necessary as it is relates to understanding how technological and symbolic changes in objects open multiple bodily possibilities.

Therefore, the study of the relationship between technological and physical approaches to material culture and its symbolic and narrative dimensions allows us to understand the extent and the permanent renewal of playful and sporting practices, especially those related to children.

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