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Prelude: Fun, Play, Game, Ludus... A Survey of Game Theories

Several researchers have underlined two salient aspects from which we can embark upon research into games. First, they indicate the extreme complexity of elaborating a theory of games. A first generator of complexity in game theorization consists of the great difficulty of thinking of it as a global object: how to think the similarity between playing with a rubber band between one's fingers without letting it fall (see [CHA 07]), playing a game of chess or playing a role-playing game, for example?

In the second place – and the second salient aspect of game research – we have the poverty and very relative interest brought to the field in French research communities, outside the interest of children's games by educational and psychological sciences. In fact, well-behind Anglo-Saxon game studies, research on games only really developed in France during the last decade. It is strongly marked by the development of video games (videoludic practices) and new technologies, which tends to give second place to the study of non-digital games. Yet, these were investigated previously by some avant-garde (though isolated) figures in game research such as Roger Caillois in the 1950s and Gilles Brougère today. In the United States, though there exists a field entirely devoted to "game studies", these researches concern themselves, as their name indicates, primarily with games (their rules, principles and structures) and not with play (the ludic attitude). We also find an interest in games among researchers into folklore, and this diversity and partiality in game research contribute to the difficulty of envisaging it as a global object.

Historically, as starting points for reflection on games, we could cite, on the one hand, research into animal games and, on the other hand those – as we stressed, a handful – on specifically human games (without restriction to the domain of childhood alone).

1.1. Animal play, human play

Karl Groos (1861–1946), a German psychologist, wrote "The Play of Animals" [GRO 96], then later "The theory of play" in "The Play of Man" [GRO 08], where he argued – on the basis of his observations of animal play – that play functions as preparation for later life. His research would later be seen as relating to a functionalist theory: play has a function, it serves a (biological) end, a heterotelic principle that might be controversial in theories on human play. As another point of discussion, many criticisms would be made of research into animal play, dealing with the acceptance of the word "play": what a human calls "play", is it play for the animal? Is there not an anthropomorphic bias in thinking about animal behaviors in the image of human behaviors?

These questions would further continue in anthropology, where some researchers such as Hamayon [HAM 12] underlined the great variability of what might be understood as relating to "play" in the populations studied, or again, in a more general questioning, such as Geertz [GRE 80], who called for critical examination of analogies with play and game.

Beyond these controversies relating to the ontology of "play", these researches however bring to light a common element in animal play and in the activity of human play (ludic as well as artistic, moreover): behaving "as if", pretending, the "not for real"; as in the example of puppies play-fighting, fighting "not for real". Research in ethology [FAG 81, IMM 80] show that not all animals play. Practices called "play" have been identified mainly in mammals. Birds, for example, do not play (with the exception of corvids: ravens, magpies, jackdaws, etc.) and animals, according to which species they belong to, do not play the same games.

Three types of games have been categorized among animals. Ethologists speak of locomotor games and rotation games, play with objects and social

play. Pierre Garrigues, a researcher in anthropological ethology, thus describes locomotor and rotation games among animals:

> "Most locomotor games are distributed in a fairly uniform manner among the various animal species: running, running in a circle, jumping, bouncing, kicking, rolling, sliding. Others are more common, or alternatively, more original. Thus, the behavior "jumping in the air" has the widest distribution. It is found among non-human primates, cetaceans, rodents, carnivores and artiodactyls (including the hippopotamus). To this repertoire, some animals add their own specialties: chasing their own tails, as in domestic dogs or minks, or even hanging upside down, as in gibbons, red pandas or ravens. Some locomotor and rotation games involving the whole body or parts of the body, like those of young chimpanzees, have become popular in descriptions made by primatologists, whether young chimpanzees repetitively climbing up and sliding down their mother's body, their acrobatics between tree branches, or improvising pirouettes while walking" [GAR 01, p. 12].

As for play with objects, one critical doubt arises (in the absence of the ability to question the animal about what it is doing) between observation/exploration by the animal of the object, use of the object as a tool, and playing with the object. As Garrigues [GAR 01] says, there is no firm line between the three activities. "In fact, at what moment does playing with an object become the discovery of a tool?" [GAR 01, p.13], he asks. Playing with objects covers different activities such as picking up, carrying, shaking, biting or pinching, pulling to pieces, throwing up and catching, throwing away as well as pushing [DES 06].

In 1976, Egan described the behavior of a cat (quoted by DES 06, p. 52]: "typically, an object begins by being sniffed at or batted with a paw. The nature of the object determines whether it will be bitten or not; furry toys are those most commonly bitten. If it is bitten, the object may be kept in the mouth, shaken and tossed (behavior that helps stun live prey), or carried (to a corner where prey could be eaten in peace, for example). For the other type of object, an initial small blow with a paw might make the object roll, in which case it will lead to squatting and pouncing

(the movement being the triggering stimulus for these two behaviors) which, as for prey, has the effect of immobilizing the object". Games with marbles, jump-rope and playing with a ball (outside of the game structure present, for example, in a soccer game) could be seen as play with objects in the human setting. This latter here has a clearly ludic function. This goes even more for objects with which one prepares to play: balancing a pen on one's finger, etc.

As for the last category of play, the social, it is very distinct among animals from human play and we seem to meet here again the difference between game and play. Animal play, when social, seems to refer only to the latter category, as opposed to human games, which socially structure play: tennis, soccer, or monopoly, for example. By social play, we mean in ethology – still according to a functionalist reading – the fact that play allows members of a group to get to know each other and to be able to agree. In addition, play explores social positions (who is dominant). Play, by promoting interactions, reinforces links between the members of the group.

Social play among animals involves fighting, agility (primates sliding down their mother's body, for example), pursuit or possession, serving either biological or social purposes. Ethologists note that social play among animals is mainly a game of simulation: simulating aggression, defense or mating. Klaus Peter Köpping thus says of play that it is a "pivot" category, "linking the social and the natural" [HAM 12, p. 298].

If in these theories play has a function in the development of the young animal, this is greatly emphasized for children's games [PET 84, MIL 79, WIN 80].

> "Through the superabundant physical activity deployed, games doubtless participate in the physical development of the animal, but this is not the only benefit. In its interactions with the environment the young animal develops its social and cognitive skills. It experiments, in conditions which are relatively safe, in varied situations, in the frame of which it learns to find solutions to new problems: find the appropriate distance in interaction with its peers, or discover the use of a tool. Through its explorations, the young animal thus develops behavioral regularities with regard to the physical and social environment. From this point of view, the central function of play is to allow in the young individual the "unlocking" of different activities,

> belonging to its species' repertoire or developing from gradually acquired patterns of action" [PET 84].

The function of development is one of the recurring arguments for the use of games in training. However, limiting "play" to a function of development does not work as well for the case of "games": does a game of monopoly or cards help us develop[1]?

To continue on the subject of animal play, ethologists have shown what we can call "codes of communication" that are linked to it. When animals fight "in play", they show the signs of "not for real", characteristic of play – and which approach, for many theoreticians, the game of fiction. This indication of "not for real" becomes necessary so that a playful bout does not turn into a real fight (this being true for animals as well as humans). This is what Bateson, as we will return to at greater length, calls the *metacommunication pertaining to play*. Bateson tells us that when we play, animals as well as humans, we send a message indicating: "this is play". This message is non-verbal for animals and, for humans, can be verbal ("let the games begin", "game on!") or non-verbal or even arise from the context or the accessories of the game (taking out a monopoly board puts the act of buying real estate into a different context, meeting a troll avatar means *a priori* that someone is not attacking you for real, etc.). Not knowing or being able to understand this metacommunication, that is, the figurative dimension particular to play, is a symptom of schizophrenia according to Bateson.

So it is that for animals, we remark that if dangerous tactics are used in a fight between animals, "in a game in contrast, [these tactics] and bites are absent, as well as the stereotypical signals of threat and submission. (...) the "physiognomy of the game" is always present, as an indicator superimposed on acts modeled on those of actual combat, but without the same amount of violence" [GAR 01, p. 15]. Garrigues adds that the "physiognomy of the game" [...] "is used by individuals to indicate their availability to play and prevent their partners from any misunderstanding during playful combat" [GAR 01, p. 16].

It is thus this physiognomy of the game that signals play among animals. In this sense, by using metacommunication, animals show that they are

1 The possibility of a social function in these games is of course understood; and yet, is it possible to speak of "development" without using this term in an overly broad manner?

playing. Play may sometimes be solicited by an animal using a very particular message:

> "The best known is found among canids, under the form of a "play bow", displayed by the dog to invite a peer or a human to begin or continue a session of play. Crouched on the ground, the back bent in the arc of a circle and the thorax pointing towards the partner, the dog keeps its front legs flat in front of it; he is ready to jump one way or the other. This posture is only seen in the context of play" [GAR 01, p. 16].

Ethologists thus show that, in play, there is not only intentional communication among some animals but also use of the figurative dimension.

1.2. Theories of human play

The French word *jeu*, meaning both play and game, comes etymologically from the Latin "jocus" – "joke, or play on words". Consulting historical dictionaries of the French language, it is explained that *jocus was frequently associated with ludus (play in action) and eventually absorbed its meaning.*

> "Jeu", since its first appearances in 1080, has indicated, again according to the dictionary, "free amusement" and "ludic activity in as much as it is organized by a system of rules defining success and failure, winning and losing" (1160). Its dimension of regulation led to the word applying to sporting competitions (1160) and then to the theater (1200). A century after its appearance, "jeu" also applied to battle [HAM 12].

1.2.1. *Precursors*

One of the earliest theorists in the field of games study is Johan Huizinga (1872–1945). In his 1938 work, *Homo Ludens* [LED 38], he examined the "social function" of play, to which he allocated a role for humanity equal to that of *Homo faber* (the capacity of humans for creation and work) and

Linnaeus' *Homo sapiens* (knowledge, intellectual power). Huizinga's thesis is very all encompassing (in the history of humanity, everything started as play), something which would be critiqued by those who followed up his reflections on play. He says that play was the origin of culture: that play was not born from culture but that from play, he argued, culture came.

Thus, Huizinga was led to consider "all human activity as nothing but pure play" [HUI 38: 11], in addition to which "human civilization begins and develops within play, as play" [HAM 12]. Differing from the tradition of condemnation of play by religion in Europe, his theory removes it from the solely moral register. Historically, and particularly as a simulacrum or representation ("acting as if"), play is condemned by religion – in particular, by Christians – as Roberte Hamayon reports, citing Tertullian (theologian of the second century after Christ): "Can theatrical masks please God? If he forbids the likeness of any living thing, all the more shall he forbid that anyone disfigure his image. No, no, the author of truth loves not that which is false". Tertullian again: "games trick human beings and thus betray the will of their creator". Play is assimilated to the inauthentic, to trickery, to artificiality – which is still often the case: fooling, feinting, simulating, etc. An often-quoted formula of Freud argues that "the opposite of play is not seriousness, but... reality" [FRE 88, p. 34].

Huizinga is thus one of the first to try to theorize play and to articulate all these disparate things that are called "play" outside of all moral considerations. He therefore characterizes play according to the following properties, very often repeated after him and actively supporting the debate on the concept of game:

– Play is a "free" activity: "All play is first and foremost a free action. A commanded game is no longer a game" [HUI 38, p. 24]. Play is distinguished from compulsory activity, which could be further clarified (Brougère [BRO 05] proposes replacing the criterion of freedom with that of decision) or discussed if one considers, for example, ethnographic data (Hamayon reports that among the Buryats, play is compulsory), or even a parent playing with their child, actions that are certainly often free, but sometimes coerced. In other words, guilt or resignation faced with the child's demands might function as a "command". This definitional aspect directly confronts our subject with the question of possibility of play in work organizations, if we consider that it is organized there and features neither the spontaneity nor the absence of coercion inherent in the idea of liberty.

– The goal of pleasure: “The child and the animal play because they find pleasure in playing, and their freedom lies there. (...) Play is superfluous. (...) At any moment the game may be deferred or abandoned. It is not imposed by physical need, even less by moral duty. It is not a task. It is performed during “leisure time” [HUI 38, p. 24]. One might question here the possibly anthropomorphic dimension of these remarks. Susanna Millar thus questions the criteria allowing us to assert that an animal or a young child is contented. She underlines the fact that observations of children do not show a systematic link between play and contentment [MIL 79]. Is it always a pleasure to play? When we lose? Or for oneself, when we play to give pleasure to others? Huizinga next defines play according to three parameters: the first is specific to play that operates in – we might say – an anthropologically specific space and takes a human being out of their daily activities. The two others are more classically spatiotemporal. Play is thus a practice linked to “a need for isolation” [HUI 38, p. 40].

– An activity that takes the player out of their “routine life”: “Play is not life as “routine” or “in itself”. It offers an excuse to escape this to enter into a provisional sphere of activity for its own sake [HUI 38, p. 24]. This idea of “a provisional sphere of activity for its own sake” consequently brings into question the use of play in work organizations, just as in pedagogical practices. Far in these cases from being a “pure” activity (play for its own sake), play is supposed to promote learning or experience, for example. It becomes hybridized with work activities.

– A temporally bounded activity and an activity circumscribed in space: “Play begins and, at a certain movement, “ends” [HUI 38, p. 26]. “The local limitation of play is even more striking than its temporal limitation” [HUI 38, p. 27]. The question arises here of the applicability of this criterion in particular to play when one is interested in the practices, observed in the sociology of work [BUR,79, ROY 58, DES 91, SHE 07, LE 13, DUJ 15], of workers transforming their activity from work to play. Does the delimitation of play apply in this case as neatly as to a game of bridge?

To these characteristics Huizinga adds the rules: “Every game has its rules” It is these which, added to the spatial and temporal limits, give the game its characteristic that “it creates order, it is order” [HUI 38, p. 27].

Finally, three last properties define every game:

– the "tension" generated by the game, or a factor of uncertainty;

– which other authors such as Bateson or Gilles Brougère would call the figurative dimension: "In an authentic game, besides its formal traits and its cheerful atmosphere, one essential characteristic is also indissolubly associated: the awareness, even if relegated to the background, "of acting only in appearance" [HUI 38, p. 43]. "Behaving as if" or "not for real" is accompanied for Huizinga by the awareness of the facticity of what is being performed. An author like Henriot will question the degree of awareness of the game by the player in the play of animals or very young children.

– Finally, according to Huizinga, a game has no purpose apart from itself. A game is "autotelic", has no goal but to be a game. We will return to this.

One of the main limitations of Huizinga's work is that he restricts games to the sole dimension of competition. He argues this in part in view of the origin of ludus: "It is of the highest importance that the simple word ludus, despite all the joy and freedom it evokes, was always used to signify the collection of Roman games, with their bloody, superstitious and slavish character" [HUI 38, p. 111]. He thus links games back to jousting or combat, arguing that: "Battle, as a function of culture, always assumes restrictive rules, demanding, up to a certain point, the recognition of a ludic quality" [HUI 38, p. 130].

This might quite obviously be debated: is a child playing with a skipping rope in competition, even if only with themselves? In role-playing games, is it always a question of competition? Of being on top? In the warrior example provided by Huizinga, is this "ludic quality" always recognized? And, if so, by whom?

The summary provided by Huizinga of the elements of every game consists of a few lines, from which further researchers would construct – either in opposition or in agreement – game theory. "A game is an action which takes place within certain limits, of place, of time and of will, in an apparent order, following rules freely consented to, and outside the sphere of utility and of material necessity. The atmosphere of a game is of rapture and enthusiasm, whether a sacred game or a simple celebration, a mystery or entertainment. The action is accompanied by feelings of transportation and tension and brings with it joy and relaxation" [HUI 38, p. 187].

In studying games, Huizinga is led to think that they arise prior to culture. Culture, according to him, has throughout human history followed games. Rules of order and limit generate culture through their structuring dimension. Huizinga speaks of "higher forms of social games" [HUI 38, p. 75]. "Social games" are understood by Huizinga as: "actions ordained by a community or group, or by two groups with respect to each other" [HUI 38]. Huizinga thus combines the functionalist and evolutionist theories previously seen in the ethological analysis. According to him: "The more the game is able to raise the level of life of the individual or group, the more truly it transforms into culture" [HUI 38, p. 76]. The game therefore has the function of development and evolution for the human group and the individuals who comprise it. Although thought of as autotelic, devoid of purpose, he says [HUI 38, p. 78], it can be seen to have some kind of a function that we might qualify as "higher", not linked to the protagonists of the game, but to the humanity to which they belong. Play would have an anthropological and social power of producing culture. This thought of the higher operationality of play is taken up again in two ideas:

– the fact that it is thought of by Play Theory as a medium, vector of "adaptive potentiality" [SUT 97, p. 229];

– the fact that it is thought of by anthropology in a very similar manner to ritual and shares with the latter, according to ethnographic observations, the property of generating "the expectation of an "effect" on a different order of reality" [HAM 12, p. 88]. Roberte Hamayon questions the prospective dimension linked to the game: "On what basis arises this expectation of a possible "effect" of the act of playing? (...) can it be perceived as capable of influence on another level than that on which it occurs? (...) It would seem that it is in the margin and through metaphorization that playing operates as a modality of action (...)" [HAM 12].

The question of effects on a dimension exterior to its own framework (production of culture, adaptation, effect on the harvests for the Buryats studied by Hamayon, etc.) is one of the recurrent themes of research on games and leads, in a way, to think of this subject as linked to another: this time, productive power.

This way of conceiving games would, paradoxically enough, be in agreement with another dominant thought in this research: play as the opposite of work and productivity, immediate this time, one of whose main thinker is Roger Caillois.

Another 20th Century author important for the study of this field, Roger Caillois, tried to propose a definition of play through a typology that goes beyond the single theme of antagonism (competition, combat) proposed by Huizinga. As with many game theoreticians who followed, Caillois (1913–1978) made the play/work opposition one of the axes of definition of what play is.

For Caillois, play has to do with entertainment, "it rests and it amuses" [CAI 67, p. 9]. According to him, play is devoid of constraints (we once again find the idea of freedom) and above all, like Huizinga, he considers it to be free from consequences in the world outside of the game or the life of the player: "creating neither property nor riches nor a new element of any sort; and, except for the transfer of property among the circle of players, leading to an identical situation to that at the beginning of the game" [CAI 67, p. 42]. In this sense, play produces nothing and aims to produce nothing. These categories explain in part the logic of opposition to work as soon as one thinks of play: play is unproductive, work is productive, play is free, work constrains, play is fun, work does not have this purpose, work is an activity with consequences, play is the opposite.

Caillois even opposes the literature proposing children's play as having an educational function: "On the contrary to what is often claimed, play is not training for work. Only in appearance does it anticipate adult activities. The boy who plays horses or trains is in no way preparing to become a rider or a mechanic" [CAI 67, p. 21] – a statement to be cautious with, if one considers, for example, the learning of socially expected gender roles mediated through toys (dolls, etc.).

Caillois widens the statement in making play not a training exercise for a particular activity (in contrast to those exact uses made of it in business: training for an evaluation interview to lead a reticent colleague to accept a mission, etc.). He says more broadly that play is preparation for life, notably in "developing all capacities to surmount obstacles or to cope with difficulties" [CAI 67, p. 21]. We see once again here the previously underlined paradox of immediate productivity denied to play in favor of a higher function of adaptation.

Another paradoxical dimension of play that we might underline is that, although free and with no productive function, it is yet not without rigor and

carries within itself a principle of authority. A game is in fact composed of rules that "define what is and is not part of the game, that is, the allowed and the forbidden. These conventions are at the same time arbitrary, mandatory and without appeal. (...) nothing maintains the rule except the pleasure of playing, that is the wish to respect it. One must play the game or not play at all" [CAI 67, p. 13]. To play the game consequently means to consent to this authority.

Caillois suggests several characteristics of games in the direct tradition of Huizinga (before outlining a typology of them): In the first place, he conceives the game as an activity about which he also says that it is "free: into which the player cannot be forced without the game immediately losing its nature of attractive and joyful entertainment" [CAI 67, p. 42]. Caillois here frankly opposes the principle of pleasure and that of constraint, denying any possibility for example that work, the carrier activity of constraint, might be the source of pleasure or of "attraction" and "joy", to use the same descriptors that he uses. This sharp cleavage between activities and values underlies the recurrent concept of a definition of play as opposed to the activity of work. He then takes up the criteria of delimitation and uncertainty already developed by Huizinga: the activity of play is "separate: circumscribed in limits of space and time specified and fixed in advance", and it is "subject to conventions which suspend ordinary laws and which temporarily institute a new set of rules, the only ones that count" [CAI 67, p. 42]. Caillois also makes play a spatiotemporally autonomous sphere, but also according to the principle of rules that govern a separate space. We see how this fits with the concept of "frame" developed by Bateson and later Goffman.

It is also "uncertain: its development cannot be determined nor can the result be predicted in advance, a certain latitude for the sake of invention always being left to the initiative of the player" [CAI 67, pp. 42–43]. The complexity of play is shown here as well, in the conjunction between uncertainty and clear limits, just as previously in its capacity to combine the *a priori* scarcely compatible dimensions of freedom and regulation particular to play. Finally for Caillois, as we have said, play is an "unproductive" activity.

An interesting characterization, which will inspire many consequent reflections thereafter, is about the relationship between play and fiction.

Caillois argues that the activity of play is "fictive: accompanied by specific awareness of a secondary reality or of frank unreality with respect to everyday life" [CAI 67, p. 43]. With this category, he goes beyond the whole question of the figurative dimension or the awareness of play. With fiction, we go beyond the "not for real", that is to say, we encounter the possibility of freeing ourselves from reference to the real.

Having suggested these characteristics of play, Caillois groups games into four categories: simulation, competition, chance and dizziness:

– Mimicry (simulation games): "The game may consist (...) of a player becoming an illusory character and acting accordingly. We are thus faced with a varied series of events which have the common feature of resting on the fact that the subject plays at believing, at making themselves believe or making others believe that they are other than themselves" [CAI 67, p. 61]. Imagination, fictionality and "acting as if" are at the heart of the category of mimicry.

– Agôn (competitive games): This category refers to both individual and collective games involving the question of challenge and competition. Their goal is to overcome: oneself, another, the machine. Caillois underlines the dramatic tension inherent to the agôn: "The antagonists are applauded each time they take an advantage. Their struggle has its vicissitudes which correspond to different acts or episodes of a drama. It is finally the moment to remember the extent to which the champion and the star are interchangeable characters" [CAI 67, p. 150].

– Alea (category of games of chance): Chance, destiny and fate are at the heart of this category.

– Ilinx (games of vertigo): Turning around to get dizzy or jumping elastics are for Caillois games whose goal is the physical sensation of vertigo and euphoria.

Ilinx and Alea share a "letting go"; one submits oneself to chance or to vertigo, as opposed to Agôn or Mimicry that assume the mastery of the game or the simulation. For Caillois, these categories of game can be seen as significant of the values of certain societies that value such and such a type of game. We might note, within work organizations, the predominance of simulation and competition games, to the detriment of games of chance

(forbidden, even if elements of chance may exist, for example, in the case of the allocation by drawing lots for such and such a team of competitors) and vertigo games (rare).

The absolute proscription of games of chance in organizations is perhaps linked to what Caillois mentions about Piaget on pedagogical principles, where respect for rules is taught to the child "for their moral training". In France, educators, Caillois stresses, do not promote games of chance.

For Caillois, these forms may be hybridized, but affinities or compatibilities/incompatibilities exist between the categories. He suggests notably a compatibility between, on the one hand, simulation and competition (the dramatic dimension of both competition and spectacle) and, on the other hand, vertigo and chance.

In addition to the four categories of agôn, mimicry, alea and ilinx, Caillois suggests a distinction between two categories of "ludicity": between paidia (noisiness, laughter, agitation), on the one hand, and ludus (concentration, calm, even solitude), on the other hand.

One can see that this paidia/ludus distinction comes close to other distinctions made – for example, in the English language between play and game or by Jacques Henriot between the ludic attitude and the structure of the game.

1.2.2. *Differentiation between game structure and ludic attitude*

Henriot would be the first to theorize the distinction between ludic structure (game) and ludic attitude (play). For him, "the structure expresses the schema of the action: it does not indicate its meaning. One may do something within a game; one can do the same thing without playing. It is certainly not the same thing for the subject concerned, but it is the same for someone watching the action" [HEN 89, p. 107]. The same ludic structure can, for Henriot, generate either a "serious" or a ludic activity. He takes the example of simulators, either professional or recreational (flight simulators, etc.): "The simulation is as real as the thing simulated. (...) What the pilot does in manipulating their controls is not, in essence, different to what they would do if playing. Certainly, the difference is vital: the least error on their

part could cause a catastrophe. But this is not a difference at the structural level. The gestures, the procedures, the decisions, the way of thinking and acting of the operator are identical in both cases" [HEN 89, p. 56]. What makes the game is argued to be the fact of playing it. The structure might just as well support a professional activity, for example, as a leisure activity. What is meant here is that play is certainly an attitude, but equally context. One might think that a pilot might find a ludic dimension in their activity. But the question of consequences, of productivity, of constraint, etc., is here expressed in a differentiated manner.

In this sense, Henriot says that play is also to be understood as a gap – as in the "play" between two nuts on a screw – through which different uses may slip. "A toy is all the more useful 'when it leaves a play, a space of determination' within its shape and consistency as an object, allowing the child to hang imaginary frames upon it, to insert therein their own game (quotes Grange, 225)" [HEN 89, p. 94]. In any game, he says, there is "potential ludicity".

Concerning the ludic attitude, Henriot returns to his example of simulation, saying that what differentiates a game from another situation is "the intention of the actors". From here, he makes a distinction between a "fictive situation" (the game: for example, a flight simulator in a video game) and an "actual situation" (the non-game: for example, a professional flight simulator). "The difference between a 'real' and a 'fictive' situation does not emerge from the structure, but from the intention which motivates the actors, the conditions in which they operate, of the value they attribute to the goal" [HEN 89, pp. 111–112].

What is interesting here is the reference that Henriot also makes to fiction. Henriot adds, just like Freud – whom he cites[2] – a creative dimension to play. A game is in this sense a secondary space where, when one does the same thing as in reality (through simulation, for example), it is not the same thing. In the game, the real is more than mimicked, it is surpassed, with new elements added to it: actions as well as attitudes. This point is important and will be moreover stressed by consultants and trainers through games: a game is a situation which is at the same time real and factitious, and the way in

2 And his famous phrase among game theories: "the opposite of play is not seriousness, but reality", already cited.

which the players of the game simulate reality therein through role-playing is not, all the same, what would happen in reality. We are in the power of "as if", in the realm of possibility, of imagining the possibilities of action.

Henriot links this imagination to the dimension of the unexpected and uncertainty in play. In play, there is freedom of decision and accordingly, risk-taking. This allows him to explain, on the one hand, the strong link between play and the question of limits (reaching them, trying to exceed them), and, on the other hand, its equally strong link with chance, through the very fact of the uncertainty that it carries.

It is this understanding of play as a space of possibility and experimentation that we can understand with Winnicott and Bateson.

1.3. Play as potential and intermediate space

1.3.1. *Winnicott and play as "potential space"*

Winnicott (1896–1971), the celebrated psychoanalyst and specialist in child development, makes play, in his work "Playing and Reality" [WIN 71], a space of communication. According to him, play is a space neither entirely "inside" (interior to the subject) nor entirely "outside" (of the world outside the subject). It consists of an intermediary space where symbolizations are possible (and, in the development of the infant, where the first stages of symbolization take place). This space rests at the same time on the subjectivity of the individual subject and on the world outside of the subject (other people, toys, objects in the world, etc.).

Winnicott anchors this potential space initially between the baby and its mother. It is in the first place a transitional space, an "area of separation" as he puts it, born of relations of trust and affection, which will allow play to reside there. The child, increasingly detached from its mother, will be able to create there, and thereby create itself there as a subject. What Winnicott means by creativity is: "the retention throughout life of something that belongs properly to infant experience: the ability to create the world" [WIN 04, p. 55]. Play as a creative force can be questioned here as well, in its relationship to fiction: if a world is created there, how is the world recreated and what displacements operate within what is a gap?

With play, we enter the idea of a potentiality of the subject: to develop as an individual, to intervene in oneself and one's environment, to invent one's life – not only in the sense of fantasy or dreaming, but in the sense of intervening in it. Play in this sense produces effects.

Winnicott says that it is in playing, in having – we might say almost literally – introduced play between the baby and its mother (and consequently brought into existence the subject that is the child as separate from their mother) that communication becomes possible: between two subjects, but also between the interiority of the subject and the exteriority of the world.

One might consider play as a first symbolization, which says through the actions of the game that cannot yet, for the very small child, be said with words. This is why play, with Winnicott in particular, is introduced into therapy. "Playing leads into group relationships; playing can be a form of communication in psychotherapy (...)" [WIN 71, p. 41]. Play is interaction before speech. It is a space of symbolization and of communication even before the use of the major symbolic register that is verbal language when the child begins to speak.

Child psychiatrists such as Bailly [BAL 01] argue that in its first perceptions, the infant does not see itself as separate from its mother, whom they consider to make up an integral part of their being. For the psychic life of the infant, it is a question of an "illusion" that means that "internal and external realities are not yet clearly distinct for the infant, allowing "intermediate" experiences, in particularly that of possessing a transitional object that is neither the real mother, nor her internal representation, but a little of both" [BAI 01, p. 42].

This stage is one of great dependency. For specialists in early childhood, transitional objects allow the child to constitute itself as a subject by supporting separation: "The transitional object allows the child to accept the absence of the mother and gives it the possibility of having the feeling of existing despite her absences. In this way, the baby can accumulate life experiences without its mother and without finding itself in danger. The transitional object allows this game, something the child can submit to its "omnipotence", in the presence or absence of its mother (...). In this sense, Winnicott could say that the infant plays as soon as it is able to possess a non-me object" [BAI 01, p. 43]. We see here how in psychoanalysis, the idea

of children's play meets that of a space conducive to the experience and development of the self. Here, we encounter previously mentioned notions developed by game theoreticians: freedom, creation, imagination, intrinsic exteriority of play (its own time and space) and finally, the perception of limits. We consider that it is through this play – space – between mother and child, that the infant grasps the boundaries of its being and the world that surrounds it. Yet, in child psychiatric literature, play is not constituted in limits but rather in space. It allows– first for the infant, testing the limits then, second for the child, breaking free from said limits. Every further game retains for Winnicott, the nature of a "transitional phenomenon". Bailly explains:

> "By "transitional phenomena" must be understood the continuity of experiences of omnipotence characteristic to children's games. When the child plays, they enter into an intermediate space, where reality no longer acts as a constraint but sees itself remodeled to suit the child's internal needs (...). The child can distinguish reality from their own desires, but play is a way of existing as "oneself", despite the constraints of reality to which it must adapt. (...) We must distinguish clearly here, as Winnicott does, a game, which can be socially organized, and the much more essential activity of playing. Playing is a creative act, the invention of an individual, which allows for an infinite number of variations, when social or educational games are much more limited. Playing is thus a transitional phenomenon. It consists (...) of a vital experience. By "vital" must be understood 'essential to the child', namely the feeling of really existing, or even the feeling that life is worth living" [BAI 01, p. 44].

Here, we see how much play is presented as an anthropological experience, fundamentally human, opening up the initial possibility (or its failure) of a self-possessing subject, capable of seeing itself in interaction with the world. Through play, says Winnicott, the objects and phenomena of the world are put into relation with the "internal or personal reality" [BAI 01, p. 105] of the individual.

For Winnicott, play characterizes psychotherapy, which endeavors to recreate a potential space between the therapist and the patient. He thus says that "In psychotherapy, what are we dealing with? With two people playing together" [BAI 01, p 84]. Constitution or reconstitution of the subject is

possible through play, which is able to generate potentiality and restore to the subject its capacity to act upon itself and the world or, more simply to create or restore relations between them. Here, we find again development as a higher function recognized in play, here no longer for humanity as a species, but for the individual. More than an activity, play is action: "To play is to do", says Winnicott [WIN 71].

Winnicott suggests that in human development, there is a slippage "from transitional phenomena to play, from play to shared play and, from there, to cultural experiences" [WIN 75, p. 105].

1.3.2. *Bateson and the question of "frame"*

The concept of a link between play and communication – in its relation to symbolization and its second-degree nature – is shared by many game theoreticians, beginning with Bateson (without forgetting Henriot, who will speak of the "ludic metaphor" as soon as play is involved).

Gregory Bateson (1904–1980) was a particularly atypical researcher – anthropologist, psychologist, founder of the Palo Alto school, son of a great geneticist who had considerable influence on his relationship to science.

Bateson invites us to consider play not as a content, a "substance', but as a "form", which structures an activity. It is this form that allows us in particular to distinguish a real fight from a pretend one (not for real, in play). This form, at the moment it comes into action, presents a story about the activity that it covers. This is what he calls the metacommunicative function of play: every game is accompanied by a narrative of which the object "is here the relationship between the interlocutors" [BAT 77a, p. 248].

> "Now, this phenomenon – play – could only occur if the participant organisms were capable of some degree of metacommunication, i.e., of exchanging signals which could carry the message: 'this is play'" [BAT 72, p. 179].

If this meta-message is not conveyed, then a real fight will ensure, a fight in earnest, between knights and dragons on the playground as between two dogs.

Bateson insists on one particularly illuminating thing: the question of the play frame (which Goffman takes up and develops). He advances the idea

that in the play frame there are play acts that do not mean what they would mean outside the play frame. “The playful nip denotes the bite but it does not denote what would be denoted by the bite” [BAT 72, p. 180]. The “frame” (which he names a “psychological frame”) is for Bateson a collection of messages (messages which may be verbal – “one might say, you be the knight and I’ll be the dragon” – or which might be actions: I imitate a ghost). It is the frame that is metacommunicative. He has an amusing formula (Bateson is often amusing) to describe it: “The frame tells the viewer that he is not to use the same sort of thinking in interpreting as the picture that he might use in interpreting the wallpaper outside the frame” [BAT 72, p. 187]. And look out for those who cannot decrypt this metacommunication and take pretend aggression for real. The conditions of communication are then threatened.

Bateson, to explain his theory of play, links the difference between play and reality to the difference between the map and the territory. He raises in the first place the question of what is preserved of the territory on the map (and the associated question of what is excluded). In a simulation game of a job interview, for example, what does it preserve of the reference situation and what does it leave out? What are the “rules of transformation”, to use his expression, from one frame to the other?

With a map we do not have the ground, the territory, but a symbolization. A map is in a way a metaphor for the territory, and this goes for all games, in particular those of simulation, competition or role-playing. This is why games are often related to fiction. But a particular kind of fiction, referring to reality. A game is a balance between, on the one hand, a fictional frame, and, on the other hand, a reference frame. There is an oscillation between the two frames, which can explain why a game can quite quickly turn into a non-game (we often see this among children).

Bateson finally speaks of a “more complex” game: that which makes us doubt the nature of the game and pose the question: “is it a game?”. The figurative element of which the game is a vector is not without ambiguity.

A game is often a double object: the ludic is enacted there, but also something else in reference to another frame, the reference frame, which is particularly true of simulation games that refer to a model. Its ambiguity is equally visible in what the game puts into play in terms of relations between

people (and which may lead to a halt in the game when it becomes too slippery: the "time out, I'm not playing any more" of children). In the game, there may be aggression as well as cooperation. Finally, its ambivalence also lies in the fact that we play together even when we are playing against each other.

This ambiguity makes Bateson say: "In primary process, map and territory are equated; in secondary process, they can be discriminated. In play, they are both equated and discriminated" [BAT 72, p. 185].

The "primary process" may refer, in reference to adults, to a psychiatric disorder. It is on the basis of his theory of play that Bateson can notably elaborate a theory of schizophrenia.

Schizophrenics do not access the figurative dimension, and will always interpret the metaphor literally. This is why it is difficult for them to play, as in using or understanding humor. But this non-detection (anxious and anxiety-provoking) of the register being used (is it for real? not for real?) may be our own, when we wonder, for example, if someone is joking or not (in the case of dry humor, for example). In this case, we always veer toward the first degree: "This is characteristic of anyone who feels "on the spot", as demonstrated by the careful literal replies of a witness on the stand in a court trial" [BAT 72, p. 209].

A game thus involves a particular register of communication; a figurative element which, if not detected, may end the game or raise the question: "Is this play/a game?"

One might consider this question as central to the use of games in business: am I participating in a game, or a performance evaluation? Is it a game if what I do will have an adverse impact on the way my colleagues perceive me? etc. Bateson insists moreover on the importance of context: of what frames the interaction that might help someone determine whether it is a game... or not.

1.3.3. *Goffman's analysis of frame*

Erving Goffman (1922–1982), sociologist and linguist, re-examined Bateson's concept of frame. He emphasized an interest in the "putting in parentheses" allowed by the game, and the possible confusions between

reality and play. For Goffman, frame is what gives meaning to the interaction. This supports the organization of events, such as a game, which organizes the scene of interaction and its meaning: "I assume that definitions of a situation are built up in accordance with principles of organization which governs events – at least social ones – and our subjective involvement in them; frame is the word I use to refer to such of these basic elements as I am able to identify" [GOF 1974, p. 10].

In his major work, *Frame Analysis: An Essay on the Organization of Experience*, Goffman defines, in greater depth than Bateson, what a frame is. For Goffman, each situation requires us to ask the implicit question: "What is happening here?". A frame indicates two things:

– it gives its definition to the situation – thus allowing us to interpret it: we thus return to the game, and to the question which it previously raised: is it a game or not?

– and consequently, it indicates the appropriate ways in which to act in this situation. If this is a game, I can allow myself to behave in ways that would be perceived as eccentric or even inappropriate in any other frame; disguise myself as an alien in a role-playing game – though respecting the indications (equivalent to rules) given regarding the context of the game. If this is not a game, but an ethnology course where I am asked as a student to consider my daily environment as if I knew nothing about it, like an extra-terrestrial, I will thus adjust my behavior and leave, for my experimental process, my alien costume in the cloakroom.

One may therefore: question the case of a simulation game putting one colleague in the situation of evaluating another. The two will not act in the same way in the game as if it were a matter of real evaluation for their work, and of their working relationship in reality. This is linked to the definition of the game as an *artifact*, a point which we will develop later in our research. At the same time, in this example, two frames will be considered at the same time: the game frame, inserted into the professional frame:

– One frame is thus constituted of implicit social rules that we integrate throughout our existence: how to speak, how much distance to leave, what posture to adopt, what categories of meaning to use etc. A suit will be just as socially inappropriate on the beach in August as a swimwear in a bank office at the same time, and the very process of our enculturation marks out our daily experience with indications as implicit as they are multiple.

– "The individuals I know don't invent the world of chess when they sit down to play, or the stock market when they buy some shares, or the pedestrian traffic when they move through the street. Whatever the idiosyncrasies of their own motives and interpretations, they must gear their participation into what is available by way of standard doings and standard reasons for these doings" [GOF 74, p. 236].

– Clearly the question arises, in the context of games organized by the work organization, of which frame to refer to in priority. What arrangement is in place to make the two frames compatible or, at least, capable of alignment? In a way, one might consider this question in terms of a *double bind*, as conceptualized by Bateson. One might consequently think of it as a paradoxical injunction – to demand one thing and its opposite – the injunction to work-play. Now, we know from Bateson that a double bind always returns the protagonist to the level of the first frame, the frame of reference, in the case of our example: work.

Goffman talks, as Bateson did before him, of primary and secondary frames. The primary frame correlates with the activity of interpretation linked to a situation. The primary frame, he says, "allows us, in a given situation, to give meaning to such and such of its aspects, which would otherwise be devoid of meaning" [GOF 74]. The primary frame, when it is social (and not natural, Goffman tells us), returns us to norms. It is these that, once acquired, allow us to make sense of the situation and comply with its implicit laws.

As for the secondary frames, these are keyed or fabricated on the basis of primary frames. Concerning fabrication, Goffman gives the example of falsification, where the primary frame is mimicked for the purposes of deception. Deception uses the conventions of the primary frame to function as a secondary frame. In the example of games, conventions are here used for explicit purposes – there is furthermore no secondary frame (game) if their transformation is not acknowledged. Consequently, he argues that there is use and "processing" of the frames: what he calls the "keying".

Keying, according to Goffman, corresponds to five categories:

– its correlation to a primary frame, "material which already has meaning according to a scheme of interpretation, without which the keying would be devoid of meaning" [GOF 74];

– the fact that the alteration of the primary frame is known to the participants;

– the frame corresponds to the spatial and temporal bracketing described by Bateson. Goffman explains that indicators are made available for the beginning and end of these brackets;

– one can key any type of primary frame, natural or social;

– keying influences the definition given to the situation. This definition will differ between the primary and secondary frames: for example, in play-fighting, or between actual recruitment and recruitment simulation.

According to Goffman, events taking place in the two frames are just as real as each other (fighting–game), but in the example of the game, the action is in the non-literal secondary frame even while "it is literally carried out" [GOF 74].

Goffman identifies five basic keyed frames, according to which this transformation of the activities covered by the frame takes place:

– "Make-believe", very close to Caillois' mimicry. Make-believe is conspicuous for those who are witnesses or participants in it, and is relative to a less-transformed activity. According to Goffman, nothing is likely to come of it; imitation does not have the aim of being productive. He correlates "make-believe" in this sense to ludic activities and laughter, but also to fiction. Goffman underlines the importance of the nature of the frame with regard to the admissibility of what it conveys: "What is offensive in a movie might not be offensive in a novel" [GOF 74, p. 55]. He goes on to explain this admissibility, not in relation to the situation or the reference events (the "models") but rather in the type of keying itself. One could thus think that if "make-believe" in the sense of imitating hierarchical relationships, for example overauthoritarian or sexualized ones, might make colleagues laugh, this same imitation would be received very differently in a training role-playing exercise.

– "Contests" , which according to him regulates aggression and struggle. According to Goffman, the latter may be keyed by sport, but this will provide forms allowing distancing from the primary frame of combat.

– "Ceremonials": In *Frames Analysis*, ceremonials do not key life but an event, and Goffman insists that the people present at a ceremonial are not pretending to be anyone else, but occupy with a certain intensity their role:

ruling character, priest, spouse, etc. Ceremonials involve a dramatic dimension linked to representation, he notes here, as opposed to sport or fiction. It is clear, independent of the sacred dimension conveyed by ceremonials, what brings to mind the criterion of dramatization and the emphasis given to role – not here to the role played, but to the role occupied. In this double framing of play in work, the role occupied by a manager is not only a performed role but a real one. The social role of the person participating therein may be played, embodied as Goffman put it, in such a setting. Here, the role crystallizes a place that the person occupies in society, and which may be expressed here with force (much more so than in the solely play frame).

– "Technical redoings": This entails both imitations and simulations, but this time with no direct link to play or leisure. Technical redoings in fact have the purpose of simulating an event to learn about it or to experiment. Goffman thus refers to testing, training and repetition in this category. But also to the demonstration of know-how. According to him, technical redoings simplify or complicate the situations to which they refer in reality. Following the Goffmanian idea of an alignment of frames, games in organizations that are organized for training purposes will partly refer to this framework.

– Finally, "regroudings", which refer to the conduct of an activity for purposes other than the usual ones.

These keyings thus function according to "a set of conventions by which a given activity, one already meaningful in terms of some primary framework, is transformed into something patterned on this activity but seen by the participants to be something quite else " [GOF 74, pp. 43–44].

Simulation games rest upon this principle of keying the primary frame into the secondary frame. When children play knights and dragons, they refer to the model of a battle (primary frame), but make it into a secondary frame (the game – acting as if). Goffman gives an example of using a saw: when a person saws wood, this is a primary frame, but when the same person starts to saw on another person, it may be a primary frame of murder or a secondary frame of stage magic (in which the participants grasp, by convention, the artificiality).

One might consider that this is true for other forms of game than just simulation games, if we return to the categories listed by Caillois. For example, *Ilinx*: throwing yourself off a bridge is not the same thing as throwing yourself off a bridge attached to a bungee cord. There is a transformation of the primary framework, facing the void and death, into a secondary frame: making a game of it in complete (or relative) safety.

Goffman, pursuing his theory of frames also argues that one can "fabricate" frames, in the case of hoaxes or wrongdoing. In the theater, the fabrication of a secondary frame where, for example, someone in the hall begins to heckle the actors might sometimes raise doubts about what's happening: is it an actor, or has something from the primary frame broken through? (everyone is now uneasy).

But the intentionality is not only for creative or ludic ends. Goffman defines "fabrication" thus: "I refer to the intentional effort of one or more individuals to manage activity so that a party of one or more others will be induced to have a false belief about what it is that is going on. A nefarious design is involved, a plot or treacherous plan leading –when realized – to a falsification of some part of the world" [GOF 74, p.83].

Manipulating the frame, and in particular the context of a game, leads to the possibility of manipulating someone else. For Goffman, reality arises in some sense from a competition between meanings to give to situations. Con artists, jokers, forgers and fraudsters take advantage of this competition by using a frame coupled to a meaning that they hope will dominate the others. A show, like a scam, will emerge either as a success or a failure. Thus, for Goffman, "the act of perception" is "an integral part of the scene" [GOF 74].

This question of attempted mastery of the act of perception directly bears upon problems of communication, including managerial ones. Independent of the clear intentionality of manipulating others, the manipulation of frames offers certain benefits that interest, as we have seen, those who enact ludification as well as ludicization. In this latter case, transforming commercial goals and competition between colleagues to gain bonuses into a game (or "challenge") seems to bring us back to the question of Goffmanian "fabrication" of frames... just as much as in sociology, when workers themselves transform their activity into a game so as to endure it better, something we also see.

For Goffman, there may be "stratification" of frames, or their organization in layers. Thus he invites us to consider, among other interactions, a game according to this stratified reading: an individual asked to play a role-playing game in the company, are they playing, being trained or being evaluated? What will be the dominant perception of the situation, according to the place he occupies in the game?

1.4. The concept of play today

1.4.1. *The current syntheses of a definition of play*

Because he creates a very good synthesis after debating theories of play, we will end this survey of the theorization of play over the last century with that of Gilles Brougère.

Gilles Brougère is a professor of educational sciences and has worked on play, in a quite pioneering manner in France, for more than 20 years. The definition he suggests for play interests us in particular because it synthesizes the previous propositions, while refining them.

Gilles Brougère stresses first that there are two "traditional" ways to consider play and games:

– play and games as amusement or leisure;

– game as the form of an activity.

He thus distinguishes that play is produced affectively or psychically (amusement, leisure, etc.) from its formal characteristics.

One might stress, as he does elsewhere in his various works:

– that a formal characteristic of game does not yet make something ludic for those playing;

– that, moreover, playing a game is not necessarily leisure in the sense where, for example, it has been used for a long time in the framework of school for training children (and is today in the framework of training adults).

Play and games, he states emphatically, are a particularly complex object. We have already noted that the linguistic difference between *game* and *play* does not exist in French. We have also seen that Caillois attempts to reconstitute it with his categorization between ludus and paidia: the regulated and thus organized dimension of game (ludus) and the dimension of youth, disorganization, being out of control of play (paidia).

Game is all the more complex when it refers to various articulations: "A game can first of all be an object (and not necessarily a toy, he says) (...) a game can also be a set of rules and principles, some kind of immaterial object, like the game of chess (or playing tag). A game is finally (and doubtless most often) an activity linked to the fact of playing" [BRO 05, p. 7].

1.4.2. *Brougère's characteristics of play*

One last theoretician of play, important for grasping the theoretical framework of our research, is Gilles Brougère, who, in the tradition of Huizinga, Caillois and Henriot, refines the different articulations of play and games. His perspective is thus to concentrate on identifying general characteristics, rather than analyzing play from an interactionist perspective. As a prelude to his exploration of the concept, Gilles Brougère underlines the great complexity of play in terms of traditions of attachment to values which are sometimes conflicting. He thus refers to [BRI 97] and his reflections on the rhetorics around games:

– "the rhetoric of play as progress. This mainly concerns children's play. It defends the idea that animals and children, but not adults, learn to adapt and develop through play";

– "play as destiny, which applies to games of chance";

– "play as power, which relates to the domain of sport and competition";

– "play as identity, which refers to traditional games and ceremonies";

– "play as imagination, which applies as well to childhood creativity as to social activities of creation";

– "play as the self, in relation to solitary performances of pushing one's limits";

– "finally, play as frivolity, linked to old ideas of its association with madness, and repeated today in a critique of the modern vision of play" [BRO 05, pp. 34–35].

Without returning to the supposed operative force of play, perceptible at every level of these rhetorics, what Gilles Brougère suggests is a structural definition of play, linking game and play, independently of the diversity of the articulations to which it refers. One might think that he thus surpasses the attempts at typologies such as those elaborated by Roger Caillois, distributing the characteristics of play between *agôn*, *mimicry*, *alea* and *ilinx*. He thus addresses the conjunction of "conduct" and "situation", as described by Henriot: "The key to the question of play thus relates to the establishment and articulation of the two concepts of conduct and situation. This double instrument must allow us to grasp the fleeting and ambiguous object that we seek to understand. For there to be a game, the situation must be ready for it. The subject finding itself in this situation must also have the ability to perceive and imagine the situation from this angle. Taken separately, neither the situation nor the mental attitude are enough for a game to be possible" [HEN 89, p. 216].

The characteristics of play refer Brougère to the attitude of the player (their psychic positioning with relation to the object) and the more structural elements of the game. According to Brougère, every game consists of:

– The "figurative element": "A game thus appears as a second-degree activity" – says that play "is not for real" [BRO 05, p. 45]. Brougère cites Bateson and his reflections on the metacommunication inherent in games (communication about the current interaction), which he explains, in his own theory, as a figurative element. To make it known that a fight is in play requires the use and communication of a figurative element, which allows its own interpretation to be adopted and to resolve the ambiguity of the scene specific to play. "*A game is at the same time what it appears to be (...) and a game*" [BRO 05, p. 44].

The decision: "to play is to decide". This affirmation greatly refines the question of freedom (freedom to enter the game) raised by the previous theories. This criterion profoundly nuances the nature of participation in the game and the space of freedom that constitutes it. Previously, the criterion of

freedom was in fact thought of as necessary for a game: a game being thought of as, we might say, compulsorily voluntary. One might very well, especially in the case of a game within a work organization, but also in other contexts of existence, be put in a situation where it is difficult to refuse to play (coercion), and yet be ready to play. Brougère, introducing the criterion of decision, raises it at the point of entry to the game (to decide to enter the game might become deciding to play the game... or not, while still participating). Above all, he widens the criterion of decision by saying that "free entry into the game (...) is not however the most interesting aspect of decision within the game" [BRO 05, p. 51]. The criterion of decision according to him refers to the question of decisions made IN the game. In every game (and the theory of games is based on this principle), "individuals (the players) are led to make choices among a certain number of possible actions, in a frame defined in advance (the rules of the game), the result of these choices producing the result of the game, which is associated with a positive or negative gain for each participant" (Guerrien, *The Theory of Games, p. 5* [BRO 05, p. 51]). This leads Brougère to say that "playing is deciding"; deciding on the next action in a role-playing game, in chess strategy, in taking one's turn at cards, etc. The action of the game, bearer of this decision, takes place in a dialog or an adaptation, of some kind, with the decisions of the other players.

The game consists of rules: "To play is to decide to act in conformity with a rule, and it is at the same time deciding to accept this rule as support for my action" [BRO 05, p. 55]. These rules may be more formal (chess) or more flexible: as a child, playing mommies and daddies or teachers and pupils means agreeing to obey the behavioral codes of teachers and pupils, or of parental roles. Brougère stresses that rules may be altered or renegotiated by the players, and that this remains a game. The rules are worth not so much in themselves, but precisely because they have been agreed to by the players. This returns us, for example, to the reappropriations of games observed by ethnologists. Arjun Appadurai describes the acculturation of cricket in India (1996), but this has been observed, in an even stronger form, among the Trobriand Islanders [KIL 79]. Trobriand cricket, introduced by Christian missionaries hoping that the game would discourage the Trobrianders from their regular warlike practices, has radically changed the rules. For example, the home team always wins, there is no restriction on the number of players (from 11 in the original game, there may be 40 or 50 players per team), before the match the ball is blessed

by a local religious leader who also asks that the weather stay fine, before dancing and singing that goes on quite long. The objective of these songs and dances is to promote the qualities and values of each team, while at the same time mocking them with sometimes sexual references. At the end of the match, there is dancing and feasting. What for a supporter of English cricket would no longer recognizably be a cricket game remains so for the Trobrianders. One might thus think, following Brougère, that the rules of the game are created *in situ*:

– Another criterion is what Brougère calls "frivolity", which he links to the absence of consequences: "the game (...) is constructed in such a way as to minimize consequences". "(...) while specifying: This does not mean that the game has no consequences" [BRO 05, p. 56]. In play – and we have seen it in animal play – it is possible to act "as if" without the consequences of the real reference situation: one may face an opponent in football or chess without killing each other, and if that happens, it immediately ceases to be a game. One may be an alien, some kind of animal or a god, one may participate in a murder party without anyone dying, etc. Yet, and this shows the finesse of Brougère's analysis, there may be consequences to the game, not inherent in its own frame but having an effect on other frames: one may neither lose nor win but become the subject, following the game, of derogatory or laudatory views. Goffman speaks elsewhere of evaluation games when the explicit as well as implicit goal is to detect such and such a weakness in the player. But one might more prosaically think of holding onto the bitterness linked to a defeat, or experiencing (for longer than the duration of the match) antipathy toward an opponent whose behavior was not appreciated during the game...

Finally, one last criterion of the definition of a game is uncertainty: Brougère links uncertainty to the fact "that the outcome of the game is unknown" (...) "Its story, even if provided with a pre-existing framework, develops as the game progresses." (...) "This is where the interest in a game lies, as opposed to ceremonies, rituals, or classical theater pieces" [BRO 05, p. 58]. This criterion is decisive in distinguishing play from ritual and is furthermore taken up by Roberte Hamayon in her anthropology of "playing": "(...) it is by the place allocated to this margin of realization that ritual is distinguished from play: everything is done in ritual to ignore it (except for making it, a posteriori, the cause of a failure), while everything is done in the

game to exploit it. (...) The expected effect of a ritual is to do with its normative and rationalized character, which is also helped by its solemnity and sacredness. That expected of a game, in contrast, has to do with the randomness introduced to the context of the game by the progress of the game" [HAM 12, p. 317]. Uncertainty creates tension and suspense in the game. Thus, the interest of the player is maintained, even their concentration, which may explain in part the interest of the use of games in training. Participation and attention are also associated. This criterion of uncertainty seems equally intrinsically linked to the criterion of decision that, for the players, gives pace and direction to the game and guarantees the variability of the game, given the diversity of style and subjectivity of each player. This may appear strange in organizations: to give a role, not to chance, but to hazard, in its contemporary meaning of unforseeability and risk, is understood much better when carried out or thought of within the limits/frame of a game. It will therefore be important to analyze the margin allowed in this specific frame, and the relationship of this margin to the power of action of the actors, if we refer to the definition of power by Crozier and Friedberg [CRO 77].

Brougère disqualifies the criterion of pleasure, often invoked to characterize play, arguing that, on the one hand, many activities not relevant to play may be done with pleasure (including working!) and, on the other hand, one may experience displeasure in a game: finding the effort one makes to be taxing, conflict with other players, etc.

By characterizing play thus and nuancing or modulating the characteristics defined previously, Brougère defines play not as a concept with fixed limits but a concept allowing us to grasp an object in all its complexity and variability. He introduces the notion of degrees of play, allowing objects of hybrid forms to be described: some games are thus more games than others, and some criteria may not have the same force as others in a particular game. He thus speaks of "partial ludic characteristics", which makes play not a standardized but a modular object.

It is this complex, non-homogeneous object, linked to other frames, which we are to study as it takes place in work environments.

1.4.3. *The link with learning*

Gilles Brougère stresses the theoretical development, two centuries old, which argues a strong link, even thought of as "natural", between play and learning; play seen as being spontaneous to the child and referring, Brougère says, to the "myth of natural harmony" [BRO 97, p. 55]. He underlines the fact that "if play does not allow new learning, its contribution to development seems essential in that it helps entrench it" [BRO 05, p. 23], referring to Piaget. Play is thus thought of as contributing to the child's development, and creating the conditions for learning, as is implicit in pedagogical programs, particularly those of early childhood (kindergarten), since Froebel's original Kindergarten in 1836 [BRO 97, p. 50].

Play is also thought of as promoting informal learning, seen as unconscious or able to happen independently of the will of the child (or adult!) to learn: "Play is perceived as having a goal, functional implications which essentially escape awareness" [BRO 05, p. 29].

In this sense, play is operative or performative: it enacts actions of learning while not directly or explicitly having learning as a goal.

Brougère questions this, saying that this assumption, virtue of learning through play seen as proven (its proof very certainly the outcome of studies in ethology) has no systematic basis. In his work *Playing/Learning, he cites* studies that "show the impossibility of showing in a rigorous way any certain long-term benefit to play behaviors which by definition already appear devoid of immediate benefit" [BRO 05, p. 30].

Besides the fact that the potential of play for learning has no systematic basis, he stresses the differentiated relationship between play and learning: "It seems to me that the justification for play oscillates, without this being clearly stated, between visions of a vector for learning (it is through play that one learns), a context for learning (it is in play that one learns), and favorable conditions for it (it is around play that one learns, games allowing us to be available to learn)" [BRO 05, p. 75].

Finally, he insists, taking up deconstructionist theses concerning play, on the fact that children's play – though we might add to this the play of adults in the professional context – takes place "in a frame that in large part is determined by adults" [BRO 05, p. 77]; by which he means: those who

prescribe games, parents as teachers. The type of toy given or the type of game taught to the child relates to the nature of the game – not free, but socially and culturally determined. A child plays different games, he says, according to whether they are a boy or a girl, according to their age, their environment, their country. And we can see that in businesses it is the same thing: different games are played, depending on the goals of the context in which the game occurs, whether played by the managers or the workers, the engineers or the salespeople.

Brougère returns to the fact that play is thought of as natural even though it is an artifact, a construction: "(...) what is thought of as natural is in fact a cultural artifact, what sees itself as universal is local, what sees itself as freedom is control" [BRO 05, p. 84]. His comparative work on preschool systems, and more generally his research on play, show how ultimately play is conditioned according to what, as a bearer of cultural, social and professional norms, one thinks play is. People according to their cultural inscription or their environment are carriers of an image of what a game is: for some, a "challenge" in a company will be a game, and for others it will mean having to set possibly tightened objectives for work, productivity or performance. For some, role-playing games around their activity will be fun; for others, they will be something of a humiliation.

We must then, in the professional and managerial context that we intend to study, perceive norms, categories and frames in/according to which games are carried out. We must also address play according to the variable nature of its characteristics, as analyzed by Brougère. The choice of analysis that we enact will aim to grasp it according to two structural traits:

– its dimension of "margin", a game-space between several frames, spheres of interpretation that will lead us to study the relations between them, as well as those elements pertaining to these frames and interpretations;

– its performative scope, interrogating what a game does in taking place.

But before that, after this survey that we have carried out of theories of play, what is left of the traditional (and factitious) opposition between play and work? What games are mobilized in the work organizations which we aim to study? And finally, are they games?