

Man,

•§ ROGER CAILLOIS

Play and Games

TRANSLATED FROM THE FRENCH BY
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CHAPTER I

The Definition of Play

In 1933, the rector of the University of Leyden, J. Huizinga, chose as the theme of an important oration, "The Cultural Limits of Play and the Serious." He took up and developed this topic in an original and powerful work published in 1938, *Homo Ludens*. This work, although most of its premises are debatable, is nonetheless capable of opening extremely fruitful avenues to research and reflection. In any case, it is permanently to J. Huizinga's credit that he has masterfully analyzed several of the fundamental characteristics of play and has demonstrated the importance of its role in the very development of civilization. First, he sought an exact definition of the essence of play; second, he tried to clarify the role of play present in or animating the essential aspects of all culture: in the arts as in philosophy, in poetry as well as in juridical institutions and even in the etiquette of war.

Huizinga acquitted himself brilliantly in this task, but even if he discovers play in areas where no one before him had done so,

he deliberately omits, as obvious, the description and classification of games themselves, since they all respond to the same needs and reflect, without qualification, the same psychological attitude. His work is not a study of games, but an inquiry into the creative quality of the play principle in the domain of culture, and more precisely, of the spirit that rules certain kinds of games—those which are competitive. The examination of the criteria used by Huizinga to demarcate his universe of discourse is helpful in understanding the strange gaps in a study which is in every other way remarkable. Huizinga defines play as follows:

Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.¹

Such a definition, in which all the words are important and meaningful, is at the same time too broad and too narrow. It is meritorious and fruitful to have grasped the affinity which exists between play and the secret or mysterious, but this relationship cannot be part of the definition of play, which is nearly always spectacular or ostentatious. Without doubt, secrecy, mystery, and even travesty can be transformed into play activity, but it must be immediately pointed out that this transformation is necessarily to the detriment of the secret and mysterious, which play exposes, publishes, and somehow *expends*. In a word, play tends to remove the very nature of the mysterious. On the other hand, when the secret, the mask, or the costume fulfills a sacramental function one can be sure that not play, but an institution is involved. All that is mysterious or make-believe by nature approaches play: moreover, it must be that the function of fiction or diversion is to remove the mystery; i.e. the mystery may no

longer be awesome, and the counterfeit may not be a beginning or symptom of metamorphosis and possession.

In the second place, the part of Huizinga's definition which views play as action denuded of all material interest, simply excludes bets and games of chance—for example, gambling houses, casinos, racetracks, and lotteries—which, for better or worse, occupy an important part in the economy and daily life of various cultures. It is true that the kinds of games are almost infinitely varied, but the constant relationship between chance and profit is very striking. Games of chance played for money have practically no place in Huizinga's work. Such an omission is not without consequence.

It is certainly much more difficult to establish the cultural functions of games of chance than of competitive games. However, the influence of games of chance is no less considerable, even if deemed unfortunate, and not to consider them leads to a definition of play which affirms or implies the absence of economic interest. Therefore a distinction must be made.

In certain of its manifestations, play is designed to be extremely lucrative or ruinous. This does not preclude the fact that playing for money remains completely unproductive. The sum of the winnings at best would only equal the losses of the other players. Nearly always the winnings are less, because of large overhead, taxes, and the profits of the entrepreneur. He alone does not play, or if he plays he is protected against loss by the law of averages. In effect, he is the only one who cannot take pleasure in gambling.

Property is exchanged, but no goods are produced. What is more, this exchange affects only the players, and only to the degree that they accept, through a free decision remade at each game, the probability of such transfer. A characteristic of play, in fact, is that it creates no wealth or goods, thus differing from work or art. At the end of the game, all can and must start over again at the same point. Nothing has been harvested or manufactured, no masterpiece has been created, no capital has accrued. Play is an occasion of pure waste: waste of time, energy,

ingenuity, skill, and often of money for the purchase of gambling equipment or eventually to pay for the establishment. As for the professionals—the boxers, cyclists, jockeys, or actors who earn their living in the ring, track, or hippodrome or on the stage, and who must think in terms of prize, salary, or title—it is clear that they are not players but workers. When they play, it is at some other game.

There is also no doubt that play must be defined as a free and voluntary activity, a source of joy and amusement. A game which one would be forced to play would at once cease being play. It would become constraint, drudgery from which one would strive to be freed. As an obligation or simply an order, it would lose one of its basic characteristics: the fact that the player devotes himself spontaneously to the game, of his free will and for his pleasure, each time completely free to choose retreat, silence, meditation, idle solitude, or creative activity. From this is derived Valéry's proposed definition of play: it occurs when "*l'ennui peut délier ce que l'entrain avait lié*."² It happens only when the players have a desire to play, and play the most absorbing, exhausting game in order to find diversion, escape from responsibility and routine. Finally and above all, it is necessary that they be free to leave whenever they please, by saying: "I am not playing any more."

In effect, play is essentially a separate occupation, carefully isolated from the rest of life, and generally is engaged in with precise limits of time and place. There is place for play: as needs dictate, the space for hopscotch, the board for checkers or chess, the stadium, the racetrack, the list, the ring, the stage, the arena, etc. Nothing that takes place outside this ideal frontier is relevant. To leave the enclosure by mistake, accident, or necessity, to send the ball out of bounds, may disqualify or entail a penalty.

The game must be taken back within the agreed boundaries. The same is true for time: the game starts and ends at a given signal. Its duration is often fixed in advance. It is improper to abandon or interrupt the game without a major reason (in children's games, crying "I give up," for example). If there is

occasion to do so, the game is prolonged, by agreement between the contestants or by decision of an umpire. In every case, the game's domain is therefore a restricted, closed, protected universe: a pure space.

The confused and intricate laws of ordinary life are replaced, in this fixed space and for this given time, by precise, arbitrary, unexceptionable rules that must be accepted as such and that govern the correct playing of the game. If the cheat violates the rules, he at least pretends to respect them. He does not discuss them: he takes advantage of the other players' loyalty to the rules. From this point of view, one must agree with the writers who have stressed the fact that the cheat's dishonesty does not destroy the game. The game is ruined by the nihilist who denounces the rules as absurd and conventional, who refuses to play because the game is meaningless. His arguments are irrefutable. The game has no other but an intrinsic meaning. That is why its rules are imperative and absolute, beyond discussion. There is no reason for their being as they are, rather than otherwise. Whoever does not accept them as such must deem them manifest folly.

One plays only if and when one wishes to. In this sense, play is free activity. It is also uncertain activity. Doubt must remain until the end, and hinges upon the denouement. In a card game, when the outcome is no longer in doubt, play stops and the players lay down their hands. In a lottery or in roulette, money is placed on a number which may or may not win. In a sports contest, the powers of the contestants must be equated, so that each may have a chance until the end. Every game of skill, by definition, involves the risk for the player of missing his stroke, and the threat of defeat, without which the game would no longer be pleasing. In fact, the game is no longer pleasing to one who, because he is too well trained or skillful, wins effortlessly and infallibly.

An outcome known in advance, with no possibility of error or surprise, clearly leading to an inescapable result, is incompatible with the nature of play. Constant and unpredictable definitions

of the situation are necessary, such as are produced by each attack or counterattack in fencing or football, in each return of the tennis ball, or in chess, each time one of the players moves a piece. The game consists of the need to find or continue at once a response *which is free within the limits set by the rules*. This latitude of the player, this margin accorded to his action is essential to the game and partly explains the pleasure which it excites. It is equally accountable for the remarkable and meaningful uses of the term "play," such as are reflected in such expressions as the *playing* of a performer or the *play* of a gear, to designate in the one case the personal style of an interpreter, in the other the range of movement of the parts of a machine.

Many games do not imply rules. No fixed or rigid rules exist for playing with dolls, for playing soldiers, cops and robbers, horses, locomotives, and airplanes—games, in general, which presuppose free improvisation, and the chief attraction of which lies in the pleasure of playing a role, of acting *as if* one were someone or something else, a machine for example. Despite the assertion's paradoxical character, I will state that in this instance the fiction, the sentiment of *as if* replaces and performs the same function as do rules. Rules themselves create fictions. The one who plays chess, prisoner's base, polo, or baccara, by the very fact of complying with their respective rules, is separated from real life where there is no activity that literally corresponds to any of these games. That is why chess, prisoner's base, polo, and baccara are played *for real*. *As if* is not necessary. On the contrary, each time that play consists in imitating life, the player on the one hand lacks knowledge of how to invent and follow rules that do not exist in reality, and on the other hand the game is accompanied by the knowledge that the required behavior is pretense, or simple mimicry. This awareness of the basic unreality of the assumed behavior is separate from real life and from the arbitrary legislation that defines other games. The equivalence is so precise that the one who breaks up a game, the one who denounces the absurdity of the rules, now becomes the one who breaks the spell, who brutally refuses to acquiesce

in the proposed illusion, who reminds the boy that he is not really a detective, pirate, horse, or submarine, or reminds the little girl that she is not rocking a real baby or serving a real meal to real ladies on her miniature dishes.

Thus games are not ruled and make-believe. Rather, they are ruled *or* make-believe. It is to the point that if a game with rules seems in certain circumstances like a serious activity and is beyond one unfamiliar with the rules, i.e. if it seems to him like real life, this game can at once provide the framework for a diverting make-believe for the confused and curious layman. One easily can conceive of children, in order to imitate adults, blindly manipulating real or imaginary pieces on an imaginary chessboard, and by pleasant example, playing at "playing chess."

This discussion, intended to define the nature and the largest common denominator of all games, has at the same time the advantage of placing their diversity in relief and enlarging very meaningfully the universe ordinarily explored when games are studied. In particular, these remarks tend to add two new domains to this universe: that of wagers and games of chance, and that of mimicry and interpretation. Yet there remain a number of games and entertainments that still have imperfectly defined characteristics—for example, kite-flying and top-spinning, puzzles such as crossword puzzles, the game of patience, horsemanship, seesaws, and certain carnival attractions. It will be necessary to return to this problem. But for the present, the preceding analysis permits play to be defined as an activity which is essentially:

1. *Free*: in which playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion;
2. *Separate*: circumscribed within limits of space and time, defined and fixed in advance;
3. *Uncertain*: the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovations being left to the player's initiative;

4. *Unproductive*: creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game;

5. *Governed by rules*: under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts;

6. *Make-believe*: accompanied by a special awareness of a second reality or of a free unreality, as against real life.

These diverse qualities are purely formal. They do not pre-judge the content of games. Also, the fact that the two last qualities—rules and make-believe—may be related, shows that the intimate nature of the facts that they seek to define implies, perhaps requires, that the latter in their turn be subdivided. This would attempt to take account not of the qualities that are opposed to reality, but of those that are clustered in groups of games with unique, irreducible characteristics.

CHAPTER II

The Classification of Games

The multitude and infinite variety of games at first causes one to despair of discovering a principle of classification capable of subsuming them under a small number of well-defined categories. Games also possess so many different characteristics that many approaches are possible. Current usage sufficiently demonstrates the degree of hesitance and uncertainty: indeed, several classifications are employed concurrently. To oppose card games to games of skill, or to oppose parlor games to those played in a stadium is meaningless. In effect, the implement used in the game is chosen as a classificatory instrument in the one case; in the other, the qualifications required; in a third the number of players and the atmosphere of the game, and lastly the place in which the contest is waged. An additional over-all complication is that the same game can be played alone or with others. A particular game may require several skills simultaneously, or none.

Very different games can be played in the same place. Merry-

go-rounds and the diabolò are both open-air amusements. But the child who passively enjoys the pleasure of riding by means of the movement of the carousel is not in the same state of mind as the one who tries as best he can to correctly whirl his diabolò. On the other hand, many games are played without implements or accessories. Also, the same implement can fulfill different functions, depending on the game played. Marbles are generally the equipment for a game of skill, but one of the players can try to guess whether the marbles held in his opponent's hand are an odd or even number. They thus become part of a game of chance.

This last expression must be clarified. For one thing, it alludes to the fundamental characteristic of a very special kind of game. Whether it be a bet, lottery, roulette, or baccara, it is clear that the player's attitude is the same. He does nothing, he merely awaits the outcome. The boxer, the runner, and the player of chess or hopscotch, on the contrary, work as hard as they can to win. It matters little that some games are athletic and others intellectual. The player's attitude is the same: he tries to vanquish a rival operating under the same conditions as himself. It would thus appear justified to contrast games of chance with competitive games. Above all, it becomes tempting to investigate the possibility of discovering other attitudes, no less fundamental, so that the categories for a systematic classification of games can eventually be provided.



After examining different possibilities, I am proposing a division into four main rubrics, depending upon whether, in the games under consideration, the role of competition, chance, simulation, or vertigo is dominant. I call these *agôn*, *alea*, *mimicry*, and *ilinx*, respectively. All four indeed belong to the domain of play. One *plays* football, billiards, or chess (*agôn*); roulette or a lottery (*alea*); pirate, Nero, or Hamlet (*mimicry*); or one produces in oneself, by a rapid whirling or falling movement, a state of dizziness and disorder (*ilinx*). Even these designations do not

cover the entire universe of play. It is divided into quadrants, each governed by an original principle. Each section contains games of the same kind. But inside each section, the different games are arranged in a rank order of progression. They can also be placed on a continuum between two opposite poles. At one extreme an almost indivisible principle, common to diversion, turbulence, free improvisation, and carefree gaiety is dominant. It manifests a kind of uncontrolled fantasy that can be designated by the term *paidia*. At the opposite extreme, this frolicsome and impulsive exuberance is almost entirely absorbed or disciplined by a complementary, and in some respects inverse, tendency to its anarchic and capricious nature: there is a growing tendency to bind it with arbitrary, imperative, and purposely tedious conventions, to oppose it still more by ceaselessly practicing the most embarrassing chicanery upon it, in order to make it more uncertain of attaining its desired effect. This latter principle is completely impractical, even though it requires an ever greater amount of effort, patience, skill, or ingenuity. I call this second component *ludus*.

I do not intend, in resorting to these strange concepts, to set up some kind of pedantic, totally meaningless mythology. However, obligated as I am to classify diverse games under the same general category, it seemed to me that the most economical means of doing so was to borrow, from one language or another, the most meaningful and comprehensive term possible, so that each category examined should avoid the possibility of lacking the particular quality on the basis of which the unifying concept was chosen. Also, to the degree that I will try to establish the classification to which I am committed, each concept chosen will not relate too directly to concrete experience, which in turn is to be divided according to an as yet untested principle.

In the same spirit, I am compelled to subsume the games most varied in appearance under the same rubric, in order to better demonstrate their fundamental kinship. I have mixed physical and mental games, those dependent upon force with those requiring skill or reasoning. Within each class, I have not dis-

tinguished between children's and adults' games, and wherever possible I have sought instances of homologous behavior in the animal world. The point in doing this was to stress the very principle of the proposed classification. It would be less burdensome if it were perceived that the divisions set up correspond to essential and irreducible impulses.

1. *Fundamental Categories*

Agôn. A whole group of games would seem to be competitive, that is to say, like a combat in which equality of chances is artificially created, in order that the adversaries should confront each other under ideal conditions, susceptible of giving precise and incontestable value to the winner's triumph. It is therefore always a question of a rivalry which hinges on a single quality (speed, endurance, strength, memory, skill, ingenuity, etc.), exercised, within defined limits and without outside assistance, in such a way that the winner appears to be better than the loser in a certain category of exploits. Such is the case with sports contests and the reason for their very many subdivisions. Two individuals or two teams are in opposition (polo, tennis, football, boxing, fencing, etc.), or there may be a varying number of contestants (courses of every kind, shooting matches, golf, athletics, etc.). In the same class belong the games in which, at the outset, the adversaries divide the elements into equal parts and value. The games of checkers, chess, and billiards are perfect examples. The search for equality is so obviously essential to the rivalry that it is re-established by a handicap for players of different classes; that is, within the equality of chances originally established, a secondary inequality, proportionate to the relative powers of the participants, is dealt with. It is significant that such a usage exists in the *agôn* of a physical character (sports) just as in the more cerebral type (chess games for example, in which the weaker player is given the advantage of a pawn, knight, castle, etc.).

As carefully as one tries to bring it about, absolute equality does not seem to be realizable. Sometimes, as in checkers or chess, the fact of moving first is an advantage, for this priority permits the favored player to occupy key positions or to impose a special strategy. Conversely, in bidding games, such as bridge, the last bidder profits from the clues afforded by the bids of his opponents. Again, at croquet, to be last multiplies the player's resources. In sports contests, the exposure, the fact of having the sun in front or in back; the wind which aids or hinders one or the other side; the fact, in disputing for positions on a circular track, of finding oneself in the inside or outside lane constitutes a crucial test, a trump or disadvantage whose influence may be considerable. These inevitable imbalances are negated or modified by drawing lots at the beginning, then by strict alternation of favored positions.

The point of the game is for each player to have his superiority in a given area recognized. That is why the practice of *agôn* presupposes sustained attention, appropriate training, assiduous application, and the desire to win. It implies discipline and perseverance. It leaves the champion to his own devices, to evoke the best possible game of which he is capable, and it obliges him to play the game within the fixed limits, and according to the rules applied equally to all, so that in return the victor's superiority will be beyond dispute.

In addition to games, the spirit of *agôn* is found in other cultural phenomena conforming to the game code: in the duel, in the tournament, and in certain constant and noteworthy aspects of so-called courtly war.

In principle, it would seem that *agôn* is unknown among animals, which have no conception of limits or rules, only seeking a brutal victory in merciless combat. It is clear that horse races and cock fights are an exception, for these are conflicts in which men make animals compete in terms of norms that the former alone have set up. Yet, in considering certain facts, it seems that animals already have the competitive urge during encounters where limits are at least implicitly accepted and spontaneously

respected, even if rules are lacking. This is notably the case in kittens, puppies, and bear cubs, which take pleasure in knocking each other down yet not hurting each other.

Still more convincing are the habits of bovines, which, standing face to face with heads lowered, try to force each other back. Horses engage in the same kind of friendly dueling: to test their strength, they rear up on their hind legs and press down upon each other with all their vigor and weight, in order to throw their adversaries off balance. In addition, observers have noted numerous games of pursuit that result from a challenge or invitation. The animal that is overtaken has nothing to fear from the victor. The most impressive example is without doubt that of the little ferocious "fighting" willow wrens. "A moist elevation covered with short grass and about two meters in diameter is chosen for the arena," says Karl Groos.⁸ The males gather there daily. The first to arrive waits for an adversary, and then the fight begins. The contenders tremble and bow their heads several times. Their feathers bristle. They hurl themselves at each other, beaks advanced, and striking at one another. *Never is there any pursuit or conflict outside the space delimited for the journey.* That is why it seems legitimate for me to use the term *agôn* for these cases, for the goal of the encounters is not for the antagonist to cause serious injury to his rival, but rather to demonstrate his own superiority. Man merely adds refinement and precision by devising rules.

In children, as soon as the personality begins to assert itself, and before the emergence of regulated competition, unusual challenges are frequent, in which the adversaries try to prove their greater endurance. They are observed competing to see which can stare at the sun, endure tickling, stop breathing, not wink his eye, etc., the longest. Sometimes the stakes are more serious, where it is a question of enduring hunger or else pain in the form of whipping, pinching, stinging, or burning. Then these ascetic games, as they have been called, involve severe ordeals. They anticipate the cruelty and hazing which adolescents must undergo during their initiation. This is a departure

from *agôn*, which soon finds its perfect form, be it in legitimately competitive games and sports, or in those involving feats of prowess (hunting, mountain climbing, crossword puzzles, chess problems, etc.) in which champions, without directly confronting each other, are involved in ceaseless and diffuse competition.

Alea. This is the Latin name for the game of dice. I have borrowed it to designate, in contrast to *agôn*, all games that are based on a decision independent of the player, an outcome over which he has no control, and in which winning is the result of fate rather than triumphing over an adversary. More properly, destiny is the sole artisan of victory, and where there is rivalry, what is meant is that the winner has been more favored by fortune than the loser. Perfect examples of this type are provided by the games of dice, roulette, heads or tails, baccara, lotteries, etc. Here, not only does one refrain from trying to eliminate the injustice of chance, but rather it is the very capriciousness of chance that constitutes the unique appeal of the game.

Alea signifies and reveals the favor of destiny. The player is entirely passive; he does not deploy his resources, skill, muscles, or intelligence. All he need do is await, in hope and trembling, the cast of the die. He risks his stake. Fair play, also sought but now taking place under ideal conditions, lies in being compensated exactly in proportion to the risk involved. Every device intended to equalize the competitors' chances is here employed to scrupulously equate risk and profit.

In contrast to *agôn*, *alea* negates work, patience, experience, and qualifications. Professionalization, application, and training are eliminated. In one instant, winnings may be wiped out. *Alea* is total disgrace or absolute favor. It grants the lucky player infinitely more than he could procure by a lifetime of labor, discipline, and fatigue. It seems an insolent and sovereign insult to merit. It supposes on the player's part an attitude exactly opposite to that reflected in *agôn*. In the latter, his only reliance is upon himself; in the former, he counts on everything, even the vaguest sign, the slightest outside occurrence, which he immedi-

ately takes to be an omen or token—in short, he depends on everything except himself.

Agôn is a vindication of personal responsibility; *alea* is a negation of the will, a surrender to destiny. Some games, such as dominoes, backgammon, and most card games, combine the two. Chance determines the distribution of the hands dealt to each player, and the players then play the hands that blind luck has assigned to them as best they can. In a game like bridge, it is knowledge and reasoning that constitute the player's defense, permitting him to play a better game with the cards that he has been given. In games such as poker, it is the qualities of psychological acumen and character that count.

The role of money is also generally more impressive than the role of chance, and therefore is the recourse of the weaker player. The reason for this is clear: *Alea* does not have the function of causing the more intelligent to win money, but tends rather to abolish natural or acquired individual differences, so that all can be placed on an absolutely equal footing to await the blind verdict of chance.

Since the result of *agôn* is necessarily uncertain and paradoxically must approximate the effect of pure chance, assuming that the chances of the competitors are as equal as possible, it follows that every encounter with competitive characteristics and ideal rules can become the object of betting, or *alea*, e.g. horse or greyhound races, football, basketball, and cock fights. It even happens that table stakes vary unceasingly during the game, according to the vicissitudes of *agôn*.⁴

Games of chance would seem to be peculiarly human. Animals play games involving competition, stimulation, and excess. K. Groos, especially, offers striking examples of these. In sum, animals, which are very much involved in the immediate and enslaved by their impulses, cannot conceive of an abstract and inanimate power, to whose verdict they would passively submit in advance of the game. To await the decision of destiny passively and deliberately, to risk upon it wealth proportionate to the risk of losing, is an attitude that requires the possibility of

foresight, vision, and speculation, for which objective and calculating reflection is needed. Perhaps it is in the degree to which a child approximates an animal that games of chance are not as important to children as to adults. For the child, play is active. In addition, the child is immune to the main attraction of games of chance, deprived as he is of economic independence, since he has no money of his own. Games of chance have no power to thrill him. To be sure, marbles are money to him. However, he counts on his skill rather than on chance to win them.

Agôn and *alea* imply opposite and somewhat complementary attitudes, but they both obey the same law—the creation for the players of conditions of pure equality denied them in real life. For nothing in life is clear, since everything is confused from the very beginning, luck and merit too. Play, whether *agôn* or *alea*, is thus an attempt to substitute perfect situations for the normal confusion of contemporary life. In games, the role of merit or chance is clear and indisputable. It is also implied that all must play with exactly the same possibility of proving their superiority or, on another scale, exactly the same chances of winning. In one way or another, one escapes the real world and creates another. One can also escape himself and become another. This is *mimicry*.

Mimicry. All play presupposes the temporary acceptance, if not of an illusion (indeed this last word means nothing less than beginning a game: *in-lusio*), then at least of a closed, conventional, and, in certain respects, imaginary universe. Play can consist not only of deploying actions or submitting to one's fate in an imaginary milieu, but of becoming an illusory character oneself, and of so behaving. One is thus confronted with a diverse series of manifestations, the common element of which is that the subject makes believe or makes others believe that he is someone other than himself. He forgets, disguises, or temporarily sheds his personality in order to feign another. I prefer to designate these phenomena by the term *mimicry*, the English word

for mimetism, notably of insects, so that the fundamental, elementary, and quasi-organic nature of the impulse that stimulates it can be stressed.

The insect world, compared to the human world, seems like the most divergent of solutions provided by nature. This world is in contrast in all respects to that of man, but it is no less elaborate, complex, and surprising. Also, it seems legitimate to me at this point to take account of mimetic phenomena of which insects provide most perplexing examples. In fact, corresponding to the free, versatile, arbitrary, imperfect, and extremely diversified behavior of man, there is in animals, especially in insects, the organic, fixed, and absolute adaptation which characterizes the species and is infinitely and exactly reproduced from generation to generation in billions of individuals: e.g. the caste system of ants and termites as against class conflict, and the designs on butterflies' wings as compared to the history of painting. Reluctant as one may be to accept this hypothesis, the temerity of which I recognize, the inexplicable mimetism of insects immediately affords an extraordinary parallel to man's penchant for disguising himself, wearing a mask, or *playing a part*—except that in the insect's case the mask or guise becomes part of the body instead of a contrived accessory. But it serves the same purposes in both cases, viz. to change the wearer's appearance and to inspire fear in others.⁵

Among vertebrates, the tendency to imitate first appears as an entirely physical, quasi-irresistible contagion, analogous to the contagion of yawning, running, limping, smiling, or almost any movement. Hudson seems to have proved that a young animal "follows any object that is going away, and flees any approaching object." Just as a lamb is startled and runs if its mother turns around and moves toward the lamb without warning, the lamb trails the man, dog, or horse that it sees moving away. Contagion and imitation are not the same as simulation, but they make possible and give rise to the idea or the taste for mimicry. In birds, this tendency leads to nuptial parades, ceremonies, and exhibitions of vanity in which males or females, as the case may

be, indulge with rare application and evident pleasure. As for the oxyrhinous crabs, which plant upon their carapaces any alga or polyp that they can catch, their aptitude for disguise leaves no room for doubt, whatever explanation for the phenomenon may be advanced.

Mimicry and travesty are therefore complementary acts in this kind of play. For children, the aim is to imitate adults. This explains the success of the toy weapons and miniatures which copy the tools, engines, arms, and machines used by adults. The little girl plays her mother's role as cook, laundress, and ironer. The boy makes believe he is a soldier, musketeer, policeman, pirate, cowboy, Martian,⁶ etc. An airplane is made by waving his arms and making the noise of a motor. However, acts of mimicry tend to cross the border between childhood and adulthood. They cover to the same degree any distraction, mask, or travesty, in which one participates, and which stresses the very fact that the play is masked or otherwise disguised, and such consequences as ensue. Lastly it is clear that theatrical presentations and dramatic interpretations rightly belong in this category.

The pleasure lies in being or passing for another. But in games the basic intention is not that of deceiving the spectators. The child who is playing train may well refuse to kiss his father while saying to him that one does not embrace locomotives, but he is not trying to persuade his father that he is a real locomotive. At a carnival, the masquerader does not try to make one believe that he is really a marquis, toreador, or Indian, but rather tries to inspire fear and take advantage of the surrounding license, a result of the fact that the mask disguises the conventional self and liberates the true personality. The actor does not try to make believe that he is "really" King Lear or Charles V. It is only the spy and the fugitive who disguise themselves to really deceive because they are not playing.

Activity, imagination, interpretation, and *mimicry* have hardly any relationship to *alea*, which requires immobility and the thrill of expectation from the player, but *agôn* is not excluded. I am not thinking of the masqueraders' competition, in which the

relationship is obvious. A much more subtle complicity is revealed. For nonparticipants, every *agôn* is a spectacle. Only it is a spectacle which, to be valid, excludes simulation. Great sports events are nevertheless special occasions for *mimicry*, but it must be recalled that the simulation is now transferred from the participants to the audience. It is not the athletes who mimic, but the spectators. Identification with the champion in itself constitutes *mimicry* related to that of the reader with the hero of the novel and that of the moviegoer with the film star. To be convinced of this, it is merely necessary to consider the perfectly symmetrical functions of the champion and the stage or screen star. Champions, winners at *agôn*, are the stars of sports contests. Conversely, stars are winners in a more diffuse competition in which the stakes are popular favor. Both receive a large fan-mail, give interviews to an avid press, and sign autographs.

In fact, bicycle races, boxing or wrestling matches, football, tennis, or polo games are intrinsic spectacles, with costumes, solemn overture, appropriate liturgy, and regulated procedures. In a word, these are dramas whose vicissitudes keep the public breathless, and lead to denouements which exalt some and depress others. The nature of these spectacles remains that of an *agôn*, but their outward aspect is that of an exhibition. The audience are not content to encourage the efforts of the athletes or horses of their choice merely by voice and gesture. A physical contagion leads them to assume the position of the men or animals in order to help them, just as the bowler is known to unconsciously incline his body in the direction that he would like the bowling ball to take at the end of its course. Under these conditions, paralleling the spectacle, a competitive *mimicry* is born in the public, which doubles the true *agôn* of the field or track.

With one exception, *mimicry* exhibits all the characteristics of play: liberty, convention, suspension of reality, and delimitation of space and time. However, the continuous submission to imperative and precise rules cannot be observed—rules for the dissimulation of reality and the substitution of a second reality.

Mimicry is incessant invention. The rule of the game is unique: it consists in the actor's fascinating the spectator, while avoiding an error that might lead the spectator to break the spell. The spectator must lend himself to the illusion without first challenging the décor, mask, or artifice which for a given time he is asked to believe in as more real than reality itself.

Illux. The last kind of game includes those which are based on the pursuit of vertigo and which consist of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind. In all cases, it is a question of surrendering to a kind of spasm, seizure, or shock which destroys reality with sovereign brusqueness.

The disturbance that provokes vertigo is commonly sought for its own sake. I need only cite as examples the actions of whirling dervishes and the Mexican *voladores*. I choose these purposely, for the former, in technique employed, can be related to certain children's games, while the latter rather recall the elaborate maneuvers of high-wire acrobatics. They thus touch the two poles of games of vertigo. Dervishes seek ecstasy by whirling about with movements accelerating as the drumbeats become ever more precipitate. Panic and hypnosis are attained by the paroxysm of frenetic, contagious, and shared rotation.⁷ In Mexico, the *voladores*—Huastec or Totonac—climb to the top of a mast sixty-five to one hundred feet high. They are disguised as eagles with false wings hanging from their wrists. The end of a rope is attached to their waists. The rope then passes between their toes in such a way that they can manage their entire descent with head down and arms outstretched. Before reaching the ground, they make many complete turns, thirty according to Torquemada, describing an ever-widening spiral in their downward flight. The ceremony, comprising several flights and beginning at noon, is readily interpreted as a dance of the setting sun, associated with birds, the deified dead. The frequency of accidents has led the Mexican authorities to ban this dangerous exercise.⁸

It is scarcely necessary to invoke these rare and fascinating examples. Every child very well knows that by whirling rapidly he reaches a centrifugal state of flight from which he regains bodily stability and clarity of perception only with difficulty. The child engages in this activity playfully and finds pleasure thereby. An example is the game of teetotum⁹ in which the player pivots on one foot as quickly as he is able. Analogously, in the Haitian game of *maïs d'or* two children hold hands, face to face, their arms extended. With their bodies stiffened and bent backward, and with their feet joined, they turn until they are breathless, so that they will have the pleasure of staggering about after they stop. Comparable sensations are provided by screaming as loud as one can, racing downhill, and tobogganing; in horsemanship, provided that one turns quickly; and in swinging.

Various physical activities also provoke these sensations, such as the tightrope, falling or being projected into space, rapid rotation, sliding, speeding, and acceleration of vertilinear movement, separately or in combination with gyrating movement. In parallel fashion, there is a vertigo of a moral order, a transport that suddenly seizes the individual. This vertigo is readily linked to the desire for disorder and destruction, a drive which is normally repressed. It is reflected in crude and brutal forms of personality expression. In children, it is especially observed in the games of hot cockles, "winner-take-all," and leapfrog in which they rush and spin pell-mell. In adults, nothing is more revealing of vertigo than the strange excitement that is felt in cutting down the tall prairie flowers with a switch, or in creating an avalanche of the snow on a rooftop, or, better, the intoxication that is experienced in military barracks—for example, in noisily banging garbage cans.

To cover the many varieties of such transport, for a disorder that may take organic or psychological form, I propose using the term *ilinx*, the Greek term for whirlpool, from which is also derived the Greek word for vertigo (*ilingos*).

This pleasure is not unique to man. To begin with, it is appropriate to recall the gyrations of certain mammals, sheep in par-

ticular. Even if these are pathological manifestations, they are too significant to be passed over in silence. In addition, examples in which the play element is certain are not lacking. In order to catch their tails dogs will spin around until they fall down. At other times they are seized by a fever for running until they are exhausted. Antelopes, gazelles, and wild horses are often panicked when there is no real danger in the slightest degree to account for it; the impression is of an overbearing contagion to which they surrender in instant compliance.¹⁰

Water rats divert themselves by spinning as if they were being drawn by an eddy in a stream. The case of the chamois is even more remarkable. According to Karl Groos, they ascend the glaciers, and with a leap, each in turn slides down a steep slope, while the other chamois watch.

The gibbon chooses a flexible branch and weighs it down until it unbends, thus projecting him into the air. He lands catch as catch can, and he endlessly repeats this useless exercise, inexplicable except in terms of its seductive quality. Birds especially love games of vertigo. They let themselves fall like stones from a great height, then open their wings when they are only a few feet from the ground, thus giving the impression that they are going to be crushed. In the mating season they utilize this heroic flight in order to attract the female. The American nighthawk, described by Audubon, is a virtuoso at these impressive acrobatics.¹¹

Following the teetotum, *maïs d'or*, sliding, horsemanship, and swinging of their childhood, men surrender to the intoxication of many kinds of dance, from the common but insidious giddiness of the waltz to the many mad, tremendous, and convulsive movements of other dances. They derive the same kind of pleasure from the intoxication stimulated by high speed on skis, motorcycles, or in driving sports cars. In order to give this kind of sensation the intensity and brutality capable of shocking adults, powerful machines have had to be invented. Thus it is not surprising that the Industrial Revolution had to take place before vertigo could really become a kind of game. It is now provided

for the avid masses by thousands of stimulating contraptions installed at fairs and amusement parks.

These machines would obviously surpass their goals if it were only a question of assaulting the organs of the inner ear, upon which the sense of equilibrium is dependent. But it is the whole body which must submit to such treatment as anyone would fear undergoing, were it not that everybody else was seen struggling to do the same. In fact, it is worth watching people leaving these vertigo-inducing machines. The contraptions turn people pale and dizzy to the point of nausea. They shriek with fright, gasp for breath, and have the terrifying impression of visceral fear and shrinking as if to escape a horrible attack. Moreover the majority of them, before even recovering, are already hastening to the ticket booth in order to buy the right to again experience the same pleasurable torture.

It is necessary to use the word "pleasure," because one hesitates to call such a transport a mere distraction, corresponding as it does more to a spasm than to an entertainment. In addition, it is important to note that the violence of the shock felt is such that the concessionaires try, in extreme cases, to lure the naive by offering free rides. They deceitfully announce that "this time only" the ride is free, when this is the usual practice. To compensate, the spectators are made to pay for the privilege of calmly observing from a high balcony the terrors of the co-operating or surprised victims, exposed to fearful forces or strange caprices.

It would be rash to draw very precise conclusions on the subject of this curious and cruel assignment of roles. This last is not characteristic of a kind of game, such as is found in boxing, wrestling, and in gladiatorial combat. Essential is the pursuit of this special disorder or sudden panic, which defines the term vertigo, and in the true characteristics of the games associated with it: viz. the freedom to accept or refuse the experience, strict and fixed limits, and separation from the rest of reality. What the experience adds to the spectacle does not diminish but reinforces its character as play.

2. *From Turbulence to Rules*

Rules are inseparable from play as soon as the latter becomes institutionalized. From this moment on they become part of its nature. They transform it into an instrument of fecund and decisive culture. But a basic freedom is central to play in order to stimulate distraction and fantasy. This liberty is its indispensable motive power and is basic to the most complex and carefully organized forms of play. Such a primary power of improvisation and joy, which I call *paidia*, is allied to the taste for gratuitous difficulty that I propose to call *ludus*, in order to encompass the various games to which, without exaggeration, a civilizing quality can be attributed. In fact, they reflect the moral and intellectual values of a culture, as well as contribute to their refinement and development.

I have chosen the term *paidia* because its root is the word for child, and also because of a desire not to needlessly disconcert the reader by resorting to a term borrowed from an antipodal language. However, the Sanskrit *kredati* and the Chinese *wan* seem both richer and more expressive through the variety and nature of their connotations. It is true that they also present the disadvantages of overabundance—a certain danger of confusion, for one. *Kredati* designates the play of adults, children, and animals. It applies more specifically to gambling, i.e. to the sudden and capricious movements provoked by a superabundance of gaiety and vitality. It applies equally to illicit sex relationships, the rise and fall of waves, and anything that undulates with the wind. The word *wan* is even more explicit, as much for what it defines as for what it avoids defining, i.e. specifying games of skill, competition, simulation, and chance. It manifests many refinements of meaning to which I will have occasion to return.

In view of these relationships and semantic qualifications, what can be the connotations and denotations of the term *paidia*? I shall define it, for my purposes, as a word covering the

spontaneous manifestations of the play instinct: a cat entangled in a ball of wool, a dog sniffing, and an infant laughing at his rattle represent the first identifiable examples of this type of activity. It intervenes in every happy exuberance which effects an immediate and disordered agitation, an impulsive and easy recreation, but readily carried to excess, whose impromptu and unruly character remains its essential if not unique reason for being. From somersaults to scribbling, from squabble to uproar, perfectly clear illustrations are not lacking of the comparable symptoms of movements, colors, or noises.

This elementary need for disturbance and tumult first appears as an impulse to touch, grasp, taste, smell, and then drop any accessible object. It readily can become a taste for destruction and breaking things. It explains the pleasure in endlessly cutting up paper with a pair of scissors, pulling cloth into thread, breaking up a gathering, holding up a queue, disturbing the play or work of others, etc. Soon comes the desire to mystify or to defy by sticking out the tongue or grimacing while seeming to touch or throw the forbidden object. For the child it is a question of expressing himself, of feeling he is the *cause*, of forcing others to pay attention to him. In this manner, K. Groos recalls the case of a monkey which took pleasure in pulling the tail of a dog that lived with it, each time that the dog seemed to be going to sleep. The primitive joy in destruction and upset has been notably observed by the sister of G. J. Romanes in precise and most meaningful detail.¹²

The child does not stop at that. He loves to play with his own pain, for example by probing a toothache with his tongue. He also likes to be frightened. He thus looks for a physical illness, limited and controlled, of which he is the cause, or sometimes he seeks an anxiety that he, being the cause, can stop at will. At various points, the fundamental aspects of play are already recognizable, i.e. voluntary, agreed upon, isolated, and regulated activity.

Soon there is born the desire to invent rules, and to abide by them whatever the cost. The child then makes all kinds of bets—

which, as has been seen, are the elementary forms of *agôn*—with himself or his friends. He hops, walks backwards with his eyes closed, plays at who can look longest at the sun, and will suffer pain or stand in a painful position.

In general, the first manifestations of *paidia* have no name and could not have any, precisely because they are not part of any order, distinctive symbolism, or clearly differentiated life that would permit a vocabulary to consecrate their autonomy with a specific term. But as soon as conventions, techniques, and utensils emerge, the first games as such arise with them: e.g. leapfrog, hide and seek, kite-flying, teetotum, sliding, blindman's buff, and doll-play. At this point the contradictory roads of *agôn*, *alea*, *mimicry*, and *ilinx* begin to bifurcate. At the same time, the pleasure experienced in solving a problem arbitrarily designed for this purpose also intervenes, so that reaching a solution has no other goal than personal satisfaction for its own sake.

This condition, which is *ludus* proper, is also reflected in different kinds of games, except for those which wholly depend upon the cast of a die. It is complementary to and a refinement of *paidia*, which it disciplines and enriches. It provides an occasion for training and normally leads to the acquisition of a special skill, a particular mastery of the operation of one or another contraption or the discovery of a satisfactory solution to problems of a more conventional type.

The difference from *agôn* is that in *ludus* the tension and skill of the player are not related to any explicit feeling of emulation or rivalry: the conflict is with the obstacle, not with one or several competitors. On the level of manual dexterity there can be cited games such as cup-and-ball, diabolo, and yo-yo. These simple instruments merely utilize basic natural laws, e.g. gravity and rotation in the case of the yo-yo, where the point is to transform a rectilinear alternating motion into a continuous circular movement. Kite-flying, on the contrary, relies on the exploitation of a specific atmospheric condition. Thanks to this, the player accomplishes a kind of auscultation upon the sky from

afar. He projects his presence beyond the limits of his body. Again, the game of blindman's buff offers an opportunity to experience the quality of perception in the absence of sight.¹³ It is readily seen that the possibilities of *ludus* are almost infinite.

Games such as solitaire or the ring puzzle, although part of the same species, already belong to another group of games, since they constantly appeal to a spirit of calculation and contrivance. And lastly, crossword puzzles, mathematical recreations, anagrams, olrhymes¹⁴ and obscure poetry, addition to detective stories (trying to identify the culprit), and chess or bridge problems constitute, even in the absence of gadgets, many varieties of the most prevalent and pure forms of *ludus*.

It is common knowledge that what to begin with seems to be a situation susceptible to indefinite repetition turns out to be capable of producing ever new combinations. Thus the player is stimulated to emulate himself, permitting him to take pride in his accomplishment, as against those who share his taste. There is a manifest relationship between *ludus* and *agôn*. In addition, it can happen that the same game may possess both, e.g. chess or bridge.

The combination of *ludus* and *alea* is no less frequent: it is especially recognizable in games of patience, in which ingenious maneuvers have little influence upon the result, and in playing slot machines in which the player can very crudely calculate the impulsion given to the ball at various points in directing its course. In both these examples, chance is still the deciding factor. Moreover, the fact that the player is not completely helpless and that he can at least minimally count on his skill or talent is sufficient reason to link *ludus* with *alea*.¹⁵

Ludus is also readily compatible with *mimicry*. In the simplest cases, it lends aspects of illusion to construction games such as the animals made out of millet stalks by Dogon children, the cranes or automobiles constructed by fitting together perforated steel parts and pulleys from an Erector set, or the scale-model planes or ships that even adults do not disdain meticulously constructing. However, it is the theater which provides the basic

connection between the two, by disciplining mimicry until it becomes an art rich in a thousand diverse routines, refined techniques, and subtly complex resources. By means of this fortunate development, the cultural fecundity of play is amply demonstrated.

In contrast, just as there could be no relationship between *paidia*, which is tumultuous and exuberant, and *alea*, which is passive anticipation of and mute immobility pending the outcome of the game, there also can be no connection between *ludus*, which is calculation and contrivance, and *ilinx*, which is a pure state of transport. The desire to overcome an obstacle can only emerge to combat vertigo and prevent it from becoming transformed into disorder or panic. It is, therefore, training in self-control, an arduous effort to preserve calm and equilibrium. Far from being compatible with *ilinx*, it provides the discipline needed to neutralize the dangerous effects of *ilinx*, as in mountain climbing or tightrope walking.

Ludus, in itself, seems incomplete, a kind of makeshift device intended to allay boredom. One becomes resigned to it while awaiting something preferable, such as the arrival of partners that makes possible the substitution of a contest for this solitary pleasure. Moreover, even in games of skill or contrivance (e.g. patience, crossword and other puzzles) which exclude or regard as undesirable the intervention of another person, *ludus* no less inspires in the player the hope of succeeding the next time when he may obtain a higher score. In this way, the influence of *agôn* is again manifested. Indeed, it enriches the pleasure derived from overcoming an arbitrarily chosen obstacle. In fact, even if each of these games is played alone and is not replaced by an openly competitive one, it can easily and quickly be converted into a contest, with or without prizes, such as newspapers organize on occasion.

There is also an aspect of *ludus* that, in my opinion, is explained by the presence of *agôn* within it: that is, that it is strongly affected by fashion. The yo-yo, cup-and-ball, diabolo,

and ring puzzle appear and disappear as if by magic and soon are replaced by other games. In parallel fashion, the vogues for amusements of a more intellectual nature are no less limited in time; e.g. the rebus, the anagram, the acrostic, and the charade have had their hours. It is probable that crossword puzzles and detective stories will run the same course. Such a phenomenon would be enigmatic if *ludus* were an individual amusement, as seems superficially to be the case. In reality, it is permeated with an atmosphere of competition. It only persists to the degree that the fervor of addicts transforms it into virtual *agôn*. When the latter is missing, *ludus* cannot persist independently. In fact, it is not sufficiently supported by the spirit of organized competition, which is not essential to it, and does not provide the substance for a spectacle capable of attracting crowds. It remains transient and diffuse, or else it risks turning into an obsession for the isolated fanatic who would dedicate himself to it absolutely and in his addiction would increasingly withdraw from society.

Industrial civilization has given birth to a special form of *ludus*, the hobby, a secondary and gratuitous activity, undertaken and pursued for pleasure, e.g. collecting, unique accomplishments, the pleasure in billiards or inventing gadgets, in a word any occupation that is primarily a compensation for the injury to personality caused by bondage to work of an automatic and picayune character. It has been observed that the hobby of the worker-turned-artisan readily takes the form of constructing complete scale models of the machines in the fabrication of which he is fated to cooperate by always repeating the same movement, an operation demanding no skill or intelligence on his part. He not only avenges himself upon reality, but in a positive and creative way. The hobby is a response to one of the highest functions of the play instinct. It is not surprising that a technical civilization contributes to its development, even to providing compensations for its more brutal aspects. Hobbies reflect the rare qualities that make their development possible.

In a general way, *ludus* relates to the primitive desire to find

diversion and amusement in arbitrary, perpetually recurrent obstacles. Thousands of occasions and devices are invented to satisfy simultaneously the desire for relaxation and the need, of which man cannot be rid, to utilize purposefully the knowledge, experience, and intelligence at his disposal, while disregarding self-control and his capacity for resistance to suffering, fatigue, panic, or intoxication.

What I call *ludus* stands for the specific element in play the impact and cultural creativity of which seems most impressive. It does not connote a psychological attitude as precise as that of *agôn*, *alea*, *mimicry* or *ilinx*, but in disciplining the *paidia*, its general contribution is to give the fundamental categories of play their purity and excellence.

Besides, *ludus* is not the only conceivable metamorphosis of *paidia*. A civilization like that of classical China worked out a different destiny for itself. Wisely and circumspcctly, Chinese culture is less directed toward purposive innovation. The need for progress and the spirit of enterprise generally seem to them a kind of compulsion that is not particularly creative. Under these conditions the turbulence and surplus of energy characteristic of *paidia* is channelized in a direction better suited to its supreme values. This is the place to return to the term *wan*. According to some, it would etymologically designate the act of indefinitely caressing a piece of jade while polishing it, in order to savor its smoothness or as an accompaniment to reverie. Perhaps this origin clarifies another purpose of *paidia*. The reservoir of free movement that is part of its original definition seems in this case to be oriented not toward process, calculation, or triumph over difficulties but toward calm, patience, and idle speculation. The term *wan* basically designates all kinds of semiautomatic activities which leave the mind detached and idle, certain complex games which are part of *ludus*, and at the same time, nonchalant meditation and lazy contemplation.

Tumult and din are covered by the expression *jeou-nao*, which

means literally "passion-disorder." When joined to the term *nao*, the term *wan* connotes any exuberant or joyous behavior. But this term *wan* must be present. With the character *tchouang* (to pretend), it means "to find pleasure in simulating." Thus *wan* coincides fairly exactly with the various possible manifestations of *paidia*, although when used alone it may designate a particular kind of game. It is not used for competition, dice, or dramatic interpretation. That is to say, it excludes the various kinds of games that I have referred to as institutional.

The latter are designated by more specialized terms. The character *hsi* corresponds to games of disguise or simulation, covering the domain of the theater and the spectacle. The character *choua* refers to games involving skill and ability; however, it is also used for contests involving jokes or puns, for fencing, and for perfection in practicing a difficult art. The character *teou* refers to conflict as such, cock fighting or dueling. It is also used for card games. Lastly, the character *tou*, not to be applied to children's games, covers games of chance, feats of daring, bets, and ordeals. It also is the name for blasphemy, for to tempt chance is considered a sacrilegious wager against destiny.¹⁶

The vast semantic area of the term *wan* makes it even more deserving of interest. To begin with, it includes child's play and all kinds of carefree and frivolous diversion such as are suggested by the verbs to frolic, to romp, to trifle, etc. It is used to describe casual, abnormal, or strange sex practices. At the same time, it is used for games demanding reflection and *forbidding haste*, such as chess, checkers, puzzles (*tai Kiao*), and the game of nine rings.¹⁷ It also comprises the pleasure of appreciating the savor of good food or the bouquet of a wine, the taste for collecting works of art or even appreciating them, voluptuously handling and even fashioning delicate curios, comparable to the Occidental category of the hobby, collecting or puttering. Lastly, the transitory and relaxing sweetness of moonlight is suggested, the pleasure of a boat ride on a limpid lake or the prolonged contemplation of a waterfall.¹⁸

The example of the word *wan* shows that the destinies of cultures can be read in their games. The preference for *agôn*, *alea*, *mimicry*, or *ilinx* helps decide the future of a civilization. Also, the channeling of the free energy in *paidia* toward invention or contemplation manifests an implicit but fundamental and most significant choice.

Table I. Classification of Games

	AGÔN (Competition)	ALEA (Chance)	MIMICRY (Simulation)	ILINX (Vertigo)
PAIDIA Tumult Agitation Immoderate laughter Kite-flying Solitaire Patience Crossword puzzles LUDUS	Racing Wrestling Etc. Athletics Boxing, Billiards Fencing, Checkers Football, Chess Contests, Sports in general	Counting-out rhymes Heads or tails Betting Roulette Simple, complex, and continuing lotteries*	Children's Initiations Games of illusion Tag, Arms Masks, Disguises Theater Spectacles in general	Children "whirling" Horseback riding Swinging Waltzing Velador Traveling carnivals Skiing Mountain climbing Tightrope walking

N.B. In each vertical column games are classified in such an order that the *paidia* element is constantly decreasing while the *ludus* element is ever increasing.

* A simple lottery consists of the one basic drawing. In a complex lottery there are many possible combinations. A continuing lottery (e.g. Irish Sweepstakes) is one consisting of two or more stages, the winner of the first stage being granted the opportunity to participate in a second lottery. [From correspondence with Caillois. M.B.]

Notes

1. J. Huizinga, *Homo Ludens* (English translation; New York: Roy Publishers, 1950, p. 13). On p. 28 there is another definition not quite as eloquent, but less restricted: "Play is a voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and consciousness that it is different from ordinary life."
2. Paul Valéry, *Tel quel*, II (Paris, 1943), p. 21.
3. Karl Groos, *The Play of Animals* (English translation; New York: D. Appleton & Co., 1898, p. 151).
4. For example, in the Balearic Islands for jai-alai, and cock-fights in the Antilles. It is obvious that it is not necessary to take into account the cash prizes that may motivate jockeys, owners, runners, boxers, football players, or other athletes. These prizes, however substantial, are not relevant to *alea*. They are a reward for a well-fought victory. This recompense for merit has nothing to do with luck or the result of chance, which remain the uncertain monopoly of gamblers; in fact it is the direct opposite.
5. Terrifying examples of mimicry or structural dissimulation among insects (the spectral attitude of the mantis and the fright offered by *Smerinthus ocellata*) will be found in my study entitled

"*Mimétisme et psychasténie*," in *Le Mythe et L'Homme* (Paris, 1938), pp. 101-143. Unfortunately, this study treats the problem with a perspective that today seems fantastic to me. Indeed I no longer view mimetism as a disturbance of space perception and a tendency to return to the inanimate, but rather, as herein proposed, as the insect equivalent of human games of simulation. The examples utilized in *Le Mythe et L'Homme* nevertheless retain their value [translated by M.B. from French text]:

"In order to protect itself, an inoffensive animal assumes the appearance of a ferocious animal, for example the bee-shaped butterfly *Trochilium* and the wasp *Vespa crabro*: even to the smoky wings, brown feet and antennae, yellow-and-black striped abdomens and thoraxes, and the same impressive noisy flight in broad day. Sometimes the mimetic animal has a further goal. The caterpillar *Chœrocampa elpenor*, for example, has two eyelike black-bordered spots on its fourth and fifth segments. When disturbed it retracts its anterior segments. The fourth swells enormously. The effect obtained is the illusion of a snake's head, a frightening apparition to lizards and small birds (L. Cuénot, *La génèse des espèces animales*, Paris, 1911, pp. 470 and 473). According to Weismann (*Vorträge über Descendenztheorie*, Vol. 1, pp. 78-79) *Smerinthus ocellata*, which like all sphinxes at rest hides its lower wings, when in danger suddenly masks them with two large blue eyes on a red background, thus unexpectedly frightening the aggressor. [This terrifying transformation is automatic. It is approximated in cutaneous reflexes which, although they do not extend as far as a change of color designed to transform the animal, sometimes result in lending it a terrifying quality. A cat, confronted by a dog, is frightened; its hair stands on end, thus causing the cat to become frightening. Le Dantec by this analogy (*Lamarckiens et Darwiniens*, 3rd ed.; Paris, 1908, p. 139) explains the human phenomenon known as "goose pimples," a common result of extreme fright. Even though rendered dysfunctional by the comparative hairlessness of man, the reflex still persists.] This act is accompanied by a kind of nervousness. At rest, the animal resembles a thin, desiccated leaf. When disturbed, it clings to its perch, extends its antennae, inflates its thorax, retracts its head, exaggerates the curve of its abdomen, while its whole body shakes and shivers. The crisis past, it slowly returns to immobility. Standfuss' experiments have demonstrated the efficacy of this behavior in frightening the tomtit, the robin, the common nightingale and frequently the grey nightingale. [Cf. Standfuss, "Beispiel von Schutz und Trutzfärbung," *Mitt. Schweiz. Entomol. Ges.*, XI (1906), 155-157; P. Vignon, *Introduction à la biologie expéri-*

mentale, Paris, 1930 (*Encycl. Biol.*, Vol. VIII), p. 356]. The moth, with extended wings, seems in fact like the head of an enormous bird of prey. . . .

"Examples of homomorphism are not lacking: the *calappes* and round pebbles, the *chlamys* and seeds, the *moenas* and gravel, the prawns and fucus. The fish *Phyllopteryx* of the Sargasso Sea is only an 'alga cut into the shape of a floating lanner' (L. Murat, *Les merveilles du monde animal*, 1914, pp. 37-38) like *Antennarius* and *Pterophryne* (L. Cuénot, *op. cit.*, p. 453). The polyp retracts its tentacles, crooks its back, and adapts its color so that it resembles a pebble. The white and green lower wings of *catocala nuptia* resemble the umbelliferae. The embossments, nodes, and streaks of the pieridine, *Aurora*, make it identical with the bark of the poplars on which it lives. The lichens of *Lithinus nigrocrisius* of Madagascar and the Flatides cannot be distinguished (*ibid.*, Fig. 114). The extent of mimetism among the mantidae is known. Their paws simulate petals or are rounded into corollae, which resemble flowers, imitating the effects of the wind upon the flowers through a delicate mechanical balance (A. Lefèbvre, *Ann. de la Soc. entom. de France*, Vol. IV; Léon Binet, *La vie de la mante religieuse*, Paris, 1931; P. Vignon, *op. cit.*, pp. 374 ff.). *Cilix compressa* resembles a type of bird dung, and the *Ceroxylus laceratus* with its foliated, light olive-green excrescences resembles a stick covered with moss. This last insect belongs to the phasmidae family which generally 'hang from bushes in the forest and have the bizarre habit of letting their paws hang irregularly thus making the error even easier' (Alfred R. Wallace, *Natural Selection and Tropical Nature*, London: Macmillan, 1895, p. 47). To the same family belong even the bacilli which resemble twigs. *Ceroys* and *Heteropteryx* resemble thorny desiccated branches; and the *membracides*, hemiptera of the Tropics, resemble buds or thorns, such as the impressive thorn-shaped insect, *Umbonia orozimbo*. Measuring worms, erect and rigid, can scarcely be distinguished from bush sprouts, equipped as they are with appropriate tegumentary wrinkles. Everyone is familiar with the insect of the genus *Phyllium* which resembles leaves. From here, the road leads to the perfect homomorphism of certain butterflies: *Oxydia*, above all, which perches perpendicularly from the tip of a branch, upper wings folded over, so that it looks like a terminal leaf. This guise is accentuated by a thin, dark line continuing across the four wings in such a way that the main vein of a leaf is simulated (Rabaud, *Éléments de biologie générale*, 2nd ed., Paris, 1928, p. 412, Fig. 54).

"Other species are even more perfected, their lower wings being

provided with a delicate appendix used as a petiole, thus obtaining 'a foothold in the vegetable world' (Vignon, *loc. cit.*). The total impression of the two wings on each side is that of the lanceolate oval characteristic of the leaf. There is also a longitudinal line, continuing from one wing to the other, a substitute for the median vein of the leaf; 'the organic driving force has had to design and cleverly organize each of the wings so that it should attain a form not self-determined, but through union with the other wing' (*ibid.*). The main examples are *Coenophlebia archidona* of Central America (Delage and Goldsmith, *Les théories de l'évolution*, Paris, 1909, Fig. 1, p. 74) and the various types of *Kallima* in India and Malaysia."

Additional examples: *Le Mythe et L'Homme*, pp. 133-136.

6. As has been aptly remarked, girls' playthings are designed to imitate practical, realistic, and domestic activities, while those of boys suggest distant, romantic, inaccessible, or even obviously unreal actions.

7. O. Depont and X. Coppolani, *Les confréries religieuses musulmanes* (Algiers, 1887), pp. 156-159, 329-339.

8. Description and photographs in Helga Larsen, "Notes on the Volador and Its Associated Ceremonies and Superstitions," *Ethnos*, 2, No. 4 (July, 1937), 179-192, and in Guy Strasser-Péan, "Les origines du volador et du comelagatoaze," *Actes du XXVIII^e Congrès International des Américanistes* (Paris, 1947), 327-334. I quote part of the description of the ceremony from this article [translated by M.B. from French text]:

"The chief of the dance or *K'ohal*, clad in a red and blue tunic, ascends in his turn and sits on the terminal platform. Facing east, he first invokes the benevolent deities, while extending his wings in their direction and using a whistle which imitates the puling of eagles. Then he climbs to the top of the mast. Facing the four points of the compass in succession, he offers them a chalice of calabash wrapped in white linen just like a bottle of brandy, from which he sips and spits some more or less vaporized mouthfuls. Once this symbolic offering has been made, he puts on his headdress of red feathers and dances, facing all four directions while beating his wings.

"These ceremonies executed at the summit of the mast mark what the Indians consider the most moving phase of the ritual, because it involves mortal risk. But the next stage of the "flight" is even more spectacular. The four dancers, attached by the waist, pass underneath the structure, then let themselves go from behind. Thus suspended, they slowly descend to the ground, describing a

grand spiral in proportion to the unrolling of the ropes. The difficult thing for these dancers is to seize this rope between their toes in such a way as to keep their heads down and arms outspread just like descending birds which soar in great circles in the sky. As for the chief, first he waits for some moments, then he lets himself glide along one of the four dancers' ropes."

9. [Toton in the French text. M.B.]

10. Groos, *op. cit.*, p. 208.

11. *Ibid.*, p. 259.

12. Observation cited by Groos, *ibid.*, pp. 92-93:

"I notice that the love of mischief is very strong in him. Today he got hold of a wineglass and an egg cup. The glass he dashed on the floor with all his might and of course broke it. Finding, however, that the egg cup would not break when thrown down, he looked round for some hard substance against which to dash it. The post of the brass bedstead appearing to be suitable for the purpose, he raised the egg cup high above his head and gave it several hard blows. When it was completely smashed he was quite satisfied. He breaks a stick by passing it down between a heavy object and the wall and then hanging onto the end, thus breaking it across the heavy object. He frequently destroys an article of dress by carefully pulling out the threads (thus unraveling it) before he begins to tear it with his teeth in a violent manner.

"In accordance with his desire for mischief he is, of course, very fond of upsetting things, but he always takes great care that they do not fall on himself. Thus he will pull a chair toward him till it is almost overbalanced, then he intently fixes his eyes on the top bar of the back, and when he sees it coming over his way, darts from underneath and watches the fall with great delight; and similarly with heavier things. There is a washstand, for example, with a heavy marble top, which he has with great labor upset several times, but always without hurting himself." (G. J. Romanes, *Animal Intelligence*, New York, D. Appleton & Co., 1897, p. 484.)

13. This had already been observed by Kant. Cf. Y. Hirn, *Les jeux d'enfants* (French translation; Paris, 1926), p. 63.

14. [*Olorimes* (in French)] are two lines of poetry in which each syllable of the first line rhymes with the corresponding syllable of the second line. Cailliois suggested the following couplet from Victor Hugo as an example:

Gal, amant de la reine, alle, tour magnanime
Galamment de l'urène a la Tour Magne, a Nîmes

From correspondence with Cailliois. M.B.]

15. The development of slot machines in the modern world and

the fascination or obsessive behavior that they cause is indeed astonishing. The vogue for playing slot machines is often of unexpected proportions. It causes true obsessions and sometimes is a contributing factor to youth's entire way of life. The following account appeared in the press on March 25, 1957, occasioned by the investigation conducted by the United States Senate that same month:

"Three hundred thousand slot machines manufactured by 15,000 employees in 50 factories, most of which are located in the environs of Chicago, were sold in 1956. These machines are popular not only in Chicago, Kansas City, or Detroit—not to speak of Las Vegas, the capital of gambling—but also in New York. All day and all night in Times Square, the heart of New York, Americans of all ages, from schoolboy to old man, spend their pocket money or weekly pension in an hour, in the vain hope of winning a free game. At 1485 Broadway, 'Playland' in gigantic neon letters eclipses the sign of a Chinese restaurant. In an immense room without a door dozens of multicolored slot machines are aligned in perfect order. In front of each machine a comfortable leather stool, reminiscent of the stools in the most elegant bars on the Champs-Élysées, allows the player with enough money to sit for hours. He even has an ash tray and a special place for his hot dog and Coca Cola, the national repast of the poor in the United States, which he can order without budgeting from his place. With a dime or quarter, he tries to add up enough points to win a carton of cigarettes. In New York State it is illegal to pay off in cash. An infernal din muffles the recorded voice of Louis Armstrong or Elvis Presley which accompanies the efforts of the small-time gamblers. Youths in blue jeans and leather jackets rub shoulders with old ladies in flowered hats. The boys choose the atomic bomber or guided-missile machines and the women put their hand on the 'love meter' that reveals whether they are still capable of having a love affair, while little children for a nickel are shaken, almost to the point of heart failure, on a donkey that resembles a zebu. There are also the marines or aviators who listlessly fire revolvers." [D. Morgaine, translated by M.B.]

The four categories of play are represented: *agôn* and *alea* involved in most of the machines, *mimicry* and illusion in the imaginary maneuvering of the atomic bomber or guided missile, *ilinx* on the shaking donkey.

It is estimated that Americans spend \$400 million a year for the sole purpose of projecting nickel-plated balls against luminous blocks through various obstacles. In Japan, after the war, the mania was worse. It is estimated that about 12 per cent of the national budget was swallowed up annually by slot machines. There were

some installed even in doctors' waiting rooms. Even today, in the shadow of the viaducts, in Tokyo, between the trains "is heard the piercing noise of the *pachencos*, the contraptions in which the player strikes a steel ball which gropingly traverses various tricky obstacles and then is lost forever. An absurd game, in which one can only lose, but which seduces those in whom the fury rages. That is why there are no less than 600,000 *pachencos* in Japan. I gaze at these rows of dark heads fascinated by a ball that gambols against some nails. The player holds the apparatus in both hands, no doubt so that his will to win shall pass into the machine. The most compulsive do not even wait for one ball to run its course before hitting another. It is a painful spectacle." [James de Coquet, *Le Figaro*, Feb. 18, 1957, translated by M.B.]

This seduction is so strong that it contributes to the rise of juvenile delinquency. Thus, in April of 1957, the American newspapers reported the arrest in Brooklyn of a gang of juveniles led by a boy of ten and a girl of twelve. They burglarized neighborhood stores of about one thousand dollars. They were only interested in dimes and nickels, which could be used in slot machines. Bills were used merely for wrapping their loot, and were later thrown away as refuse.

Julius Siegal, in a recent article entitled "The Lure of Pinball" [*Harper's* 215, No. 1289 (Oct. 1957), 44-47] has tried to explain the incredible fascination of the game. His study emerges as both confession and analysis. After the inevitable allusions to sexual symbolism, the author especially stresses a feeling of victory over modern technology in the pleasure derived from slot machines. The appearance of calculation that the player reflects before projecting the ball has no significance, but to him it seems sublime. "It seems to me that when a pinballer invests his nickel he pits himself—his own skill—against the combined skills of American industry (p. 45)." The game is therefore a kind of competition between individual skill and an immense anonymous mechanism. For one (real) coin, he hopes to win (fictive) million, for scores are always expressed in numbers with multiple zeros.

Finally, the possibility must exist of cheating the apparatus. "Tilt" indicates only an outer limit. This is a delicious menace, an added risk, a kind of secondary game grafted onto the first.

Curiously, Siegal admits that when depressed, he takes a half-hour's detour in order to find his favorite machine. Then he plays, confident that the game "... assumes positively therapeutic proportions—if I win (p. 46)." He leaves reassured as to his skill and

chances of success. His despair is gone, and his aggression has been sublimated.

He deems a player's behavior at a slot machine to be as revealing of his personality as is the Rorschach test. Each player is generally trying to prove that he can beat the machine on its own ground. He masters the mechanism and amasses an enormous fortune shown in the luminous figures inscribed on the screen. He alone has succeeded, and can renew his exploit at will. ". . . He has freely expressed his irritation with reality, and made the world behave. All for only a nickel (p. 47)." The responsibility for such an ambitious conclusion is the author's. What is left is that the inordinate success of slot machines (in which nothing is won but the possibility of playing again) appears to be one of the most disconcerting enigmas posed by contemporary amusements.

16. The Chinese also use the word *yeou* to designate idling and games in space, especially kite-flying, and also great flights of fancy, mystic journeys of shamans, and the wanderings of ghosts and the damned.

17. Game analogous to ring puzzles: nine links form a chain and are traversed by a rod attached to a base. The point of the game is to unlink them. With experience, one succeeds at it, careful not to call attention to a quite delicate, lengthy, and complicated manipulation where the least error makes it necessary to start again from the beginning.

18. From data provided by Duyvendak in Huizinga (*op. cit.*, p. 32), a study by Chou Ling, the valuable observations of Andre d'Hormon, and Herbert A. Giles' *Chinese-English Dictionary*, 2nd ed. (London, 1912), pp. 510-511 (*hsi*), 1250 (*choua*), 1413 (*teou*), 1452 (*wan*), 1487-1488 (*tou*), 1662-1663 (*yeou*).

19. For example, here are the recommendations of Mithuna in a randomly chosen issue of a woman's weekly [*La Mode du Jour*, Jan. 5, 1956, translated by M.B.].

"When I advise you (with all reasonable precautions) to favor, if possible, one number over another, I do not merely speak of the last digit, as is customary . . . I also mean the number reduced to its parts. For example 66,410 reduced to its parts becomes

$$6 + 6 + 4 + 1 = 17 = 1 + 7 = 8$$

Although it does not contain an 8, this number can be picked by those whom I indicate are favored by the 8. You have to reduce a number to its parts, except for 10 and 11, to which the procedure does not apply. And now I don't say "Good Luck" to you. But if (by chance) you win, be kind enough to let me know the good news by telling me your birth date. Sincere good wishes . . ."

Notice the precautions taken by the signer of the article. Moreover, given the variety of procedures, the large number of clients, and the small number of digits, she is assured of a substantial percentage of winners, which will be remembered by her following.

In this area, the highest success was reached by the regular horoscope of the weekly, *Intimité (du foyer)*. Like the others, it advises the natives of each decan for the current week. Then, since this periodical is intended for the country, where the mail or news vender may be late, the horoscopes and numbers are not dated.

20. Henri Piéron, "Les instincts nuisibles à l'espèce devant les théories transformistes," *Scientia*, Vol. IX (1911), 199-203.

21. William M. Wheeler, *Social Life among the Insects* (New York: Harcourt, Brace and Co., 1923), pp. 344-345.

"That the trichomal gland secretions may not only attract but in exceptional cases even narcotize the ant that imbibes them, is shown by Jacobson's important observations on *Ptilocerus ochraceus*, a peculiar Javanese bug which possesses a gland with golden trichomes in the midventral line of the second abdominal segment (see G. W. Kirkaldy, 'Some Remarks on the Reduviid Subfamily Holoptilinae, and on the Species *Ptilocerus ochraceus* Montandon,' *Tijdschr. Ent.*, 54 (1911), 170-174, 1 pl., and E. Jacobson, 'Biological Notes on the Hemipteron *Ptilocerus ochraceus*,' *ibid.*, 175-179). Jacobson found this insect frequenting the trails of a common East Indian ant, *Dolichoderus bituberculatus*, on the rafters of houses, and describes the behavior of both insects:

"The way in which the bugs proceed to entice the ants is as follows. They take up a position in an ant-path, or ants find out the abodes of the bugs and, attracted by their secretions, visit them in great numbers. On the approach of an ant of the species *Dolichoderus bituberculatus* the bug is at once on the alert; it raises halfway the front of the body, so as to put the trichome in evidence. As far as my observations go the bugs only show a liking for *Dolichoderus bituberculatus*; several other species of ants, e.g. *Crematogaster difformis* Smith and others, which were brought together with them, were not accepted; on the contrary, on the approach of such a stranger, the bug inclined its body forwards, pressing down its head—the reverse therefore of the inviting attitude taken up towards *Dolichoderus bituberculatus*. In meeting the latter the bug lifts up its front legs, folding them in such a manner that the tarsi nearly meet below the head. The ant at once proceeds to lick the trichome, pulling all the while with its mandibles at the tuft of hairs, as if milking the creature, and by this manipulation the body of the bug is continually moved up and down. At this stage of the proceedings the bug does not yet attack the ant; it only takes the head and thorax

of its victim between its front legs, as if to make sure of it; very often the point of the bug's beak is put behind the ant's head, where this is joined to the body, without, however, doing any injury to the ant. It is surprising to see how the bug can restrain its murderous intention, as if it were aware that the right moment had not yet arrived.

"After the ant has indulged in licking the tuft of hair for some minutes the exudation commences to exercise its paralyzing effect. That this is brought about solely by the substance which the ants extract from the trichome, and not by some thrust from the bug, is proved by the fact that a great number of ants, after having for some time licked the secretion from the trichome, leave the bug to retire to some distance. But very soon they are overtaken by the paralysis, even if they have not been touched at all by the bug's proboscis. In this way many more ants are destroyed than actually serve as food to the bugs, and one must wonder at the great profitability of the ants, which enables them to stand such a heavy draft on the population of one community. As soon as the ant shows signs of paralysis by curling itself up and drawing in its legs, the bug at once seizes it with its front legs, and very soon it is pierced and sucked dry. The chitinized parts of the ant's body seem to be too hard for the bug to penetrate, and it therefore attacks the joints of the armor. The neck, the different sutures on the thorax, and especially the base of the antennae are chosen as points of attack. Nymphs and adults of the bug act in exactly the same manner to lure the ants to their destruction, after having rendered them helpless by treating them to a tempting delicacy."

"These interesting observations by a very competent naturalist are important in connection with the probable significance of the trichomes in some other ant-guests and predators, and especially in connection with Wasmann's lucubrations in regard to *Lochemusa*. To assume that *D. tuberculatus* has acquired through 'natural selection' a peculiar *Ptilocerus*-licking instinct would be absurd. We are obviously confronted with a flagrant example of appetite perversion."

22. This thesis is most prevalent and popular, reinforcing popular belief. It is even in the mind of a writer as little experienced in this domain as Jean Giraudoux. He improvises an imaginary account, fantastic in detail but, as a total, significant. According to him, men "imitate in play the physical—and sometimes even mental—activities which modern life has compelled them to give up." Aided by the imagination, everything can now be easily explained:

"The runner, while being pursued by his rival, is pursuing game

or an enemy in his imagination. The gymnast climbs the ropes to gather prehistoric fruits. The fencer is in conflict with Guise or Cyrano, as is the javelin-thrower with the Medes and the Persians. The child playing tag is at the lair of the dinosaur. The hockey player is polishing mosaics and the poker player uses the last reserves of sorcery vested in people in order to hypnotize and influence. Play is a witness to all dead occupations. It is the story in pantomime of primeval times; and sports, which mimics eras of suffering and struggle, is therefore specially chosen to preserve the body's original health and powers." [Jean Giraudoux, *Sans Pouvoirs* (Monaco, 1946), pp. 112-113. Translated by M.B.]

23. Needless to say, these opposing attitudes are rarely pure. Champions protect themselves with fetishes (nevertheless trusting no less in their own muscles, skill, or intelligence) and players engage, before betting, in shrewd though almost always vain calculations (but they suspect without having read Poincaré or Borel that chance has neither heart nor memory). Man cannot be wholly devoted to *agôn* or *alea*. In choosing one, he also agrees that the other is its surreptitious counterpart.

24. Y. Hirn, *Les jeux d'enfants* (French translation; Paris, 1926), pp. 165-174.

25. [It is felt that in American usage Caillois' term "*sociétés à tohu bohu*" can be more idiomatically rendered as "Dionysian" societies (cf. Spengler, Mead, *et al.*), and "*sociétés à comptabilité*" as "rational" in the Weberian sense. M.B.]

26. For the description of shamanism I have utilized the work by Mircea Eliade, *Le Chamanisme et les Techniques archaïques de l'Extase* (Paris, 1951), in which may be found a notably comprehensive survey of the phenomenon in various parts of the world.

27. On the effects of *Agaricus muscarius*, macropsy in particular: "His pupils dilated, the subject sees all objects before him as monstrously enlarged. . . . A little hole seems to him a terrifying abyss and a spoonful of water is like a lake." Cf. L. Lewin, *Les Paradis artificiels* (French translation; Paris, 1928), pp. 150-155. On the parallel effects of peyote and its use in the festivals and cults of the Huichol, Cora, Tepehuane, and Tarahumare of Mexico and the United States, the classic descriptions of Carl Lumholtz (1851-1922) (cf. bibliography of A. Rouhier, *Le Peyotl*, Paris, 1927) are very informative.

28. C. G. and B. Seligmann, *The Veddas* (Cambridge, 1911), p. 135, cited by T. K. Oesterreich, *Les Possédés* (French translation; Paris, 1927), p. 310. This latter work contains a remarkable collection of original descriptions of combined states of *mimicry-ilinx*.