

# culture strategic foresight

PRACTICES AND USERS

## A taste for video games, a taste for sport, two related activities for adolescents

Christophe Peter\*

### Foreword

*The analysis of relations between “virtual” and “real” is essential to an analysis of the new cultural leisure practices: Are they cumulative, replacements, or complementary? Better than most recent practices, video games practices, already over thirty years old, do provide some answers, in as much as some games have the advantage of virtualising sporting practices, which are dominant leisure practices.*

*In this approach, support from statistical data is not the least interesting part of the research by C. Peter, a young sociology and information and communication science researcher who has made secondary use of the investigation “The cultural leisure of 6-14 year olds”, produced by the Ministry of culture and communication.*

*Addressing links between tastes for video games and for sport, this work investigates the cultural domain by confronting “institutional culture” and “juvenile culture”. It calls into question educational thinking on the opposition between these real and virtual leisure activities, and seeks to achieve a positive understanding of the place of both practices in building adolescent identity.*

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*Educational thinking often opposes, almost term for term, a taste for video games and a taste for sport. On the one hand are indoor activities, supposedly not very favourable for socialization, on the other, activities requiring physical exertion, outdoors in some cases, that are good for health and social development. By progressive slippage, the qualities attributed to the activities are inferred to be those of the participants... One group are passive when the others are active, the first alienated and the second in full possession of their physical and intellectual faculties.*

*The subject becomes a moral question when a difference between sexes is added to this contrast – boys being more “affected” by the virtual world, also described as violent... – and the youngest are also considered as an age group to be “protected”. The subject then becomes a political question when the consumption of video games is contrasted with “real” cultural practices...*

*Undoubtedly in a more profound sense, these questions touch on the links between the real world and the virtual world, video games constituting its most visible and most vilified form. This rhetorical contrast has left little room for a precise analysis of existing links – or lack of them – between the two types of adolescent behaviour, between the taste for video games and sports, depending whether you are a girl or a boy.*

*Observation of 10-14 year olds consumption, from a specific use of the investigation into the cultural leisure of*

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6-14 year olds<sup>1</sup>, casts clear light on the way in which virtual digital and real practices, oppose, replace or link to each other. A secondary analysis reveals the motivations that are common to tastes for both types of activity – the search for sensations, and experimentation – and reveals a strong identity related dimension. It also brings out the continuation of sexual determining factors in leisure<sup>2</sup>: even if we observe different identity negotiation spaces to the existing real world, the virtual world is not asexual. In this respect, it is the complementarity between virtual and real that wins over substitution or opposition.

The comparison of interactions that form in the real world with the virtual interactions that characterize video games sketches out new approaches to affective identification phenomena for the latter. The importance given to the aesthetics of virtual bodies could thus be compared to that taken by bodily appearance<sup>3</sup> (size, weight, clothing...) in the identity construction of young people. Far from being a virtual practice separated from the rest of their life and adding violent behaviour, video games occupy a place in both personal and social self-development that helps them to identify with a sexual gender and a cultural universe. ■

## SPORT AND VIDEO GAMES: ADOLESCENCE RELATED LEISURE

Almost 7 adolescents out of 10 playing a sport at least once per week go in for video games at the same frequency against little over half those who do not play: There is thus a positive relationship between sporting practice and “video gaming<sup>4</sup>” practice in terms of frequency because the probability that a sporting adolescent plays video games is multiplied by 1.2 compared to a non sports player. And this link remains favourable, whatever the sex, age or even the social group: so, in the case of a sports player, this probability is multiplied by 1.3 compared to a non sports player.

This relationship can also be read in the other direction: Three quarters of adolescents who play video games at least once per week play sport, but only two thirds if the frequency is less.

How should we interpret this relationship between physical and sporting activity “in the real world” and video games (virtual world)? To aid the understanding of this link and to ease the reading of the respective fields of video games and physical and sporting activities, we will base ourselves on a categorization of one field or the other.

## VIDEO GAMES AND UNCERTAIN SPORTS

Uncertain sports are thus more commonly practised by 10-14 year olds, who also prefer virtual physical action video games. The practice of video games is based on the fact that the player takes information from the screen, in the same way as, for an uncertain sport, like roller blading, tennis or football, the adolescent must take the necessary information from their visual environment. We can thus make the assumption that there is a relation between the practice of virtual physical action video games and that of sports based on visual uncertainty.

### An attractive relation comes first

This relation is well demonstrated when we note that 10-14 year olds who devote themselves to sport in uncertain environments are more attracted to virtual physical action video games than those who devote themselves to sports without uncertainty, but this does not exhaust the motivations for attraction to these video games (see Table 1).

In this respect, we can make a remark: Playing a sport without uncertainty or not playing a sport has the same effect as the absence of a taste for virtual physical action games; what encourages the taste for the latter, is to be an adversary sport devotee (tennis, football...). So, a young person who regularly plays football has 2.5 times the probability of being a video games enthusiast as a young swimmer.

1. The analyses presented here have been made on the basis of responses supplied themselves by children from CM2 to 3<sup>rd</sup> classes, that is from 10 to 14, to the questions of a survey on the cultural leisure of 6-14 year olds that related to video games and sport. For the survey itself see Sylvie OCTOBRE, *Les loisirs culturels des 6-14 ans* [The cultural leisure of 6-14 year olds], Paris, Deps/Ministère de la Culture et de la Communication, La Documentation française, coll. « Questions de culture », 2004, and two numbers of *Développement culturel*: « Les loisirs culturels des 6-14 ans », n° 144, mars 2004; « La fabrique sexuée des goûts culturels : construire son identité de fille ou de garçon à travers les activités culturelles » [“The sexual fabric of cultural tastes: building an identity as boy or girl through cultural activities”], *Développement culturel*, n° 150, 2005 (<http://www/culture.gouv.fr/deps>).

2. Olivier DONNAT, « La féminisation des pratiques culturelles » [“The feminisation of cultural practices”], *Développement culturel*, n° 145, juin 2005.

3. Olivier GALLAND, *Histoires de vie* [Life stories], Paris, Insee, 2006.

4. We will use this term, which is now usual in the literature of research on video games.

## Categorisation of video games and sports

➤ **Video games** can be classed into three categories\*:

- *Virtual physical action* games, in which children pass their time in making the virtual people that represent them run, jump and catch objects;
- *Intelligent games*, which consist of resolving an enigma or series of enigmas by collecting information;
- *Role play games*, where children become a person gifted with certain skills and must accomplish various quests.

In the last two categories, the outcome of the game does not depend on the physical skills of the players, but the level and powers of their respective virtual representatives. On the contrary, in the first category – “combat” video games for example –, the gestural skills of the players manipulating the combatants appearing on the screen determine the progress of the virtual combat: A poorly aimed kick, a clumsy side-step and all is lost.

In the survey of cultural leisure of 6-14 year olds, three quarters of 10-14 year olds declared that they like virtual physical action video games (Platform, action/arcade and simulation, with the exception of sports games). Virtual mind games are less appreciated (57% for role play games, 55% for strategy and 35% for adventure).

➤ **Physical and sporting activities (PSA)** can be distinguished in terms of the relationship that the sports player has with their environment\*\*:

- Sports referred to as “*without uncertainty*”, notably *visual*, like running, swimming in a pool or athletics: The sportsman knows that his environment is always the same and that he does not need to take information from it.
- Sports that are performed in an *uncertain environment*: They imply the taking of visual information on the physical environment (example: sliding sports).
- Sports *with an adversary*, *uncertain by nature* because the action of the adversary is added to the physical uncertainty.

In the survey, 72% of 10-14 year olds declared that they took part in a sport. Half of them took part in sports with uncertainty, meaning adversary sports (judo, football... 40%) or sports in uncertain environments (rollerblading, skiing... 12%). Only 19% of them were involved in sports without uncertainty (gymnastics, swimming, etc.).

\* Pierre PARLEBAS, *Éléments de sociologie du sport* [Elements of sports sociology], Paris, PUF, 1986.

\*\* Jean-Paul LAFRANCE, *Les jeux vidéo. À la recherche d'un monde meilleur* [Video games. In search of a better world], Paris, Lavoisier, 2006. The “intelligent” video games category was not a particular distinction in the survey, these video games not being played much compared to the other categories.

## ... then a parallel decline of both activities in the secondary school environment

High in adolescents at the start of secondary school, playing sport diminishes from the 4<sup>th</sup> class: from 67% in CM2, the percentage of young people who play a sport at least once a week falls to 78%

in the 5<sup>th</sup> then to 66% in the 3<sup>rd</sup>. In addition, activity changes: whereas on entering secondary school they overwhelmingly prefer football and judo, they then turn towards urban roller blading and swimming. A similar phenomenon is observed on the video game playing side: 68% of pupils in CM2 play video games at least once per week, a proportion that rises to 71% for pupils in the 5<sup>th</sup> then

**Table 1 – Relation between types of video game and types of sport played by 10-14 year olds**

in %

	Sporting practice				
	Does not play any sport weekly	Plays one or more sports weekly	including:		
			a sport without uncertainty (gymnastics, swimming...)	a sport in an uncertain environment (roller blading...)	an adversary sport (judo, football...)
Video gaming practice					
Does not play any video game weekly	44	31	48	34	22
Plays one or more video games weekly including: number of virtual physical action game types*	56	69	52	66	78
– low	22	15	18	21	13
– medium	20	23	21	19	25
– high	14	31	14	26	40
Total	100	100	100	100	100

\* The concept of the number of types of virtual physical action games refers to the following construct: low = one or two types of virtual physical action out of the four proposed, medium = three types out of the four proposed, high = the four types proposed.

To read this table: Young people who do not play sport at least once per week are 44% who do not play video games weekly.

Among the non sportsmen who play video games weekly, 22% say that they do not like virtual physical action video games very much, 20% like an average number of these video games and only 14% like all types of virtual physical action video games.

reducing until in the 3<sup>rd</sup>, there are already only 55% playing weekly.

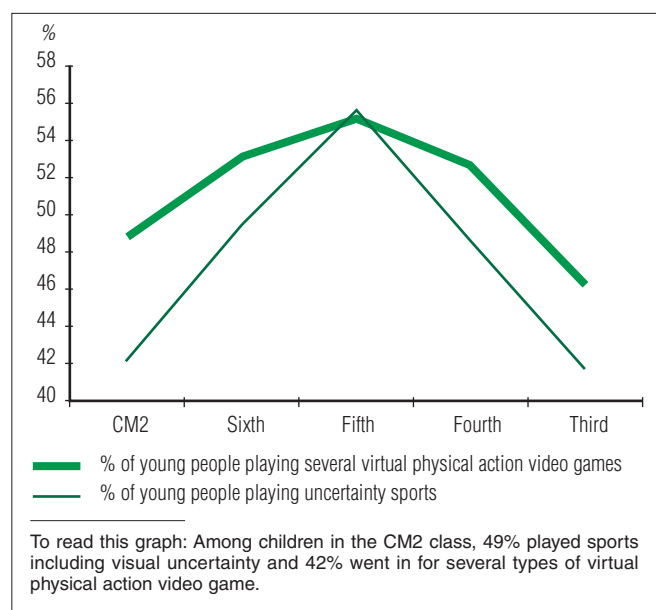
The changes in video gaming and sporting practices, more precisely uncertainty sports, are thus parallel (see Graph 1).

From the end of secondary school, a proportion of young people abandon playing video games and give up uncertainty sports. For young people who continue to play in upper school, other surveys show that they modify the content of their games<sup>5</sup>. In this respect, two trends become apparent:

- The position of shooting games increases in virtual physical action games. Sixth formers often find themselves in networked games rooms or in a *LAN Party* (players meetings connecting their personal computers to a network) organized at home to play virtual shooting games together often opposing teams of players in uncertain virtual environments;
- And thought games develop. Some sixth formers, in fact, cease to play exclusively physical action video games in favour of role play, strategy or problem solving games.

Nevertheless, these “virtual cognition” games only occupy a very secondary place in video gaming practice. In addition, players of these game still spend equal time on virtual physical action games. Conversely, there are many who play virtual physical action games without being interested in virtual thought games.

**Graph 1 – Change in playing uncertainty sports and physical action video games**



## THE MAKING OF THE VIRTUAL SEXUAL BODY

Sport, as numerous works have shown, is a sexual identity marker. The survey confirms it, because girls play less sport than boys, they often stop playing at the end of secondary school, and when they play it, it is different sports from those played by boys (football, judo... for the boys, and for the girls, gymnastics, dance...). We can thus say that sport contributes strongly to the sexual construction of young people in the differentiation mode: for girls, expressive physical activities in which grace and emotion play an important role; for boys, physical activities providing individual (judo) or collective (football) opposition.

Do we find this difference in video games? Do girls choose virtual representatives who make expressive gestures and boys digital avatars that accomplish virtual physical actions of opposition? Virtual bodies would then be sexually marked in a comparable way to physical bodies in the real world: we would see the emergence of sexualized virtual bodies with marked contrasts.

Video games were able to appear, at least when they were created, as a virtual space where real bodily differences were suppressed. When they started to be distributed at the beginning of the 1980s, then considered as the advance guard of digital society, they were based more on intelligence or manual dexterity than physical force, and in this respect, were considered to be addressed equally to both sexes.

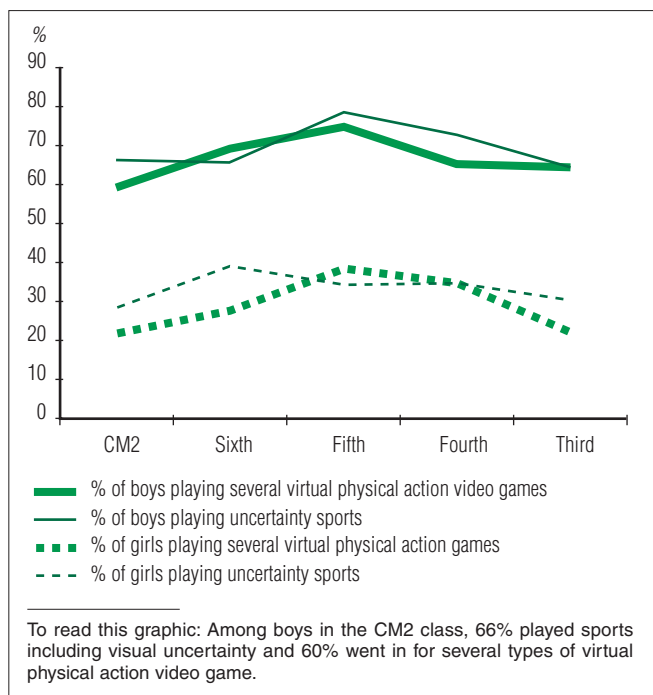
A quarter of a century later, we are forced to note that the reality is very different. So the frequency with which video games are played among 10-14 year olds is very different depending on the sex of the players: 84% of boys play video games at least once per week, and only 47% of girls. Among the 15% of boys who do not play weekly, however over half do from time to time and 7% almost never. Among the 53% of girls (meaning the majority of them) who do not play at least once per week, over half (or 27% of the total population) practically never play. So we observe that for boys, video gaming has become a compulsory rite for socialization in peer group, whereas this is not the case for girls<sup>6</sup>. Girls consequently invest distinctly less time than boys in video games, and when they are interested,

5. A survey of this subject was performed in 1997 (J. JOUET, D. PASQUIER, « Les jeunes et l'écran » [“Young people and the screen”], *Réseaux*, n° 92-93, Paris, CNET, 1999) and another in 2004-2005 (C. PETER, « *Motricité virtuelle* » et communication médiatisée : usages sociaux des jeux vidéo [“Virtual motor skills” and mediated communication: social uses of video games], thèse, 2007).

6. Dominique PASQUIER, *Cultures lycéennes : la tyrannie de la majorité* [Secondary school cultures: the tyranny of the majority], Paris, Autrement, 2005.



**Graph 2 – Changes in playing uncertainty sports and physical action video games with increase in age as a function of sex**



it is in different games, at least from secondary school entry. The rate of playing virtual physical action video games thus changes with increase in age in a similar way to the rate of playing uncertainty sports in the real world (see Graph 2).

It is not only that girls play less than boys, but when they play, they choose less varied video games (see Table 2). Whereas 67% of boys declare that they like at least three types of virtual physical action games, less than a third (30%) of girls do and many restrict themselves to console games like *Super Mario*. Whilst they limit themselves to virtual running and jumping in enchanted universes, boys, for their part, explore multiple dimensions of virtual physical action: They drive fast cars, face the force of fists, shoot at each other in disturbing environments or yet again play football or basketball.

Virtual bodies thus appear to be at least as stereotyped, if not more, as the real bodies of boys and girls.

## VIDEO GAMES, AN EXPRESSION OF INDIVIDUAL BODILY IDENTITY

The construction of gender, which is expressed as much by the sexual character of the participants as by the practices themselves, is very strong: So, after leaving the college environment, girls very rarely devote themselves to video games. Analysing the population of those who play is thus only no longer sensible. How, in fact do we explain that a minority of them play a wider range of virtual physical action video games than the others? Is it due to a differentiated construction of the feminine bodily identity that could be entered into the scaling of choices between real sports and virtual physical actions? In other words, do the girls who take part in physical and sporting activities that are rich in visual uncertainty also have different video gaming practices?

Some parts of the answer have been provided for young adults: according to a recent survey performed in 2004-2005 on the video gaming practices of young Parisian adults<sup>7</sup>, there is a fundamental relationship between the preferred corporal practices in the real world and those that take place in the virtual universe. A relation between the real body and the virtual body, it even takes precedence over the link between the real body and the imaginary televisual body. So it is true that most amateur football players watch football programmes on television, in contrast there are many assiduous television viewers of the same programmes who never play. On the other hand, it is rare to encounter an

**Table 2 – 10-14 year olds and video games as a function of sex**

in %

Video gaming practices	Boys	Girls	All
Do not play any video game weekly	16	53	35
Playing one or more virtual physical action game types weekly, numbers:	84	47	65
– low	17	17	17
– medium	26	18	22
– high	41	12	26
Total	100	100	100

To read this table: only 16% of boys do not play video games weekly. Among those who play video games at least once per week, 17% declare that they do not like virtual physical action games very much, 26% like an average number of these video games and only 41% like all types of virtual physical action games.

7. This survey was undertaken in 2004-2005 by C. PETER, « Les SIC au service du sport ou du spectacle sportif ? Une expertise asymétrique » [“An asymmetric appraisal: SICs in the service of sport or the sporting spectacle?”] in *Questionner les pratiques d’information et de communication : agir professionnel et agir social* [Questioning information and communication practices: professional and social action], actes du XV<sup>e</sup> Congrès des sciences de l’information et de la communication, université de Bordeaux, 10-12 mai 2006, SFISIC, p. 511-518.

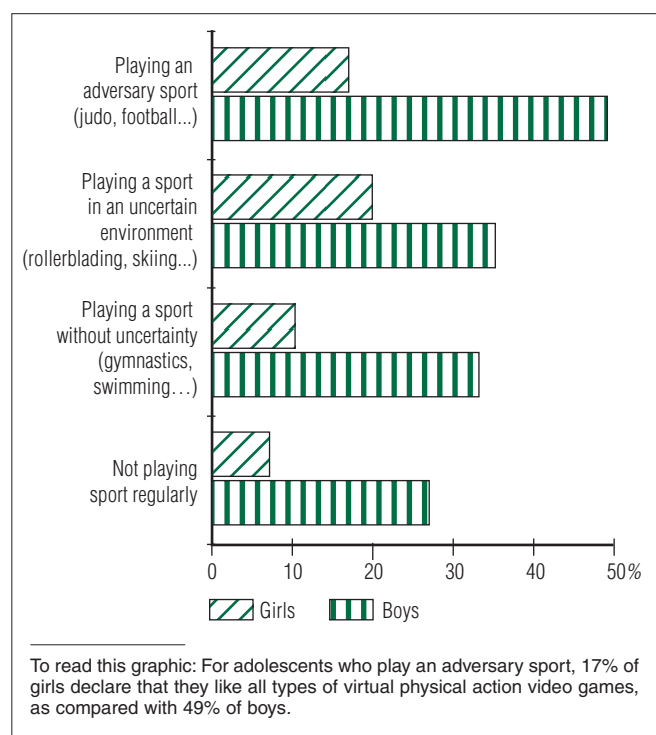
individual who frequently plays video football games (mainly *Fifa* or *Pro Evolution Soccer*) who does not himself play real football at least once per week. Someone who prefers a certain type of action in the real world thus has a high chance of preferring it equally in the virtual universe. In contrast, it is rare to choose types of physical actions in the virtual world that have not first been tried out in the real world. Virtual bodily actions allow the logic of real bodily action to be pushed beyond the limits imposed in the real world, but also in themselves rarely create the taste for these action logics *ex nihilo*. Are these distinctions valid from adolescence?

## In girls

According to the results of the survey on 10-14 year olds, only 12% of girls play video games at least once per week and enjoy the virtual physical action varieties in the four proposed types (see Box p. 33). But how many is it if we take into account the participation in sport that they prefer in the real world?

We observe that girls who do not do physical and sporting activities weekly are little represented among those who play virtual physical action video games (see Graph 3), a proportion that remains low among those, very much in the majority, who practice physical activities without visual uncertainty,

**Graph 3 – Share of girls and boys liking all types of virtual physical action video game as a function of their participation in sport**



like dance or gymnastics. In these physical actions, the body is not used to react rapidly to a succession of information from the external environment: on the contrary, for the dancer or the gymnast, it is a matter of concentrating on the perfect execution of a sequence of physical actions repeated many times and memorized absolutely. This total programming of the bodies movement can then permit the performer to allow her physical grace to express itself. In this case we are in complete opposition to what happens in video games, which are insensitive to the way the player plays, and where only the speed of reaction to variations in the virtual environment counts.

Among girls who play an uncertainty sport, the proportion who go in for video games at least once a week and like all sorts of virtual physical action rises in two cases: among those who play an adversary sport like tennis and among those who practice a physical activity in an uncertain environment like roller blading (in this second case, the proportion is even larger). The fact of practicing an uncertain sport in the real world thus doubles the chances of enjoying the variety of virtual physical actions.

So, the actions that their real bodies are used to predispose girls to accomplish comparable actions with their virtual bodies. Is this sensitivity of the virtual body to the actions of the real body a feminine privilege or is it found in boys?

## In boys

Among adolescents, 42% play video games at least once a week and declare a liking for all types of virtual motor skills. But this statistical mean hides large differences according to the frequency and type of physical and sporting activity that they have in the real world (see Graph 3). Those who do not play sport weekly in the real world are rarely enthused by virtual physical actions. Those who play sports without visual uncertainty, such as running or swimming, are more enthusiastic, and this is even more the case for boys who practise a sport in an uncertain physical environment, such as roller blading. The difference appears to be shown above all in boys who play a sport in which the uncertainty comes from the adversary, such as judo or football: one out of two declares that they like all sorts of virtual physical action.

The bodily leisure actions that boys have in the real world thus push them to perform similar types of actions in virtual universes and those that are based on an adversary occupy a more important role in this mechanism than is the case for girls. Video

games thus offer a palette of stereotyped virtual bodies that adolescents can use to construct their bodily identity, this shaping of ways of acting physically linking real and virtual bodies. But do specific features of virtual bodies remain? So it is the virtual as a potential space for the creation of new modes of bodily action that is then interrogated. Some artists have certainly sought to explore all the potential of virtual universes<sup>8</sup> to imagine new types of relations to bodies radically different from those previously experienced by humanity. But the examination of ordinary virtual practices shows that current virtual body usages are essentially based on the development of bodily action logic that previously existed in the real world, and not on the invention of new modes of bodily action.

## VIDEO GAMES, VIRTUAL PROJECTIONS OF BODIES AND SPIRIT?

Far from attenuating the traditional contrast that take place in the real world, do video games thus redouble and reinforce them? Or do they contribute to the invention of a new reality released from habitual social burdens.

In fact there is a notable characteristic of physical leisure activities in the real world: They generally only involve a maximum of a single source of uncertainty. Let us take two examples. People playing tennis or football: They confront each other but benefit from a physical environment that is always fixed and identical, meaning the pitch whose dimensions are regulated and uniform. The physical environment being known, it thus a matter of obtaining information concerning the adversary's behaviour. On the other hand, the young person who goes snow boarding, does not have an adversary but must face a moving physical environment and is thus in a contrasting situation where the information to be obtained concerns the physical environment.

Contrary to leisure sports that rarely combine two sources of uncertainty, in video games, many combine them. The virtual hero of a console video game must thus both avoid his adversaries and move in a physical environment full of uncertainty. This double constraint is even greater for players in a virtual shooting game because the players must kill their adversaries and avoid being hit.

Whereas situations without uncertainty or with only one uncertainty are the limits in the field of

real sporting practices, these situations with double information uncertainty predominate in the video games universe. This is easily explained: in these situations, in fact, the risk of damage to bodily integrity is high and, in this respect the individual is not ready to take the risk in the real world, whereas he takes it by proxy in the virtual universe.

The use of virtual physical action video games is thus situated at the intersection of two logical processes: The logic of bodily anchoring of physical actions, which links real bodies and virtual bodies; the logic of specific features of mediated man/computer communication, which separate them.

In the survey we also observe a relation between the practice of social and thought games and the playing of video games: Playing the first multiplies the probability of playing the second by 1.2. This effect adds to that of sporting practice because a youth who plays both social games and sport has 1.5 times greater chance of playing video games than a youth who does not play them.

The nature of the games – certain exist in the real world and in the virtual world – favours this effect. So, face to face role play enthusiasts have a pronounced liking for the same types of video games (which are however only played on screen): 75% play these against only 49% of young people who do not enjoy role play games around a table. However, as in the physical activity domain the medium introduces its own logic: whereas in the real world role play games are generally played in a group of 5-6 persons, in the virtual universe the number of players can be very high, for some time now being able to exceed a million participants.

For 10-14 year olds, sporting practices and video gaming practices are thus linked in a complementary relationship. Complementary practices – sportsmen are no longer players –, founded on a scaling of enjoyment: Adolescents can be confronted in the virtual universe by situations with high information uncertainty that they do not experience in their everyday life, but they are only pushed to seek these situations of virtual uncertainty when they already enjoy them in the real world. It is likely that this significant link between sports and video games is reinforced by the spread of games consoles (like the Wii) allowing the player to control the bodily movements of his virtual representative by himself miming the action with his whole body. ■

8. Anne SAUVAGEOT, *L'épreuve des sens [Trial of the senses]*, Paris, PUF, 2003.

## SURVEY METHODOLOGY

The survey of culture leisure activities of 6-14 year olds\* was undertaken in winter 2001 -2002, and concerned 3,000 families with schoolchildren between CP (*Cours préparatoire ~ Preparatory Classes*) and 3<sup>rd</sup> classes.

The analyses presented here have been made on the basis of responses supplied by the children from CM2 to 3<sup>rd</sup> themselves, that is from 10 to 14, to the questions of a survey on the cultural leisure of 6-14 year olds that related to video games and sport.

1. Frequency of physical and sporting activities (PSA): "Since the start of the school year in September, have you taken part in sport or a physical and sporting activity, apart from sport classes at school...?"

Four possible responses were offered: "Never or almost never"; "Once or twice per month"; "Once or twice per week"; "Every day or almost".

The analyses have mainly been performed on weekly practice (meaning by grouping the possible responses in pairs).

2. Name of the PSA played: "What sport(s) do you take part in apart from school sports classes? (If you take part in several sports, start with the one that you play most often)". Young adolescents could cite three PSA. The answers to this question have been recoded.

3. Frequency of video gaming: "Since the start of the school year in September, have you played video games...?"

Four possible responses were offered: "Never or almost never"; "Once or twice per month"; "Once or twice per week"; "Every day or almost".

The analyses have mainly been performed on weekly practice (meaning by grouping the possible responses in pairs).

4. Video game types appreciated: "What types of video game do you like?"

There were three possible answers: "I like", "I do not like" and "I do not know". The seven video game types offered are:

- "Action/arcade games (*Mortal kombat, Tomb raider...*)",
- "Adventure games (*Pokemon, Outcast...*)",
- "Role play games (*Diablo, Final fantasy, Vampire...*)",
- "Simulation games (*Sim city, flight simulation, car races...*)",
- "Strategy games (*Ages of empires, Civilization, Warcraft...*)",
- "Sports games (*Fifa, L'entraîneur (Trainer)...*)",
- And "Console games (*Sonic, Super Mario, Rayman...*)".

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\* S. OCTOBRE, *Les loisirs culturels des 6-14 ans*, op. cit.