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3 Conceptual Review of Play

3.1 Definition of Play

LUDI adopted the definition of play proposed by Garvey (1990), as it has been considered the most representative one for the purposes of the project: “Play is a range of voluntary, intrinsically motivated activities normally associated with recreational pleasure and enjoyment”. This definition shows interesting features: it can include all kinds of activities performed with ludic intention and takes into consideration three important and typical dimensions of the infant play: pleasure, self-direction, and intrinsic drive. On the contrary, all the activities made in ludic contexts and/or in a ludic mood, with ludic tools (toys, games, etc.), but driven by an extrinsic goal (i.e., educational, rehabilitative) are defined as ‘play-like’ activities, and are not the core of the LUDI research activity.

The International Classification of Functioning, Disability and Health – Children and Youth Version (ICF-CY, WHO, 2007) includes play – that is not considered in the version for adult – thus underlying the great importance it has in childhood. Defined as a component of the domain ‘Activities and Participation’, play is placed both in Chapter 1 ‘Learning and applying knowledge’ and in Chapter 8 ‘Major life areas’. In the first case, play is seen as an engine for the child’s development, in particular, for learning: in the item ‘Learning through actions with objects’ (d131), the ICF-CY includes learning through actions with single, two or more objects, and also through symbolic play (actions relating objects, toys, or materials symbolically) as well as pretend play (actions involving pretence, substituting an object, body part, or body movement to enact a situation or event). In the second case, play is interpreted as ‘Engagement in play’ (d880), that is “Purposeful, sustained engagement in activities with objects, toys, materials or games, occupying oneself or with other” (2007:184). This second definition is more adherent to the aims of our project and is then inserted as a further definition of play adopted by LUDI. The item ‘Engagement in play’ is subdivided into: play (d8800), onlooker play (d8801), parallel play (d8802), shared cooperative play (8803); these categories will be better illustrated in the following paragraph. In relation to the objectives of LUDI, it is worth mentioning the fact that play is also treated within the domain of Environmental Factors in Chapter 1, ‘Product and technology’: in fact, this chapter considers the following items: ‘Equipment, products and technologies used in structured or unstructured play by an individual or group’ (2007:192) and ‘Products and technology used for play’ (d1152). Both adapted and non-adapted toys, or specially designed technologies to assist play can be described.

3.2 Classifications of Types of Play

The definition of play that LUDI adopted underlined the fundamental characteristics that were reported in Chapter 1. Taking those key characteristics for granted to define an activity as ‘play’, children’s play could be performed and described at different levels of cognitive complexity or of social engagement, independently from some kinds of impairment.

Both pedagogy and psychology have a long tradition in the study of play, and have developed many classifications of play, that can be clustered around two main dimensions: the first concerns the cognitive complexity implied by the different types of play and the second concerns the degree and type of social interaction in which the child is involved while playing. In some cases, these classifications described the different types also as developmental stages, and related them to the general cognitive and/or social child development; in other cases, these types could be considered as coexisting and overlapping, at least partially.

Piaget’s original cognitive classification of play was organised in stages characterised by growing complexity, and it has been partly changed by other scholars who developed substages – or subtypes – to better catch different qualities of play, or inserted new stages or types to include the interactional dimension (Rubin et al., 1976; Santrock, 2006; Smilansky, 1945; Stagnitti & Unsworth, 2000, 2009; Takata, 1974). The social classification of play has been originally proposed by Parten in the early 1930s, and it still remains the main reference in this area of studies. This classification was organised in stages of growing complexity as well. Garvey’s proposal differed from the others, as the author did not adopt the dimensions, cognitive or social, but chose to single out and describe broad types of play behaviours; furthermore, they were not hierarchically organised. A further group of classifications of play strictly relates to the type of toys used while playing (ESAR System, 2002; Kudrowitz & Wallace, 2009; U.S. Consumer Product Safety Commission). Table 3.1 summarises the types of play described in the considered classifications, the principal developmental dimension that describes them, and whether they are hierarchically organised.

In what follows, some more information about the definitions of the types of play according to the various authors are reported.

a. Piaget (1945) – the following categories are hierarchically ordered:

- Practice play: listening, visual, and tactile experimentation of objects, sounds, words, expressions.
- Symbolic play: pretend play; make-believe activities (symbolic use of objects as they were something else); use of absent objects.
 - Play with rules: games with a specific code and rules accepted and followed by the players.

Table 3.1. Classification of types of play

	Author(s)	Year	Dimension	Stages	Types
a	Piaget	1945	Cognitive	Yes	Practice play; Symbolic play; Play with rules
b	Smilansky	1968	Cognitive	Yes	Functional play; Constructive play; Symbolic play; Games with rules
c	Takata	1974	Cognitive	Yes	Sensorimotor play; Symbolic and simple constructive play; Dramatic and complex constructive play; Games with rules; Recreational and competitive play
d	Rubin et al.	1976 1983	Cognitive	Yes	Sensorimotor play; Simulation; Simulation with objects; Simulation with substitution; Sociodramatic; Role-playing; Games with rules
e	Garvey	1990	Behavioural	No	Play with motion and interaction; Play with objects; Play with language; Play with social materials
f	Santrock	2006	Cognitive and social	Yes	Sensorimotor play; Pretend/Symbolic play; Social play; Constructive play
g	Stagnitti & Unsworth	2000 2009	Cognitive (only pretend play)	Yes	Symbolic play; Sociodramatic play; Role play; Fantastic play
h	Garon et al. (ESAR)	1982 2002	Cognitive	Yes	Exercise play; Symbolic play; Assembly (=construction); Games with rules
i	U.S. National Institute of Play	N.A.	Cognitive and social	Yes	Attunement play; Body play; Object play; Social play; Imaginative and pretend play; Storytelling play; Creative play
j	Parten & Mildred	1932	Social	Yes	Solitary play; Parallel play; Associative play; Cooperative play
k	ICF-CY	2007	Social	N.A.	Solitary play; Onlooker play; Parallel play; Shared cooperative play
l	Smith	2002	Cognitive	Yes, within each stage	Early exploratory/Practice Play; Construction Play; Pretend & Role Play; Game & Activity Play; Sport & Recreational Play; Media Play; Educational & Academic Play
m	Kudrowitz & Wallace	2009	Toys	N.A.	Construction; Fantasy; Sensory; Challenge
n	Goodson & Bronson	1997	Toys	N.A.	Active Play; Manipulative Play; Make-believe Play; Creative Play; Learning Play

b. Smilansky (1968) developed Piaget's categories and splitted the first play stage into two ones.

- Functional play: simple body movements or actions with objects.
- Constructive play: doing something with objects (i.e., building a tower of small cubes).
- Symbolic play (Piaget's examples).

c. Games with rules (Piaget's examples). Takata (1974), based on a review of literature, proposed an age-based classification of play:

- Sensorimotor play (0-2 years).
- Symbolic and simple constructive play (2-4 years).
- Dramatic and complex constructive play (4-7 years).
- Games with rules (7-12 years).
- Recreational and competitive play (12-16 years).

d. Rubin et al. (1976, 1983) developed Piaget's symbolic stage into five stages with growing complexity:

- Sensorimotor play: it is similar to Piaget's practice play.
- Simulation of actions by the child; in this stage, only the body is involved.
- Simulation with objects (with dolls or other toys).
- Simulation with substitution, in which the objects become other than what they are.
- Sociodramatic play, where children act out roles in life scenes.
- Role-playing, in which the child takes the next step of assigning roles to others and planning scenes.
- Games with rules (Piaget's definition).

e. Garvey's proposal (1990) describes broad types of play behaviours:

- Play with motion and interaction: it reflects exuberance; running, jumping, skipping, shrieking, and laughing are expressions of this type of play.
- Play with objects: children can explore objects with their senses, can manipulate them, practice and use the objects as they are meant to, and repeat these behaviours several times.
- Play with language can be expressed in four different forms: play with sounds and noises; play with linguistic systems, such as those involving word meanings or grammatical constructions; play with rhymes and words; play with the conventions of speech.
- Play with social materials: this type of play is centred on the social world and consists in make-believe and pretending.

f. Santrock (2006) reclaimed Piaget's classification and added social and constructive play:

- Sensorimotor play: exploratory and playful visual and motor transactions; exploration of objects and their functioning; exploring causes and effects.

- Pretend/symbolic play: transforming objects, substituting them for other objects, and acting towards them as if they were these other objects.
- Social play: play that involves interactions with peers.
- Constructive play: combines sensorimotor/practice repetitive play with symbolic representation of ideas: children engage in self-regulated creation or construction of a product or a problem solution.

g. Stagnitti and Unsworth (2000, 2009) proposed four types of play:

- Symbolic play: children playing ‘as if’ and using an imaginary approach to play.
- Sociodramatic play.
- Role play.
- Fantastic play.

h. The ESAR system has been proposed by Garon et al. (2002) and is at the basis of the ‘Guide to Play and Toys’ developed by the Instituto Tecnológico del Juguete (AIJU) developed in Spain to classify toys; the acronym is related to the four categories of play identified by Smilansky:

- Exercise play: sensory and motor exercise play.
- Symbolic play: play that allows imitating objects, persons, or roles, which allows creating scenarios and representing reality through images or symbols.
- Assembly (= construction): play to gather, combine, arrange, and fit more elements to form a whole, and achieve a specific goal.
- Games with rules (Piaget’s definition).

i. The U.S. National Institute of Play classified patterns of play:

- Attunement play: joint attention interactions between infant and mother.
- Body play: exploratory body movements, rhythmic early speech (moving vocal cords), locomotor, and rotational activity.
- Object play: activities involving objects.
- Social play: activities carried out with parents, pets, peers.
- Imaginative and pretend play: make-believe activities.
- Storytelling play: activities related to listening and telling stories.
- Creative play: activities that give the possibility to access fantasy-play, to transcend the reality of our ordinary lives, and in the process, germinate new ideas and shape and re-shape them.

j. Parten (1932) was the first scholar to consider and describe different types of the infant play under its social aspect:

- Solitary play: the child plays alone and independently even if surrounded by other children.
- Parallel play: the child plays independently at the same activity, at the same time, and at the same place.

- Associative play: the child is still focused on a separate activity, but there is a considerable amount of sharing, lending, taking turns, and attending to the activities of one's peers.
- Cooperative play: children can organise their play and/or activity cooperatively with a common goal and are able to differentiate and assign roles.

k. The International Classification of Functioning, Disability and Health Children and Youth Version (2007) describes four categories of play in Activities and Participation in the item of Engagement of play (d880):

- Solitary play: occupying oneself in purposeful, sustained engagement in activities with objects, toys, materials, or games.
- Onlooker play: occupying oneself by purposeful observation of the activities of others with objects, toys, materials, or games, but not joining in their activities.
- Parallel play: engaging in purposeful, sustained activities with objects, toys, materials, or games in the presence of other persons also engaged in play, but not joining in their activities.
- Shared cooperative play: joining others in sustained engagement in activities with objects, toys, materials, or games with a shared goal or purpose.

l. Smith (2002) produced a study for the U.S. Consumer Product Safety Commission in which the following play stages are described:

- Early exploratory/practice play: includes all the first stages of the child's manipulative and exploratory play, such as mirrors, mobiles, pull and push toys.
- Construction play: play activities with blocks and interlocking building materials.
- Pretend and role play: all the activities that imply symbolic and/or narrative competence, such as dolls and stuffed toys, play scenes and puppets, dress-up materials, small vehicles, and so on.
- Game and activity play: toys belonging to this type can be puzzles, card, floor, board, and table games; computer and video games.
- Sport and recreational play: ride-on toys, recreational and sport equipment belong to this type of play.
- Media play: in this category, Smith includes arts and crafts, audio-visual equipment, musical instruments.
- Educational and academic play: books, learning toys, smart toys, and educational software.

As underlined before, there are also classifications based on toys. In many cases, these classifications do not belong to a scientific framework and have been developed through a bottom-up strategy, that is, by considering mainly the characteristics of use suggested by the toys themselves. Consequently, generally speaking, such classifications are difficult to compare with others. Furthermore, as different toys can be suggested for different age ranges, it is also difficult to identify whether these classifications refer to stages or not.

- m. Kudrowitz and Wallace (2009) proposed four features to describe the values of play and/or toys:
- Construction: this play is about creating and not simply creativity.
 - Fantasy: this play is about role-playing or it has a level of pretence.
 - Sensory: this play involves aesthetics and entertaining the senses.
 - Challenge: this can be physical or mental; physical challenges include both fine and gross motor skill development.
- n. Goodson and Bronson – U.S. Consumer Product Safety Commission – proposed another classification of toys (1997) from which Smith’s work was then developed:
- Active play: push and pull, ride-on toys; outdoor and gym, sports equipment.
 - Manipulative play: construction toys, pattern making, dressing, lacing, stringing, sand and water play toys.
 - Make-believe play: dolls, puppets, stuffed toys, place scenes, transportation toys.
 - Creative play: musical instruments, art and craft materials, audio-visual equipment.
 - Learning play: games, books, specific skill-development toys.

3.3 LUDI Classification of Types of Play

LUDI aims at proposing a classification of types of play to create a common language among practitioners and scholars, who daily work in the field of play of children with disabilities. A shared and nuanced understanding of play is important to better support the right to play. In fact, reasoning in terms of typologies of play could be crucial for several purposes: for instance, to better understand how to support, for the sake of play, a specific kind of play of children with their specific characteristics and abilities; or to design accessible toys that can allow activities at different play levels according to the children’s abilities. This will also be the classification used in the following chapters.

Starting from the analysis of the existing classifications, their contents and different types of play they include and describe, a new classification has been developed for LUDI according to two main scopes:

- It should be exhaustive; thus, including most of the types of play identified by scholars over the years.
- It should be consistent and effective, for the purposes of the project.

Furthermore, the LUDI Classification should maintain the two main clusters around which the types of play have been grouped, corresponding to the main dimensions the researchers decided to underline. The LUDI Classification – as it is possible to see in Table 3.2 – is strongly inspired for the cognitive dimension by the Piaget/Smilansky classifications, and for the social dimension by that of Parten.

Table 3.2. LUDI Classification of play

Dimension	Type of play
Cognitive	Practice Symbolic Constructive Play with rules (including video games)
Social	Solitary Parallel Associative Cooperative

Anyway, in the LUDI Classification, each type of play should be considered as a more comprehensive category than the types of play reported in the literature: in fact, each LUDI type of play includes types and definitions that other researchers have singled out. In Table 3.3, a first attempt is made to group these types around the LUDI types.

Table 3.3. Play theoretical references

Cognitive dimension	
Practice	Practice play (Piaget); Functional play (Smilansky); Sensorimotor play (Takata; Rubin et al.; Santrock); Play with motion and interaction, Play with objects (Garvey); Attunement play, Body play, Object play (U.S. Institute of Play); Exercise play (ESAR); Early exploratory/Practice Play (Smith)
Symbolic	Symbolic play (Piaget, Smilansky); Symbolic and simple constructive play, Dramatic and complex constructive play (Takata); Simulation, Simulation with objects, Simulation with substitution, Sociodramatic, Role-playing (Rubin et al.); Play with language, Play with social materials (Garvey); Pretend/symbolic play (Santrock); Symbolic play, Sociodramatic play, Role play, Fantastic play (Stagnitti); Symbolic play, Imaginative and pretend play (U.S. Institute of Play); Symbolic play (ESAR); Pretend and Role Play (Smith)
Constructive	Constructive play (Smilansky, Santrock); Symbolic and simple constructive play, Dramatic and complex constructive play (Takata); Object play (U.S. Institute of Play); Assembly play (ESAR); Construction play (Smith)
Games with rules	Play with rules (Piaget); Games with rules (Smilansky; Takata; Rubin et al.; ESAR); Game and Activity play (Smith)

The description of each type of play adopted in the LUDI Classification, for what concerns the cognitive dimension, has been built upon the definition from the literature reported earlier, and is better described in what follows.

a. Practice play – cognitive dimension

This type of play refers to two main aspects:

- simple body actions or experimentation of body (movements with hands, arms, legs, head and face, vocalisations, etc.);
- visual and tactile experimentation of objects (children can explore objects with their senses, can manipulate them, practice and use the objects as they are meant to). Moreover, children explore causes and effects (i.e., drop an object and listen to the sound it produces).

Typically, in this type of play, movements and experimentations are repeated several times. This type of play is typical in the first and second year of life.

b. Symbolic play – cognitive dimension

This type of play implies giving new signification to objects, persons, actions, or events: thus, children symbolically use objects as they were something else, produce pretend play, and make-believe activities.

There are several levels of symbolic play with growing complexity:

- simulation of actions by the child; in this stage, only the body is involved
- simulation with objects
- simulation with substitution, in which the objects become other than what they are
- use of absent objects

Role-playing or sociodramatic play is another type of symbolic play, where children act out roles in life scenes; they assign roles to others and plan scenes. It involves narrative competence.

The more simple expressions of this type of play typically emerge at the end of the second year of life.

c. Constructive play – cognitive dimension

This play consists in gathering, combining, arranging, and fitting more elements to form a whole, and achieve a specific goal. It usually involves blocks and interlocking building materials (i.e., building a tower of small cubes). In this type of play, the child combines sensorimotor/practice repetitive play with symbolic representation of ideas: children engage in self-regulated creation or construction of a product or a problem solution.

d. Rule play – cognitive dimension

This play consists of games with a specific code and rules accepted and followed by the players. This type of play is usually combined with the other three types: practice, symbolic, and constructive.

The four types of cognitive play emerged in specific period of the life of the typically developing children, as the cognitive abilities develop and become stable: practice play appears since the first weeks, because it basically involves sensory and motor competence and requires less complex cognitive abilities. Usually, symbolic play appears between 18

and 24 months, as the child's representative ability emerges. Constructive play appears in the second year as well, whereas first types of rule play emerge in the preschool age, from three years, when the child is able to manage easy rules.

Each type of cognitive play appears in a simplest 'version' during the childhood and develops and becomes more and more complex throughout lifetime. Early examples of symbolic play usually involve the child pretending to do something related to everyday routines: cooking and eating fake food, pretending to go sleeping, etc. During infancy, symbolic play becomes more and more complex: children engage in role-playing with peers, building very complex fantastic scenarios, with rules to be followed by all the participants (e.g., pretending to be at school with teachers and pupils or pretending to be fairies and wizards in a magical world).

The few examples reported here show that each kind of cognitive play is rarely played independently, but very often intertwines with other types of play. Thus, the symbolic play of pretending to be mom and dad with their kinds involves aspects of rule play because each child will follow the social rules related to his or her character (mom and dad will take care of the children and the house; the children will play and disobey to some rules, etc.); aspects of constructive play (putting together different elements in play); and aspects of practice play (the kids play with the ball during the session of symbolic play).

As it has been synthesised in Table 3.2, play can be categorised accordingly to the cognitive dimension or social dimension, the description of which has been strongly influenced by Parten's studies. The description that is proposed here is also derived from the ICF-CY. In what follows, the social dimensions of play are described.

a. Solitary – social dimension

Occupying oneself in purposeful, sustained engagement in activities with objects, toys, materials, or games. The child plays alone and independently even if surrounded by other children.

b. Parallel – social dimension

Engaging in purposeful, sustained activities with objects, toys, materials, or games in the presence of other persons also engaged in play, but not joining in their activities. The child plays independently at the same activity, at the same time, and at the same place.

c. Associative – social dimension

The child is still focused on a separate activity, but there is a considerable amount of sharing, lending, taking turns, and attending to the activities of one's peers.

d. Cooperative – social dimension

Joining others in sustained engagement in activities with objects, toys, materials, or games with a shared goal or purpose. Children can organise their play and/or activity cooperatively with a common goal and are able to differentiate and assign roles.

Each type of cognitive play can be played at a different social level: in solitary, parallel, associative, and cooperative way. For instance, practice play involves two persons in associative way in the case of the peek-a-boo game, or whenever children play clapping their hands together, crossing hands fast. Again, the child can play symbolically with dolls on his or her own (solitary), or he/she can play with other children, each child doing the same activities with the dolls but independently (parallel play), each child playing with his or her doll sharing the activities with the peers (associative play), or the children taking along cooperative activities with the doll (one child cleans the doll, while the other cooks some food for it).

Very often, the possibility to play with other persons allows the children to make the play more complex, from a cognitive perspective as well, because each player brings ideas and cues according to his or her ability, habits, and so on: this is the case of the child playing with peers, older children, or adults.

3.4 Type of Play: Areas of Development and Child's Abilities

Table 3.4 describes the children's area of psychological and physical development and the abilities that are necessary to display the types of play. For each play, the child needs to possess the main area of development and at least some of the abilities.

Table 3.4. Areas of development prevailingly involved by type of play

Type of play	Areas of development prevailingly involved	Abilities
Practice	Psychomotor	Experimentation Exploration
	Cognitive (in the first year of life) Cause/effect relationship Permanence of the object	Exercise Repetition Imitation
Symbolic	Sensorial	Observation Listening Touching Feeling (e.g., with mouth)
	Symbolic/representative Pretending (understand and use pretend and make-believe) Representation Drawing (from scribble to extensive drawings) Language (from wording to discourse)	Invention Imagination Interpretation (e.g., of roles) Imitation

continued **Table 3.4.** Areas of development prevailingly involved by type of play

Type of play	Areas of development prevailingly involved	Abilities
Construction	Fine and complex psychomotor	Gathering Assembling Combining Arranging Fitting Stringing Plugging Sticking Use of tools (hammer, screwdriver, spanner, and so on)
	Cognitive and meta-cognitive Goal-directed Planning Problem solving Spatial cognition Self-regulation	Invention Imagination Hypothesis making Self-monitoring, self-evaluation Identification and correction of errors
Rule	Cognitive and meta-cognitive Understanding and adhesion to conventions Understanding of and adhesion to rule systems Strategic thought	Competition Collaboration Team work (participation, organisation) Risk-taking
	Social and meta-social Becoming and being part of groups and systems (game teams, and so on) Understanding and interpreting the others' role	

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