

Attitudes to play, methods of study, and the influence of the play ethos



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Types – Differing views and the ‘play ethos’ – Animal play –
Children’s play: exercise play, rough-and-tumble play (play
fighting), object play, pretend and sociodramatic play –
3 models for functions of play – Evidence and Conclusions.

Children engage in exercise and rough-and-tumble play, object play, and pretend play



Differing views about play

Gaskins, Haight and Lancy (2005) describe 3 types of societies with differing attitudes to play:

‘culturally cultivated play’

[modern western societies]

‘culturally accepted play’

[hunter-gatherer/forager societies]

‘culturally curtailed play’

[farming/herding societies]

Theoretical views also vary

“Superfluous and useless exercise”
(H Spencer, 1898)

BUT

“Play is indeed the child’s work, and the means whereby he grows and develops. Active play can be looked upon as a sign of mental health; and its absence, either of some inborn defect, or of mental illness.” (Isaacs, 1929).

What young children do in different societies - Morelli, Rogoff, and Angelillo (2003)

Observed children aged 2 - 3 years in

- the Efe of the Democratic Republic of the Congo, a traditionally hunter-gatherer (foraging) people though now also doing some farming work;
- a Mayan agricultural town in San Pedro, Guatemala where people worked either at home (weaving, trading, carpentry) or as labourers or farmers;
- two middle class European American communities (in Massachusetts, and Utah) where parents had a lot of formal schooling, and a majority were employed away from home.

<i>Morelli et al.(2003):</i> % time, 2-3yrs	Efe (D R Congo)	Guatemala	Boston, USA	Utah, USA
Access to work	73	52	30	29
Observing work	26	19	13	12
Emulation of work in play	12	15	4	3
Involved in lesson	0.6	0.4	4	3
In play with adult	4	3	17	16
In scholastic play with adult	0	0	4	5
Conversation with adult on child-related topic	1	2	17	12

- **Efe and Guatemala** children had much more *access to*, and *opportunity to observe, adult work activities*
- they were three to five times more often in *emulation of work in play*, imitative of adult work activities (for example playing store, pretending to cut firewood, making tortillas out of dirt, pretending to shoot animals with a bow and arrow, comforting a doll).
- **U.S. children** were seen four to five times more often in *play with an adult*
- they were also seen sometimes in *scholastic play* (literacy or numeracy related activity for fun, such as singing alphabet songs, reading a story); and some ten times more often in *conversations with adults on child-related topics* (e.g. “did you have a nice time playing on the swings?") - forms of ‘**parental investment**’

How important are these kinds of play for learning and development?

One view is expressed in the 'play ethos'.

The 'play ethos' is an uncritical and extreme assertion of the importance of play in development.

Smith (1988, 2010) argued that this has influenced much parental behaviour, but also distorted much play research through the 20th century.

Examples of the ‘play ethos’:

“Play is the very essence of life and the only means whereby the infant can learn anything. It remains the chief means of learning well into school years, certainly until reading has been completely mastered.” (Tudor-Hart, 1955).

“The realisation that play is essential for normal development has slowly but surely permeated our cultural heritage” (Department of Environment Report, UK, 1973).

“Play=Learning”

(Singer, Golinkoff & Hirsh-Pasek, 2006)

“Play is essential for optimal development”

(Hewes, 2007)

“Play is essential to the social, emotional, cognitive, and physical well-being of children”

(American Academy of Pediatrics, 2017)

... but is challenged

One view is that such statements are

“... completely unjustified by either the experimental literature in child development or, especially, the ethnographic literature” (Lancy, 2007).

Different parental ethnotheories:

“the current US emphasis on the importance of play is far from universal” ... “Euro-American parents were found to believe that play is an important vehicle for early development, while the Asian parents saw little developmental value in it” (Parmer et al., 2004)

What is the evidence?

(1) animal play and evolutionary arguments

(2) children's play –
anthropological studies
correlational studies
experimental studies

Play is common in some birds and most/all mammals.

Mostly exercise play, play fighting; some object play.



Pretend play is not obviously seen in non-human species, with exception of the great apes

- *Chimpanzees*

 - Morris – (at London Zoo) imaginary injection

 - Heyes - *Vicky* imaginary pull toy

 - Kahlenberg & Wrangham – wild chimps
‘mother’ sticks

- *Bonobos*

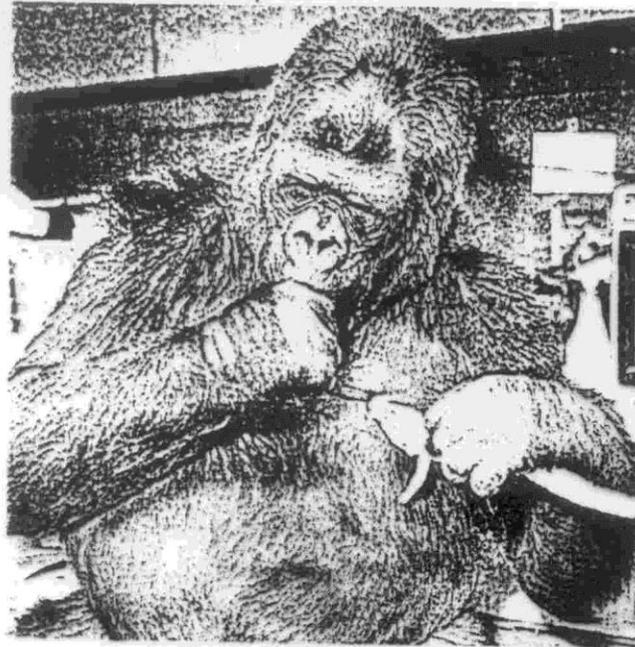
 - Savage-Rumbaugh - *Kanzi* imaginary food

- *Gorillas*

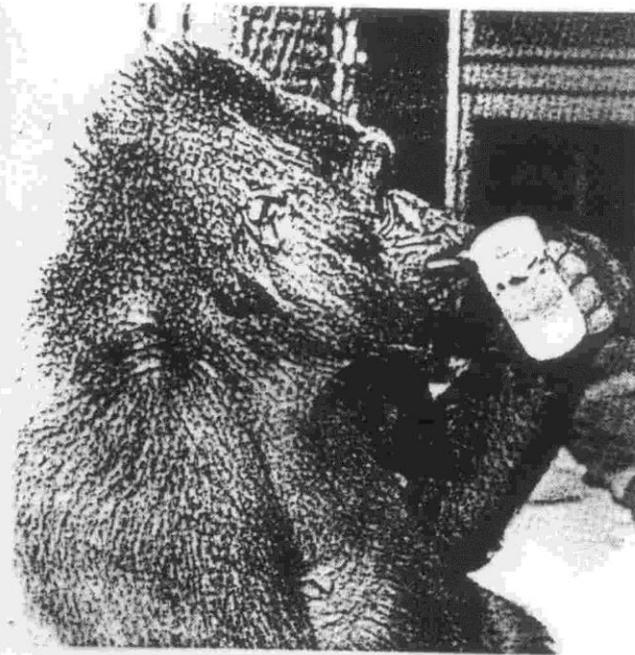
 - Patterson – *Koko* signs and pretend actions, e.g. ‘drink’

Gorillas

Koko pretends to suckle and to drink



(a)



(b)

Figure 9.9 Apes reared in human environments, especially if they have been taught some sign language, often give better evidence of pretence. (a) The gorilla, Koko, signs 'drink' as she puts a toy alligator to nurse at her breast. (b) As she drinks from an empty cup, she makes exaggerated, loud sipping noises. (Photos by F. G. Patterson and R. H. Cohn.)

Biological background to social play

- PLAY as one of 7 primary emotional networks (Panksepp, 2016)
- Experimental studies of chimpanzees (and rats) show that social play is as strong a motivator as tasty food (Vanderschuren, 2010)
- Research on neurotransmitters and brain areas involved.

Evolutionary arguments: Play has COSTS therefore BENEFITS

COSTS:

Time spent (when you could be doing other things)

Energy spent (compared to base level, resting)

Injury risk (e.g. young ibex falls on steep slopes)

Lack of vigilance (e.g. of predators)

(e.g. young fur seals can be caught and killed by Southern sea lions, a larger species. Harcourt (1991) observed 26 pups being caught; 22 were playing at the time, although play took up only 6% of the pup's time budget).

➤ If there are costs to play and if play is a regular, species-typical activity, then there should be outweighing benefits (else, play would not have evolved)

Main likely benefits of (non-human) play

BENEFITS

- Exercise play: neural & muscle development (Byers, 1998)
 - Play fighting: fighting and hunting skills; social affiliation; regulation of emotions (Pellis & Pellis, 2017)
 - Object play: develop skills in tool use (Pellegrini, 2005)
-
- *Immediate* benefits [e.g. social affiliation, current fitness]
 - *Deferred* benefits [long-term skill acquisition for adulthood; long-term stamina]

Are there benefits to children of playing?

Evolutionary arguments suggest that the propensity to play has been selected for, so we can expect benefits to playing, which may vary by type of play.

Besides direct effects, there may also be ‘incidental’ benefits to play: it keeps children active and encountering new situations.

Benefits may vary by type of society

Hunter-gatherer societies interesting as they are thought to be clearest indication of kind of environment that hominids evolved in (‘environment of evolutionary adaptedness’).

“Play permeates hunter-gatherer child daily life, but its role in social learning is poorly understood” (Hewlett et al., 2011).

In modern societies, there is a balance to draw between benefits of playing, and of instruction.

LOOK AT 4 TYPES OF PLAY

- Exercise play
- Rough-and-tumble play
- Object play
- Pretend and sociodramatic play

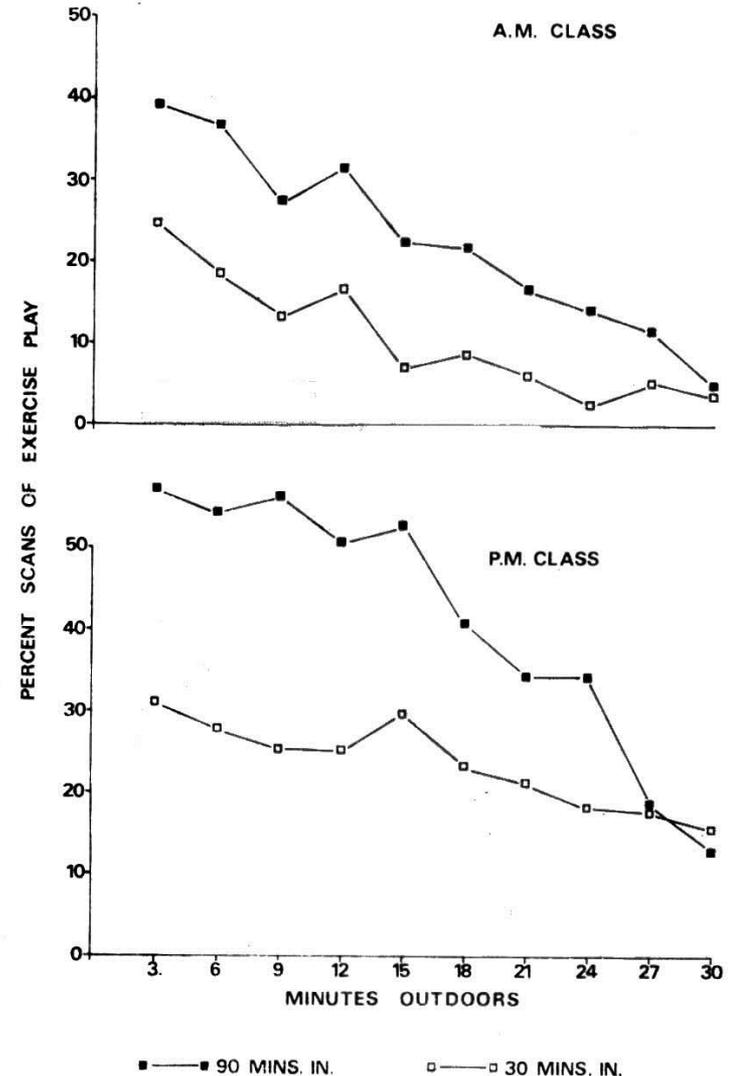
EXERCISE PLAY

- Playful activity which involves large body activity.
- Increases through preschool, peaks at early primary school, then declines.
- Boys do more than girls.



Opportunities for exercise –more exercise play after ‘deprivation’

After release from indoors to outdoors, a lot of exercise play; especially after longer (e.g. 90 cf. 30 mins) ‘deprivation’:
3-4 yr olds (Smith & Hagan, 1980);
5-9 yr olds (Pellegrini & Davis, 1993)



Exercise play – functions (1)

- ❖ Hypothesised to support physical training of muscles, for strength and endurance, and skill and economy of movement
- ❖ General evidence for beneficial effects of exercise – but this can be via play, or via organised activities.



Exercise play – functions (2)

❖ Another hypothesis is that exercise play encourages younger children to take breaks from being overloaded on cognitive tasks: ‘cognitive immaturity hypothesis’ (Bjorklund & Green, 1992)



- ❖ More concentration at work after exercise breaks – but limited evidence (Howie et al., 2014, 2015 – 10 min break optimal? Schmidt et al. 2016 - interacts with cognitive challenge)
- ❖ Practical importance for school breaks – but unlikely as an evolutionary adaptation?

Attitudes to (risky) exercise play

Brussoni et al. (2015) reviewed 21 studies of ‘risky outdoor play’ (heights, speed, lack of supervision) and outcomes (physical activity and skills, injuries, social competence):

“Parental and societal attitudes placing ever-increasing emphasis on supervision and child injury prevention have influenced ... opportunities to engage in risky outdoor play” ... “these strategies can have unintended adverse consequences on children’s health”.

“The overall positive health effects of increased risky outdoor play provide greater benefit than the health effects associated with avoiding risky outdoor play”.

Rough-and-tumble play



Play fighting and play chasing:

Increases through preschool and primary school, to peaks at late primary and then declines.

Boys do more than girls (especially play fighting).

Rough-and-tumble is often between friends.

Play fighting different from real fighting

Criteria such as:
facial expression
restraint
role-reversal
how encounter starts
and finishes.



Functions of rough-and-tumble play

Rough-and-tumble play in younger children may

- have benefits of exercise play
- practice fighting skills
- help in control of emotions
- strengthen friendships

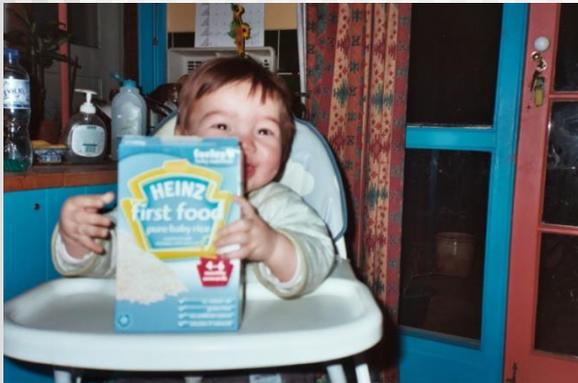
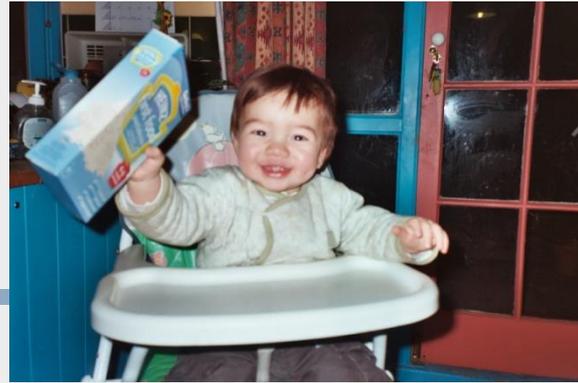
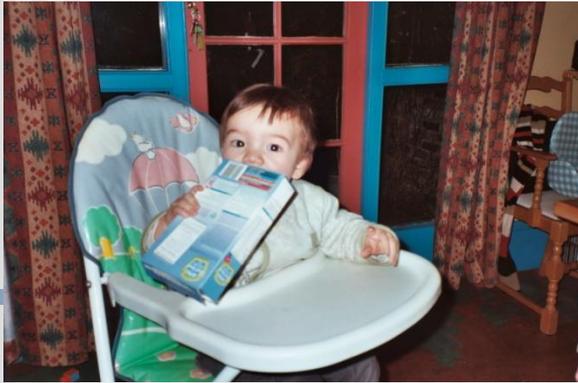
-but by 12+ years it becomes ‘rougher’, and adolescents may use rough-and-tumble play to establish or maintain dominance (Pellegrini & Smith, 1998).

Attitudes to rough-and-tumble play

Attitudes to this kind of play can be negative. A study in Norway found that teachers of 3-5 year olds restricted chase games most indoors, but pretend (play) fighting most outdoors.

“A possible interpretation ... is that R&T characterised by vigorous and physical contact between players without an obvious dimension of social drama play ... is more difficult for preschool teachers to perceive as valuable play”. (Storli & Sandseter, 2015)

During the primary school years, many teachers and lunchtime supervisors think many (average 30%) of rough-and-tumble episodes turn into real fighting, although only about 1% actually do so (Schafer & Smith, 1996)



OBJECT PLAY

Sensorimotor
play (10
months)

Construction
play
(2 years)

OBJECT PLAY and skill development in traditional societies

Bock (2002) studied play pounding, in Botswana. Age trends suggest that it can help in skill learning, but is only tolerated by parents until actual productive work is possible.



~~PESTLES~~. Make-believe grinding with mortar and pestle.

Object play and creativity in modern societies

Bruner (1972) – role of object play in creative problem-solving.

Pellegrini (2013) and

Pellegrini & Pellegrini (2013)

argue that object play may

be ‘related to children’s

discovery of novel uses for

objects’, and related social status benefits (similar

arguments from Neilsen, 2012; Bateson & Martin, 2013).



Object play: evidence

Hunter-gatherer societies - Hewlett (2013) commented
“Pellegrini and Pellegrini identify three general functions: (1) learning future skills, (2) learning skills for current survival and adaptation, and (3) a source of innovation to adapt to novel environments. The limited hunter-gatherer literature provides strong support for the first, some support for the second, and no support for the third”.

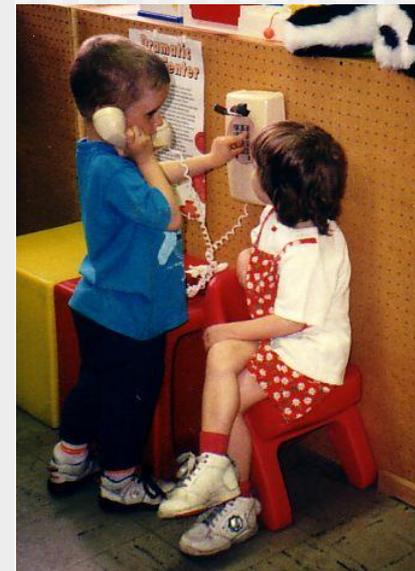
In modern societies, experimental studies were initially supportive of link to creativity, but findings later shown to be subject to experimenter effects and poor controls; lacking ecological validity.

PRETEND PLAY: defining features

Lillard (1994): pretence involves 6 defining features:

- a *pretender*,
- a *reality*,
- and a *mental representation*
- that is *projected onto reality*,
- with *awareness*
- and *intention* on the part of that pretender.

A ‘tough’ definition – with precursors in great apes, and prelinguistic infants.



One form of pretend play -Imaginary companions



One form of pretend play -Imaginary companions



Sociodramatic play

- with real companions!

Smilansky - social play with definite roles for the players,
from around 3 years

Play tutoring by adult can raise level of sociodramatic play



Sociodramatic play places heavy cognitive, linguistic, and social demands on children.

Pretend play a universal human feature?

In hunter-gatherer societies, object play is often pretend – . Konner (1972): Kalahari San, children use sticks and pebbles to represent village huts and herding cows. Blurton Jones (1973): Hadza children make dolls out of rags. Gosso et al. (2005) “*children of all forager groups studied exhibit fantasy play*”.

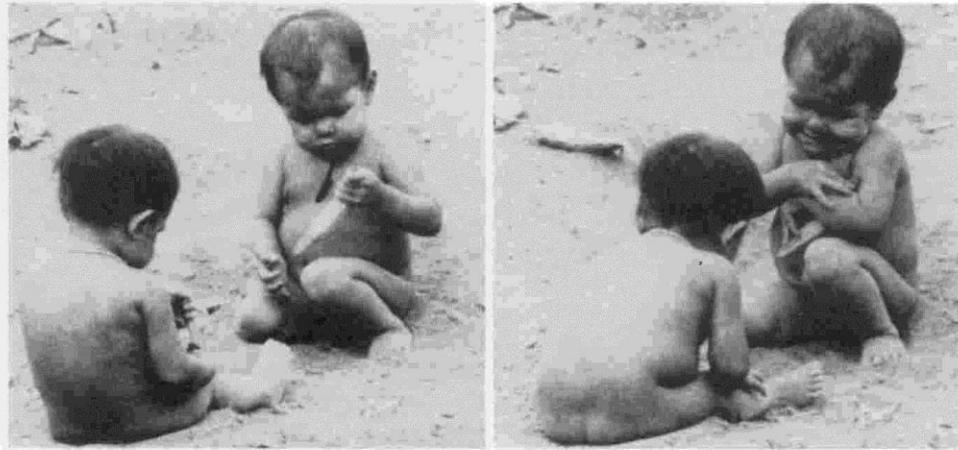


FIGURE 7.20. (a) and (b): Although still a baby herself, a 2-year-old Yanomami girl, cuddles a banana as if it were a baby infant. Photo: I. Eibl-Eibesfeldt.

Non-western societies

Schwartzmann (1978), Slaughter & Dombrowski (1989) - some 40+ articles, all mention pretend play, though variations in amount and type.

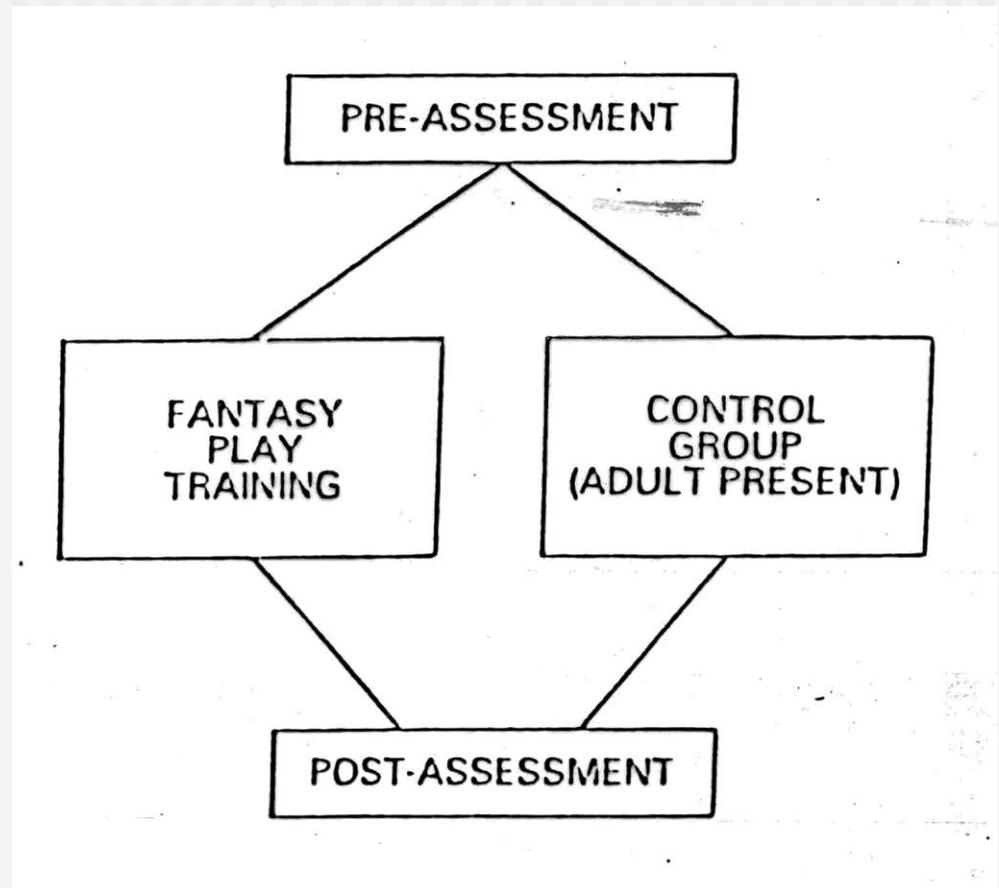
"The stable timing of its onset in different cultures strongly suggests a neuropsychological timetable and a biological basis" (Harris, 1994)

So what might be the functional significance of pretend play? Many suggestions!

- Smilansky: cognitive and language development, role-taking, creativity
- Alexander: anticipate and manipulate cause-effect relations in social cooperation and competition
- Mitchell: imaginative planning, or apprenticing
- Harris: imagination – transcend directly encountered experience
- Carruthers: creativity in adulthood
- Christie: narrative skills
- Perner: theory of mind
- Peller: mastery of traumatic events
- Carlson: executive function

Play tutoring studies

Many of these ideas tested by experimental studies, including 'play tutoring' studies. *The results appeared to support all these functions of play.*



BUT the play ethos probably influenced many of these reports in 1980s, 1990s

Smith (1988, 2010) – many earlier studies were flawed due to:

✓ *selective interpretation of results*

[highlight favourable results, even if marginal significance]

✓ *effects of experimenter bias*

[no blind testing or scoring]

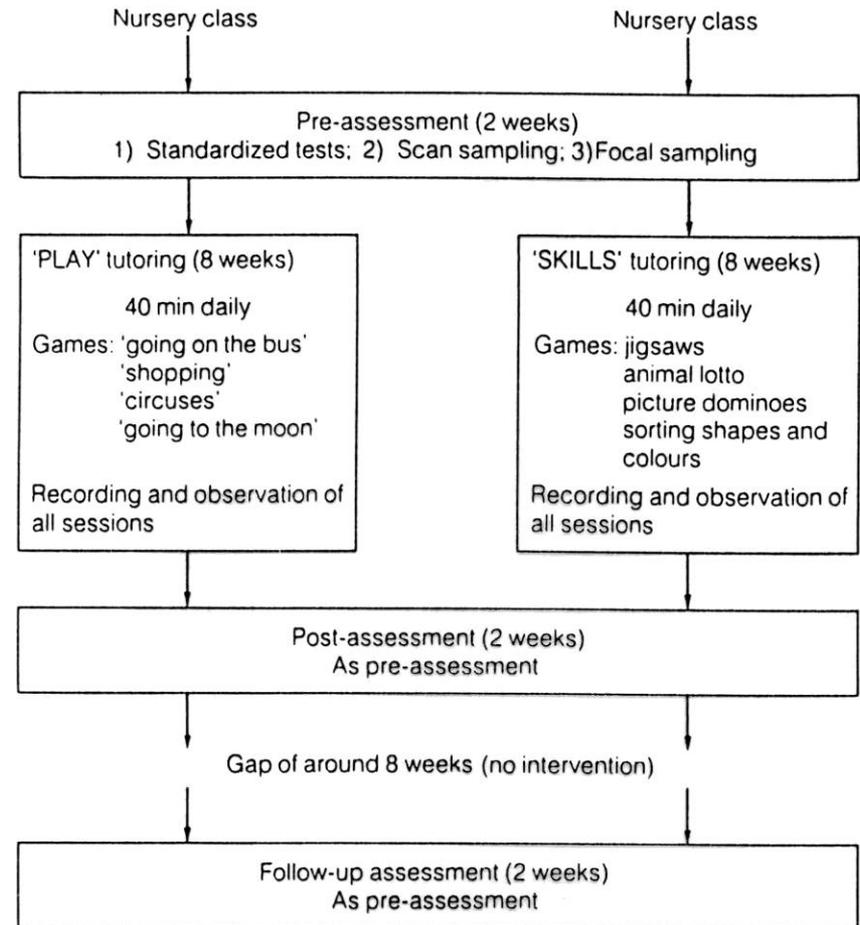
✓ *use of inappropriate control groups*

[less adult involvement in control group]

Later studies gave different results:

Smith (1978, 1988),
Christie & Johnson (1985):
**better controls – no
difference between play
tutoring and skills
tutoring.**

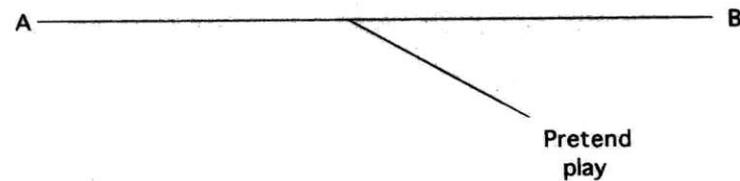
*“We would seriously
question the importance
placed upon fantasy play as
an aid to cognitive
development”* (Hutt et al.,
1989)



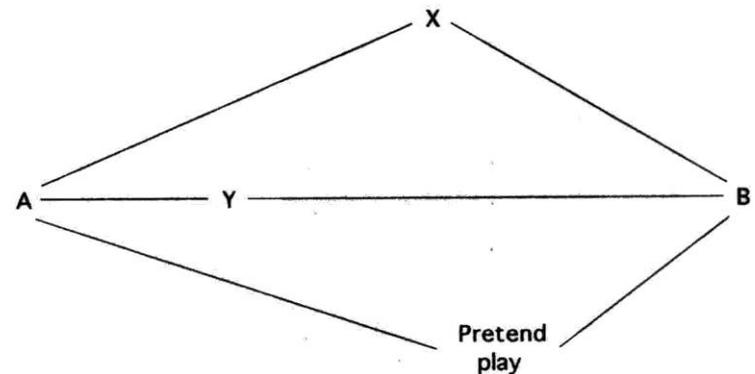
Models of role of (pretend) play in development (Smith, 2005, 2010)



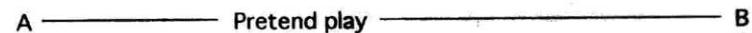
(a) pretend play as by-product



(b) pretend play as one facilitator



(c) pretend play as essential



Many correlational and some experimental studies – how do they support the 3 models? (Smith, 2005, 2010)

	CORRELATIONAL EVIDENCE (correlations of pretend play measures with other developmental skills)	EXPERIMENTAL EVIDENCE (comparing developmental outcomes for groups with enhanced or deprived pretend play experiences & control groups)
MODEL 1 [no important function] [epiphenomenal]	Any correlations would be around zero, once age or general IQ or language ability is partialled out	No differences expected between groups if other experiences are equated
MODEL 2 [one of many ways] [equifinality]	Correlations would be positive, but very variable in size depending on other circumstances.	Any differences for pretend play groups would be very dependent on what the control group experiences are
MODEL 3 [essential for development]	Correlations would be consistently positive and of appreciable magnitude	Consistent differences favouring enhanced pretend play groups (or disadvantaging deprived play groups)

Lillard et al.

(Psychological Bulletin, 2013)

Contrasted 3 similar models: pretend play as essential, equifinality, or epiphenomenal.

Language, narrative, emotion regulation – insufficient evidence;
Executive function, social skills – evidence supports ‘equifinality’ or ‘epiphenomenal’;

Reasoning – ‘equifinality’ supported;

Problem solving, creativity, intelligence, conservation, theory of mind – ‘epiphenomenal’ supported.

“Despite over 40 years of research examining how pretend play might help development, there is little evidence that it has a crucial role; equifinality and epiphenomenalism have as much if not more support”.

A paradox?

Exercise and R&T play –
most evidence for function, but least
favourable attitudes?

Pretend and sociodramatic play –
least evidence for function, but most
favourable attitudes?

Summary: (1) play as useful ...

- Evolutionary basis, benefits to balance costs
- Playful activity will give more opportunities to learn than doing nothing
- Some design characteristics of play compatible with various learning opportunities
- Positive correlations of play opportunities with developmental outcomes

Summary: (2) ... but not essential?

- Amounts of play, especially pretend play, vary greatly between cultures, with no obvious deleterious outcomes.
- Correlational evidence is very patchy. In general the evidence is compatible with ‘equifinality’ [or even ‘epiphenomenalism’].
- Experimental evidence is often flawed, and inconclusive.

Summary: the middle way

- In many modern urban societies, play is ‘culturally cultivated’, and the ‘play ethos’ has been widespread.
- But neither the evolutionary evidence, the anthropological evidence, or the psychological evidence, provide a compelling case that play is ‘essential’.
- However play is fun, and play is **one way** for children to learn lots of things. For young children it is a natural, enjoyable way, and often as effective as more structured activities.

We can defend and value play, without having to accept the ‘play ethos’.