Proper Artifact Use: The Action-Protest Paradigm

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Method

Participants:
23 children aged between 3 and 5 years (mean = 3.5 years; range = 3.1 – 5.2), 9 males, 14 females were observed in a testing session which took place in a nursery or school setting.

Procedure:
Children were randomly allocated to 1 of 3 conditions in which three familiar objects, toothbrush, baby bottle and crayon, had a different function.

Each condition consisted of a familiarisation phase followed by a test phase. Within each condition, the familiarisation function and test function were counterbalanced. All demonstrations were carried out by two puppets ‘Sam’ and ‘Sally’.

Function knowledge check: At the end of each trial children were asked, “What is a toothbrush used for? What is a bottle used for? What is a crayon used for?”

All sessions were videotaped for coding.

Measures:
Scores for expressions of normative protest:
Overt protest (2 points): E.g., explicit telling off, “No! It’s not for that!”
Implicit protest (1 point): E.g., laughing at Sally’s use of the objects, scrutinising Sally’s behaviour by looking quizzically at what she was doing with the objects.

Predictions:
1. If Casler and colleagues are correct then toddlers should only protest when the conventional function is violated.
2. However, if toddlers are simply protesting against a violation of the artifact’s use ‘in this context’, then it would appear that whilst children do have a normative awareness regarding conventional function they are quite flexible in terms of the use of an object across different function contexts.

References:
Casler, K., Terziyan, T., & Green, K. (2009). Toddlers view artifact function normatively. Cognitive Development,

Background

Research suggests that there is shared agreement among a community about the conventionalised functions of artifacts based upon how a community uses that object (German, Truxaw & Defeyter, 2007; Seston, Kelemen, & DiYanni, submitted).

However, Casler and colleagues always demonstrated the conventional function during the familiarisation phase, followed by a puppet demonstrating an alternate function during the test phase.

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Instrumental- Conventional

Instrumental-Idiosyncratic

Idiosyncratic- Conventional

Brushing hair - Cleaning teeth
Rolling dough - Drinking
Stirring mixture - Drawing

Jabbing - Cleaning teeth
Drawing circles - Drinking
Tapping - Drawing

Jabbing - Brushing hair
Drawing circles - Rolling dough
Tapping - Stirring mixture