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ORIGINAL

GAMES IN SEVENTEENTH CENTURY SPAIN: AN ANALYSIS OF RODRIGO CARO'S 1626 WORK *DÍAS GENIALES O LÚDICROS* [FESTIVE DAYS]

LA MOTRICIDAD EN LOS JUEGOS DE RODRIGO CARO: *DÍAS GENIALES O LÚDICROS* (1626)

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ABSTRACT

The paper analyses 65 physical games that feature in Rodrigo Caro's 1626 work *Días geniales o lúdicos* [Festive Days] and which are representative of seventeenth century Spanish society. The structural-systemic approach used is based on motor praxiology. Under a criterion of motor interaction the internal logic of the games described by Caro is studied by means of the motor communication network, the focus being on the relationship with other participants. Age and gender are also studied as aspects of the contextual or external logic. The information was obtained by means of content analysis, revealing that this corpus of games presents systemic regularities that enable us to understand better the society in which they were played. Most of the

games were governed by rules, and there was also a predominance of exclusive and stable motor communication networks. In addition, socio-motor games were more common than psychomotor ones. Opposition games were widely played by children and youth, whereas adults tended to play team games. These findings suggest a culture of play characterized by interaction with others through physical games. Caro's work reveals a set of games that are distributed across age groups, and where the majority are played by males.

KEY WORDS: traditional games, motor praxiology, ethnography, ethnomotricity

RESUMEN

Se estudian los 65 juegos corporales de la obra *Días geniales y lúdicos* (Rodrigo Caro, 1626), representativos de la sociedad española del siglo XVII. Se sigue un enfoque estructural-sistémico tomando la praxiología motriz como disciplina de referencia. Bajo un criterio de interacción motriz, se analiza la lógica interna de los juegos mediante la red de comunicaciones motrices; todo ello bajo la dimensión de 'relación con los demás'. También, se estudia la edad y el género como aspectos de la lógica externa. La información se obtiene mediante un análisis de contenido. Se trata de un corpus de juegos con regularidades sistémicas que permiten entender mejor la sociedad que los acoge. Predominan juegos reglados frente a prácticas motrices menos estructuradas, las redes de comunicación motriz exclusivas y estables, y los juegos sociomotores sobre los psicomotores. Los juegos de oposición están muy presentes entre la población infantil y juvenil, mientras los adultos prefieren juegos por equipos. Ello señala una cultura lúdica de encuentro con otras personas a través de desafíos motores. La obra esconde una distribución de juegos por grupos de edad y centrada en juegos de hombres.

PALABRAS CLAVE: juego tradicional, praxiología motriz, etnografía, etnomotricidad.

INTRODUCTION

Rodrigo Caro's 1626 work *Días geniales o lúdicos* [Festive Days] is of considerable importance from the point of view of games (Etienvre, 1978, p. LXXX). Indeed, and as noted by Mauss (1936/2002), it offers a legacy of body techniques, that is, essentially social phenomena which constitute a unique set of ways of behaving in line with social rules. Therefore, studying these games can help to reveal how "the norms and values of a culture determine the ludic behaviour of participants" (Parlebas, 2005, p. 13). Through symbols, these rules of play reflect the society that has created them (Levi-Strauss, 1974/1992, p. 319; Duch, 2002, p. 263).

Rodrigo Caro's book offers an exhaustive account of seventeenth-century games, and as such it can be used to study what could be called the *ethno-motricity* of these ludic practices. From the theoretical perspective of motor praxeology (Parlebas, 1981, 1988) each game can be considered as a praxeological system (Parlebas, 1988; Lagardera & Lavega, 2003) with a certain 'internal logic' (Parlebas, 1981) that derives from the system's properties. It is these properties which give a sense of identity to each game, thereby enabling Caro's narrative account to be transformed, with rigor and precision, into a systematized register (Izquierdo & Anguera, 2000). The present study focuses exclusively on the relationship between participants in the games described, and does so using the criterion of 'motor interaction'.

In parallel to but beyond the limits of this praxeological system there is another 'external' logic which serves to ascribe new meaning to games. From this perspective, the social and cultural condition of games means that they can be considered as a sociocultural system (Juliano, 1986; Lavega, 1997). This system has numerous features, but in the present study only age and gender are examined. Age is an important aspect because, as Etienvre (1978, p. LXXXIII) notes, the games described are not played solely by children or youngsters. Ariès (1960/1987, p. 56) points out that youth was regarded as a privileged period in the seventeenth century, and this fostered a certain segmentation by age; indeed, Rodrigo Caro was writing at a time of socio-historical transformation in relation to age groups (Ariès, 1987; Varela, 1986). In the present study we examine the extent to which there is segmentation by age in relation to motor communication.

With respect to existing literature there are a number of studies that have either conducted a praxeological analysis of traditional games in a similar era and in the European context (Parlebas, 2003), or which have applied a similar methodology to a corpus of games derived from a written or partially written ethnographic source (Etxebeste, 2001; Navarro, 2006). Other relevant research includes a comparative study of European games (Lavega, 2006) and a diachronic analysis of traditional games and sport in the same region (Hernández Moreno, Navarro, Jiménez & Castro, 2007).

The results of these studies, together with the scarcity of complete ethnographic sources of traditional games for the period in question, provide justification for the present research. In fact, our study responds to three key aspects of investigation in the field: a) the availability of a theory-based analytic procedure that is able to structure and code information about games; b) the accessibility of information, at times partial, contained in ethnographic accounts of historical games; and c) the degree of homogeneity of works whose subject matter is games from other historical periods. Consequently, the aims of the study were: 1) to reveal the distinctive features (the internal logic) of the games described in Rodrigo Caro's book, relating them to the contextual factors of age and gender (external logic); and 2) to interpret the values that underlie these games by examining them from a perspective of ethno-motricity, that is, relating their internal logic to the sociocultural context (external logic).

MATERIAL AND METHODS

The study adopts a structural-systemic approach (Parlebas, 1988, pp. 65 & 106) in order to identify the relevant features of the motor games described and their relationship to the sociocultural context, the premise being that “the facts should be studied in relation to themselves and in relation to the whole [...]” (Levi-Strauss, 1974/1992, p. 302).

Sample

We analysed all 65 motor games featured in Rodrigo Caro's 1626 work *Días geniales o lúdicos* [Festive Days], using the critical edition published in 1978 by Espasa Calpe. Specifically, the author describes the following games: 1. Correr la seda; 2. Carrera de caballos (versión de caballos solos); 3. Carrera de caballos (versión de caballos aparejados); 4. Juego de cañas; 5. Coscojita; 6. Espada lucía; 7. Palomita blanca; 8. Fil derecho; 9. Ande la rueda; 10. Juan de las cadenas; 11. Lucha; 12. Tirar la barra; 13. El herrón; 14. Tirar con honda (versión dañar... sobre objetos); 15. Tirar con honda (versión herir a personas); 16. Juego de los puñetes; 17. Las almendras / Ladrillejo; 18. Dedillo / Las cuadernas; 19. La chaza; 20. Pares y nones; 21. Rayuela; 22. Mochiliuno / Hoyuelo; 23. Tropa; 24. Perinola; 25. Taba / Carnicol / Rey; 26. Dados; 27. La morra; 28. Trompo / Peonza; 29. Pelota (con la mano); 30. Chueca; 31. Pelota (a pala / raqueta); 32. Pelota sobre cuerda; 33. Al caer; 34. Aporraxis; 35. Un, dos, tres, Martín Cortés; 36. Las bonitas; 37. El mallo; 38. Saltar hogueras; 39. Mantear; 40. Daca la china; 41. Hurta la ropa / Sonsoluna; 42. Adivina quien te dio; 43. Esconder / Sal salero; 44. Chitrinda / la olla; 45. Siembro y aviso; 46. El zapato; 47. Llevar el gato al agua; 48. Maruca; 49. Los panes; 50. El bolillo; 51. Bolos; 52. Los caballos / Las galeras; 53. Gallinita ciega; 54. Aquí está Doña Sancha / ¿A dó las yeguas?; 55. Chinas; 56. Columpio; 57. Correr gamones / Corre gallos; 58. Corre gallos; 59. Caballitos de caña; 60. Apatusca; 61. Sal Salero; 62. Corregüela; 63. Ephedismo; 64. Subir por la pared con soga; 65. Subir por la pared sin soga.

These games are initially distributed according to the categories 'youngsters' and adults, although the majority refer to the former. For the purposes of the analysis the corresponding age group was categorized more specifically. As regards gender, most of the games are played by males. Only those games pertaining to the period in question were analysed, such that any games which were merely alluded to through a classical reference (Greek or Latin) but without being practised at the time, or for which insufficient information was available, were excluded from the analysis.

Categories and sub-categories

In order to analyse the games from a perspective of ethno-motricity, focusing specifically on the relationship with other participants, we considered 2 macro-

categories, 4 categories and 30 sub-categories for internal logic, and 2 macro-categories, 5 categories and 4 sub-categories for external logic (Table 1).

Table 1. Relationship with other participants: Categorization of internal logic and external logic.

	Macro-category	Category	Sub-category
Internal logic (IL)	Type of motor interaction	Psychomotor	Psychomotor: alone Psychomotor: simultaneous co-motricity Psychomotor: alternate co-motricity
		Socio-motor	Cooperation Opposition: one on one: matched Opposition: one on one: unmatched Opposition: one against the rest Opposition: everybody against each other Opposition: alternate inter-motricity Cooperation-Opposition: contest between matched teams Cooperation-Opposition: contest between unmatched teams Cooperation-Opposition: contest between <i>n</i> teams Cooperation-Opposition: one team against the rest Cooperation-Opposition: ambivalent
	Motor communication	Motor communication network (exclusive or ambivalent; and stable or unstable)	1-exclusive and stable: individual 1-exclusive and stable: team n-exclusive and stable: individuals (<i>n</i> >2) 2-exclusive and stable: individuals 2-exclusive and stable: teams n-exclusive and stable: teams (<i>n</i> >2) exclusive and unstable: role switch exclusive and unstable: convergent exclusive and unstable: fluctuating ambivalent and stable ambivalent and unstable: role switch ambivalent and unstable: fluctuating
		Success interaction network	No success interaction Cooperative Opposition Mixed
	External logic (EL)	Age	'Youngsters'
Inter-generational			Youth/Adult
Adult			Adult
Gender		Male	
		Female	

Relationship with other participants

With respect to internal logic, there were two macro-categories for the relationship with other participants: type of motor interaction and motor communication.

- *Type of motor interaction* which may be established between players. Here a further distinction was made between psychomotor and socio-motor activities. The former refers to games in which the players do not interact, and includes the following sub-categories: 'alone' (the game is played alone); 'simultaneous co-motricity' (participants play at the same time but in separate and parallel spaces); and 'alternate co-motricity' (participants play in the same space but take turns to do so). The socio-motor category includes the following sub-categories: 'cooperation' (two or more participants interact to reach a common goal); 'opposition: one on one: matched' (one against one under equal conditions); 'opposition: one on one: unmatched' (one against one under unequal conditions); 'opposition: one against the rest' (one participant plays against the rest); 'opposition: everybody against each other' (all participants compete against all the others); 'opposition: alternate inter-motricity' (the contest centres around the contact made with the rivals' objects); 'cooperation-opposition: contest between matched teams' (two teams face each other under equal conditions); 'cooperation-opposition: contest between unmatched teams' (two teams face each other under unequal conditions); 'cooperation-opposition between n teams' (contest between three or more teams); 'cooperation-opposition: one team against the rest' (contest between one team and the rest of the participants); 'cooperation-opposition: ambivalent' (players are teammates and adversaries at the same time).

- *Motor communication* was studied by means of two universals or operational models. The first of these, the 'motor communication network', establishes the set of communications permitted by the rules of a game. This network may be 'exclusive' (when players are companions or rivals) or 'ambivalent' (when players are companions and adversaries at the same time). It can also be either 'stable' (when the relationship of companion or rival is maintained throughout the game) or 'unstable' (when the relationship of companion or rival varies during the game). In exclusive and stable networks, players do not change their companions or rivals, and the analysis distinguishes the number of players or teams involved (1, 2 or n , the latter when there are more than two players or teams). In the unstable networks we indicate whether the change of relationship results from an exchange of roles ('role switch'), follows an accumulative sequence ('convergent') or follows no particular order ('fluctuating'). The second universal or operational model is the 'success interaction network', which considers the set of motor interactions that are privileged by a game's motor communication network, these interactions being associated with success or failure in the game. This network is a subset of the motor communication

network. A game may have no success interaction (i.e. in the case of psychomotor games or those which end when the task is complete), or be 'cooperative' (when success is achieved through interactions with companions), 'oppositional' (when success is achieved through interactions in relation to rivals) or 'mixed' (when success is achieved through interactions in relation to both companions and rivals).

As regards the relationship with other participants, and from the perspective of the games' external logic, two macro-categories were considered: age and gender.

- *Age*. The categories or levels considered here were: *youngsters*, *intergenerational* and *adults*. However, the work analysed includes other ways of referring to the age of participants, as not all the games correspond to the same developmental stage (Etienvre, 1978, p. LXXII). Most of the time Rodrigo Caro refers to 'youngsters' and, when he makes no allusion to age, he is referring commonly to games for adults; on occasion (vol. I, p. 46) he alludes to 'young men', 'lads' (vol. I, p. 57) or 'exercises for youth' (vol. I, 149) in order to distinguish them from 'youngsters'. Reference to games for children is less common, and he tends to use the generic term 'youngsters', although at times he adds that these games are 'childish' (vol. I, p. 154) or meant for 'nippers' (vol. I, p. 168). The work also alludes to games played by young people and adults (mostly separately, and in relation to the same game), and hence we opted to create the level *intergenerational*, including the games for young people and adults that are explicitly differentiated by Rodrigo Caro. At all events, the games for young people and adults (e.g. *leaping the bonfire*, vol. II, p. 51) appear less frequently throughout the work. However, this category was also used when the author refers to a game for 'youngsters', despite there being documentation from the same historical period indicating that it was also played by adults (e.g. *chicken run*, vol. II, p. 197). Therefore, given the way in which age is referred to in Caro's work the categories 'youngsters' and 'intergenerational' were further operationalized as follows: 'youngsters', with two levels: 'children' and 'youth'; and 'intergenerational', with one level: 'youth/adult'.

In order to discriminate the 'age' sub-categories we considered the criterion of *development* so as to distinguish the most significant cognitive functions associated with the practice of the game. In this regard, two sub-criteria were established: the *internal function of the game* and the *narrative context in which the game is practised*. *Internal function* of the game refers to the predominance of representations based primarily on symbols, the predominance of both symbols and rules, or the predominance of the contractual relationship of rules. By *narrative context* of the game we mean the allusions to contextual aspects that accompany the narrated activity. For children's games we applied the criteria 'references to childish aspects', 'use of word games' (word strings or recitation), 'level of motor action' and 'contrast with another contemporaneous work'. With respect to games for youth, we only distinguished between 'intensification of effort' and 'level of motor action'. Finally, for adult games the

criteria applied were 'exclusive materials', 'contrast with another contemporaneous work' and 'present in festivities or spectacles'.

- Gender. The criterion applied here meant that a game was considered to correspond to males if Rodrigo Caro referred to participants using either the masculine or neutral article. This was done because the author also made specific reference to females when necessary ("I saw this game played among women", vol. I, p. 39; "it's a game for girls", vol. II, p. 160; "a girl stands in the middle", p. 161; "it's entertainment for lasses", p. 189; "now they imitate the women", p. 197). We therefore distinguished three categories: *male*, *female* and *mixed*. The latter category was used for games where there was an allusion to both genders ("widely played by all boys and girls", vol. II, p. 163).

Content analysis

In order to enable a rigorous inspection of content with respect to the category 'age' we used observational methodology in the form of *content analysis* (Bardin, 1986; Pérez Serrano, 1994; Flick, 2004). The analysis of the information corresponding to each game was gathered according to guidelines set out by Miles and Huberman (1994, p. 12). These data were reduced to units of meaning by applying praxeological criteria to each of the categories and sub-categories of internal logic. As regards the external logic the criterion applied was 'development' (Piaget, 1932/1983, 1959/1986), which was derived from the internal function of the game. This procedure, which links the function of the game with its narrative context, enabled us to transform the narrative register of the motor games into a systematic register (Izquierdo & Anguera, 2000). The content of the games was determined by consensus between two researchers with extensive experience in the areas of motor praxeology and traditional and motor games. The registers of motor interaction, of the motor communication network and of the success interaction network (Table 1) are consistent with the fact that their corresponding constructs are exhaustive, mutually exclusive and constituted by features which are pertinent to the internal logic (Parlebas, 1981). This 'praxic pertinence' is consistent with mathematical models (Parlebas, 2001, p. 472; 2010) and with the way of performing the tasks, which are determined by the conditions established or the rules of the game (Arias, Argudo & Alonso, 2012).

Given the way in which Rodrigo Caro alludes to age (Table 1) the analysis of age categories (an element of external logic) also included a concordance index, specifically Cohen's kappa. The high value obtained (0.91) shows that there was excellent inter-coder reliability.

RESULTS

We will first present the results corresponding to the elements of external logic ('age' and 'gender'), before moving on to consider the results related to the

internal logic of the games ('motor interaction' and 'motor communication network').

The age of participants

The largest proportion of the games described by Rodrigo Caro corresponded to the category 'youth' (36.92%), followed by the categories 'children' and 'adults'. Indeed, the work contains a considerable number of games for youth ($n = 24$), and this figure rises further (to 28; 43.07%) if one includes the four games which were played by both young people and adults (the category 'youth/adult'). The 65 games were distributed as follows across the four age sub-categories: 'children': 22 games (33.84%); 'youth': 24 games (36.92%); 'youth/adult': 4 games (6.15%); and 'adult': 15 games (23.07%).

The gender of participants

The data show that Rodrigo Caro's work refers predominantly to games for males (87.88%), with a very low proportion of mixed games across the age groups (6.06%; Figure 1). It seems reasonable to assume, however, that Caro's own experience of games as a man, along with his use of classical Greek and Latin sources, resulted in there being less information about female games of the time. Prior to considering the results regarding internal logic it is also useful to make a distinction according to the degree of structured rules shown by the games described in Caro's work. This analysis reveals a clear predominance of games in the strict sense (80.32%), as opposed to 'pseudo-games' or motor activities without rules (19.68%). This predominance of true games becomes more marked as the age of participants increases (games for children, 77.27%; for youth, 79.16%; and for adults, 86.66%).

Motor interaction

Socio-motor games ($n = 36$; 55.38%) were slightly more common than psychomotor games ($n = 29$; 44.61%), the latter being those without companions or rivals. As regards the type of motor interaction the most common was opposition (66.66% of games), as opposed to games involving cooperation-opposition (25%) or cooperation (8.33%). The large majority of psychomotor games involved situations of alternate co-motricity (82.75%), that is, games in which the participants took turns and did not interact directly, although their response on each occasion did depend on what the previous player had done. A small proportion of psychomotor games (17.24%) were played alone, without the need for other participants.

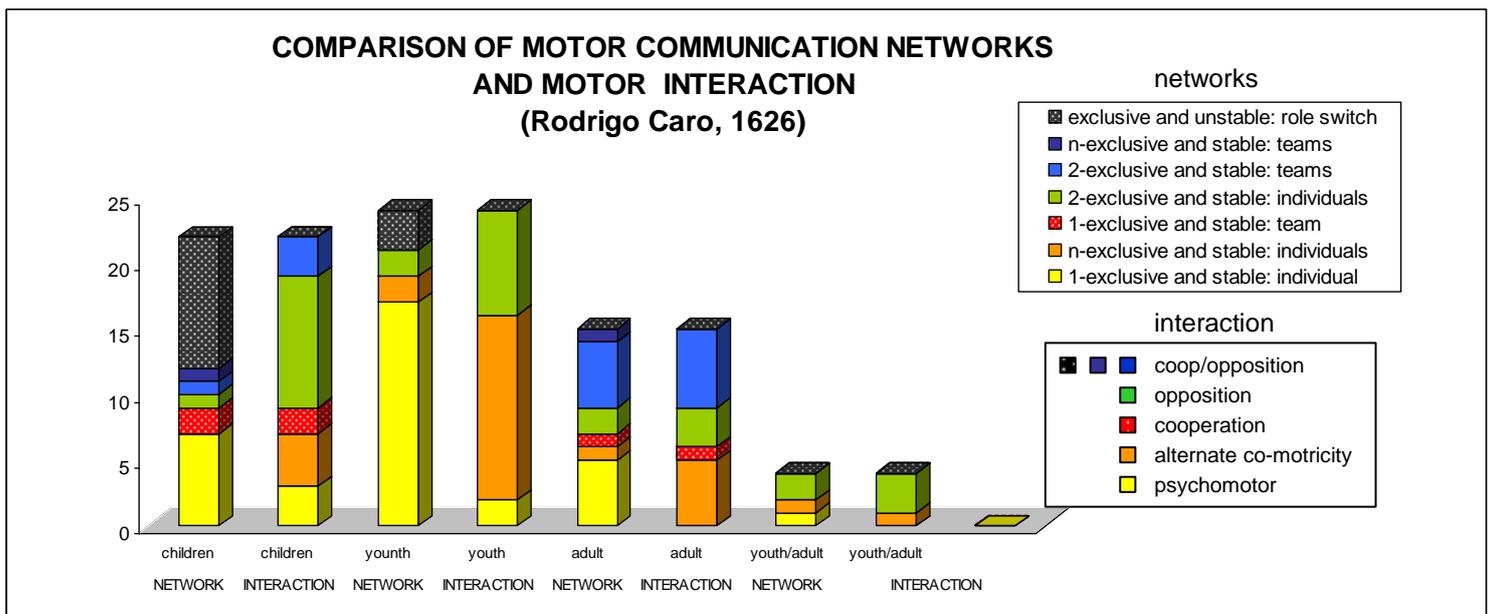
The two most common forms of interaction across the age groups were alternate co-motricity (i.e. without direct motor interaction: $n=24$; 36.92%) and opposition ($n = 24$; 36.92%). The most balanced distribution of interaction categories was found among games for children, where only opposition

(45.45%) stood out from the rest; this age group also included 66.66% of all the cooperative games described by Rodrigo Caro (which overall accounted for only 4.61% of the 65 games). Most of the games corresponding to the 'youth' stage involved alternate co-motricity (58.33%), followed by those based on opposition (33.33%). Finally, games for adults were most likely to involve oppositional motor interactions in the context of cooperation-opposition team games (42.85%).

Motor communication network

In all the games described by Rodrigo Caro (100%) the motor communication network was 'exclusive', there being no games that fitted the 'ambivalent' category. Among these exclusive networks the large majority (80%, corresponding to adult players) were 'stable', that is, they were games in which players maintained the same relationship throughout. The remaining 20% of games corresponded to unstable networks (involving child players). As regards the more specific types of network (Figure 1), the '1-exclusive and stable: individual' sub-category was the most common at the 'youth' stage (70.83%), whereas among games for adults there was an equal distribution between the network sub-categories '1-exclusive and stable: individual' (33.33%) and '2-exclusive and stable: teams' (33.33%). Unstable networks were most common among children's games (45.45%), but made a smaller contribution at the 'youth' stage (12.5%).

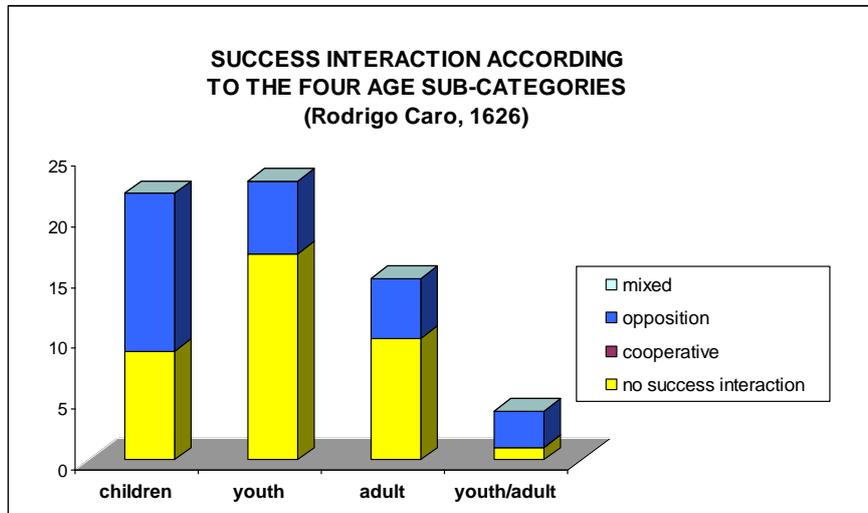
Figure 1. Comparison of the different types of motor communication with respect to the four age sub-categories (the darker the colour, the more social interaction required by the games)



As regards the 'success interaction' category, games with no success interaction were the most common at both the 'youth' (73.91%) and 'adult'

(66.6%) stages. By contrast, the ‘oppositional’ sub-category of success interaction prevailed at the ‘children’ (59.09%) and ‘youth/adult’ (75%) stages (Figure 2). In none of the games described by Rodrigo Caro was the success of motor interactions determined by cooperative behaviour (‘cooperative’ network) or by the combination of cooperation and opposition (‘mixed’ network).

Figure 2. Motor interaction across the different age categories



DISCUSSION

Rodrigo Caro’s work *Días geniales o ludicos* [Festive Days] provides an account of games in early seventeenth century Spain. Taken as a whole the results of our analysis reveal how a system of games that is compact in terms of internal logic acquires greater meaning through its links to the wider context or external logic. Indeed, these are two sides of the same coin, and by studying both we are able to understand more about the background to this body of games, thereby going beyond the activities in themselves. Furthermore, this approach shows how motor praxeology offers a valid theoretical framework for revealing these phenomena, since it systematizes ethnographic information through each distinctive feature of a culture of physical games.

More specifically, Caro’s work describes a set of circumstances and content that constitutes an erudite and classical compendium covering motor games for children (22 games, 33.84%), youth (24 games, 36.92%) and adults (youth-adult 6.15%, and adult 23.07%), including in the intergenerational sense. As for the author he is revealed to be a man of his time, one who is more rooted in the experience of males than of females. Obviously, this source of bias needs to be taken into account when interpreting the findings. However, this specificity also lends added value to the text, making it the principal reference source for motor games from this period of Spanish history.

The difference in the content of games played by children and those for adults enabled us to understand in greater detail the internal logic of the respective

games. Specifically, children's games differed in how the relationship with other participants was structured as regards motor communication and the system of role switching, as well as in terms of the related internal functions (symbolic and social) which characterized the practice of these games. In this respect, it was necessary to operationalize the category 'youngsters', since the analysis suggested that it would be more accurate to break it down into two levels: children and youth. Consequently, whereas Etienvre (1978, p. LXXXIII) saw proximity between the games for children and adults described in Rodrigo Caro's work the present praxeological analysis based on motor communication treats them as more separate.

In fact, this analysis of the games described by Rodrigo Caro reveals two things: first, the social coherence of the games studied (which constitute a homogeneous corpus, as illustrated by the structure of the relationships between each motor action domain and the values inherent to the games' rules); and second, the place occupied by these games at a point in history characterized by a broader shift in the culture of play (see below, in the comparison with other studies of this period). This leads us to hypothesize that the values of Spanish society at the time determined the content of these games. The social coherence of the games studied is revealed through their basic pattern of organization, that is, through the systemic nature of their internal logic or 'identity', as well as through the way in which these systemic regularities are related to aspects such as the age and gender of participants. Indeed, the games contain rules that are consistent with social values and interests: there are distinctions according to age, with the symbolic and social function being revealed through the categories 'children' and 'youth; the male and female worlds are largely kept separate; the motor interactions involved tend to privilege individual achievement over others; and relationships based on rivalry or solidarity take precedence over more ambiguous relations.

The social nature of rules in Rodrigo Caro's work reflects the culture that has defined them, such that these rules constitute a mechanism for socializing the forms of learning and symbolic discourse which this society wishes to promote. In this regard, the clear predominance of rule-based games (80.32%) over activities without rules ('pseudo-games') reflects the desire to foster the process of 'social literacy' by regulating the motor relationships established by these games (Lavega, Planas & Ruiz, in press). This is illustrated by the correspondence between certain values and the age categories, such that the social pact and rules become a tool for socializing the play activities which society wishes to prioritize.

The process of what Parlebas, in his comparative analysis of Brueghel and Stella, called *sportification* (Parlebas, 2001, p. 131), in other words, the process through which games become converted into sports, is confirmed and highlighted by Rodrigo Caro's work, indicating that this kind of transformation was already underway between the sixteenth and seventeenth centuries. Indeed, the results of the present analysis show that the structure of these games contained within itself prototypes of sport, such that competition was

emphasized through the idea of distributive justice and contest (equality of resources and opportunities, separate sides, systematic registers under a criterion of restoring balance, rule standardization, a system of competition, etc.; see, for example, Mandell, 1986, p. 159; Elías & Dunning, 1991, p. 31 & ff.; Brohm, 1993, p. 47; Parlebas, 2001, p. 135).

The social construction of games in Rodrigo Caro's work, a process through which they take on the regularities that one associates with the structure of sport, is revealed by studying the type of motor communication networks they involve (Flament, 1977, p. 203; Parlebas, 2001: 389; in the present study, see Figure 1). The results show that there was no place for ambiguity in this communication, and, in terms of the categorization developed here, it can be concluded that the games played by Spanish society at the time relied on exclusive and stable motor relationships, such that a clear distinction was made between companions and rivals (exclusivity) throughout a game (stability). This, at least, was the case for the motor communication that characterized games for adults. Children's games were something of an exception, since many of them were based on an unstable network (present in 45.45% of the games examined here). This can be explained by the fact that what motivates children in this context is the pleasure derived from switching roles or tasks during a game, such that there is ultimately no need to define participants as winners or losers according to whose side they started playing on. This preference for instability in motor communication is similar to what Parlebas (2003) describes in his study of the games depicted by Brueghel in his painting of 1560.

Related to the above is the fact that the games studied prioritize the motor competence of participants (through networks labelled here as '1-exclusive, individual') in terms of their ability to overcome the skill of others or the motor challenges posed by rivals. As regards psychomotor games, in which participants compete against others without receiving any help or feedback, the players take turns and need to have the information required to enable them to apply the most suitable motor strategy at any given moment. This is shown to be relevant at the 'youth' stage, where the pleasure which children derive from play is complemented by an interest in success or achievement in the presence of others, thereby reinforcing individual responsibility.

In the games described by Rodrigo Caro social dynamism becomes somewhat more limited as one moves beyond the 'children' stage. Socio-motor games show a system of relationships that evolves with age, there being a shift away from unstable team relationships toward more stable relations, that is, participants appear to prefer a social relationship based on rivalry as they do not switch teams during a game. This suggests, within the categorization used here, that as participants get older there is a move away from the wider interest in all aspects of play that is associated with childhood toward a more limited interest based on personal achievement and sense of belonging. It is in this regard that Rodrigo Caro's category of 'youngsters' is usefully broken down into the two levels defined in the present analysis so as to better describe the motor behaviour involved in the various games.

The way in which play is understood in the games described by Rodrigo Caro, as well as the way in which the system of results is generated, becomes more evident as one moves from children's games to adult games. Specifically, there is a shift from the absence of any registers, due to a lack of motor interaction, toward results derived fundamentally from opposition (Figure 2). Thus, across the age categories studied here, the games described move towards a system of results that resembles more closely that found in modern sport (Parlebas, 2003).

Our results also support a point made by Ariès (1987), who argued that in seventeenth century society, youth as a life stage was regarded as more important than childhood. This is reflected in the games described by Rodrigo Caro, the largest proportion of which corresponded to the intermediate stage of youth. In terms of the kind of games played, our results again coincide with the views of Ariès, in that childhood clearly emerges as a separate stage when one considers the motor games associated with it.

The corpus of games featured in Rodrigo Caro's work corresponds to a set of motor games that are structurally homogeneous and segmented by age, this being a reflection of a particular ludic activity. The internal structure of the games which Caro describes reflects a marked sense of 'alterity' or a search for an encounter with others through competing with rivals. In fact, some of the motor activities described involve alternate co-motricity, that is, they are games in which players take part through turn taking rather than direct interaction with others. This kind of 'interaction' enables the defects and virtues of each player to be highlighted since the task at hand has to be performed while others are watching. As such, each player competes for prestige (Huizinga, 1938/1989, p. 68), rather than attempting to win a one-on-one contest. In terms of the relationship with others, the encounter with other players is also present in other forms of motor interaction associated with adult games, where the context may involve either opposition or cooperation-opposition.

When considered alongside other studies of this period our results show both differences and similarities with respect to the Flemish and French games of the sixteenth and seventeenth centuries that were studied by Parlebas (2003). The points of coincidence indicate an ethno-motricity that is shared by a cultural area which nonetheless retains its particular feature, thereby foreshadowing the contemporary phenomenon of *glocalization* (Halloran, 1997; Renson, 2010). The main difference is that Rodrigo Caro's work contains more games than 'pseudo-games', the opposite of what is found in the works of Brueghel and Stella, and this may be due to the fact that Caro considers more than just childhood. Another notable difference is that cooperation features rarely in the games described by Caro, whereas it was on a par with other forms of interaction in the abovementioned French and Flemish games (Parlebas, 2003, p. 24).

As regards homogeneity our findings are consistent with those of Parlebas (2003) in relation to the comparison of socio-motor and psychomotor games. Opposition games involving some kind of duel are also clearly present in Caro's work, and this is again similar to the results described by Parlebas (2003); in fact, the two analyses show a further similarity in that games involving 'source networks', that is, those in which players may change their role (being companions or rivals) during the game, are shown to be particularly associated with children. With respect to ambivalent or paradoxical games the present results confirm the conclusion reached by Parlebas (1988), namely that the structure of motor games, like the majority of social forms, seeks to avoid ambivalence.

CONCLUSIONS

The praxeological analysis presented in this paper has revealed the basic patterns of organization shown by the games featured in Rodrigo Caro's work, and also how these games are underpinned by social relationships. Caro's text describes a series of games distributed by age, and we have seen that in terms of the structure of motor communication it is useful to break down his category of 'youngsters' into two levels ('children' and 'youth') so as to highlight more clearly the differences between these sub-categories. As regards gender, the work reflects the author's own experience and focuses almost exclusively on games played by males.

The process of 'sportification' can be observed in Caro's work in that the most prevalent communication network was of an exclusive (rivalry or solidarity) and stable nature, akin to what is found in modern sport. The analysis of motor interaction reveals a slight predominance of socio-motor over psychomotor games. However, in the case of the latter a social relationship is often present alongside the motor practice, with players taking turns in what has been referred to here as co-motricity, thereby privileging individual responsibility over social responsibility. Interactions based on opposition were common in socio-motor games, confirming the previous statement about how prestige is sought through achievement. In adult games, however, the focus of this aspect shifts to team games involving both cooperation and opposition. The primary communication network in Caro's work is exclusive and stable, with the exception of children's games, which tend to be unstable, and it is this which marks the boundary between the two sub-categories of 'youngsters' (i.e. 'children' and 'youth'). The present analysis revealed some similarities between the games described by Caro and French and Flemish games of a similar historical period, for example, the presence of unstable networks in children's games, as well as a shift toward a greater coding of the encounter ('sportification') in Caro's work.

In conclusion, the analysis of Rodrigo Caro's *Días geniales o lúdicos* [Festive Days] by means of an approach based on motor praxeology has provided an invaluable snapshot of the culture of games in seventeenth century Spain, one

that will serve as the basis for further comparative studies using other ethnographic sources.

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