

## The Object Concept

- Understanding that objects are unitary entities that exist independently of our actions is fundamental to adaptive perception and world-knowledge
- Piaget – proposed that the object concept develops slowly and gradually in infancy



## Stage 2 of Piaget's Object Concept

- When an object disappears the baby continues to look to the location where it disappeared and does not search
- The existence of the object is very closely linked to baby's actions



## Stage 3 of Piaget's Object Concept

- Baby can now anticipate objects visually
- can visually search for an object if he/she drops it out of sight
- will search for partially hidden but not for completely hidden objects

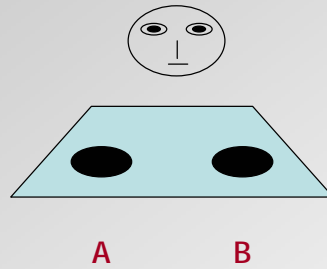


## Stage 4 of Piaget's Object Concept

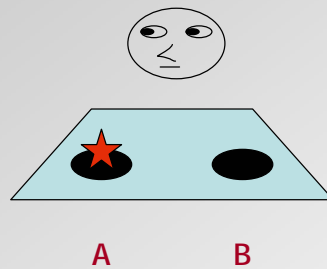
- Now infants search for hidden objects
- But even now they don't understand that an object is something that exists in-and-of-itself; rather, the object is still part-and-parcel of the action used to find the object
- The A-not-B error shows that infants do not understand that objects have a life of their own!



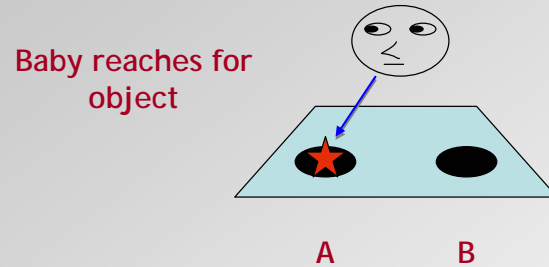
## The A-not-B Task



## The A-not-B Task



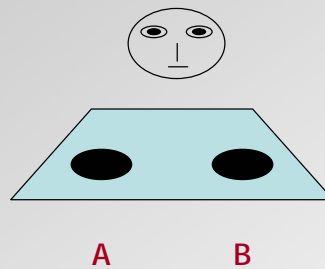
## The A-not-B Task



This A trial is repeated several times



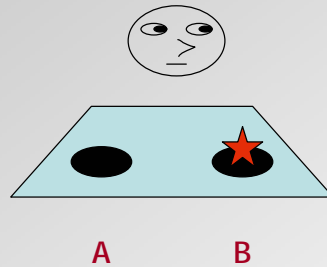
## The A-not-B Task



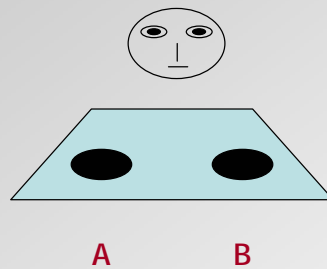
Now we start the B trial



## The A-not-B Task



## The A-not-B Task

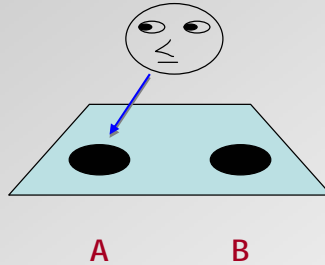


This is the test for knowledge of where object is; if baby knows that object is now in B then you should get reaching to B



## The A-not-B Task

Let the baby reach



- After the object is hidden in the new location baby still continues to search at the first hiding location
- This means that an object is still understood as part of the action



Infant Development, Fall, 2005 (Prof. Lewkowicz)

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## Stage 5 of Piaget's Object Concept

- Now the infant can solve the A-not-B task
- But still cannot solve the A-not-B task if the object is invisibly displaced (i.e., does not shift to the other hiding place if does not find object)
- In other words, the infant only can imagine the object as existing in its last hiding place



Infant Development, Fall, 2005 (Prof. Lewkowicz)

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## Reaching in the Dark in 6-m-olds

- Clifton, Rochat, Litovsky & Perris (1991) showed that 6 month-old infants can reach for a sounding object in the dark
  - They do so even when the sound goes off before the reach is completed
  - This suggests that the infant has some concept of an object
  - But this is inconsistent with Piaget's notion of the object concept
  - It might be, however, that this kind of reaching is possible because the infant is not distracted by other cues when the lights are on like in the A-not-B task (e.g., the cover)



## Spelke et. al., (1992)

2.5-month-old infants tested



Familiarization



## Spelke et. al., (1992)

Test Phase

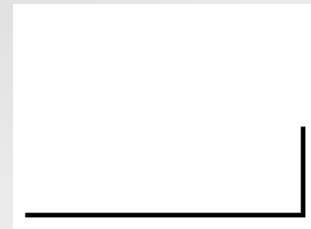


consistent



## Spelke et. al., (1992)

Test Phase



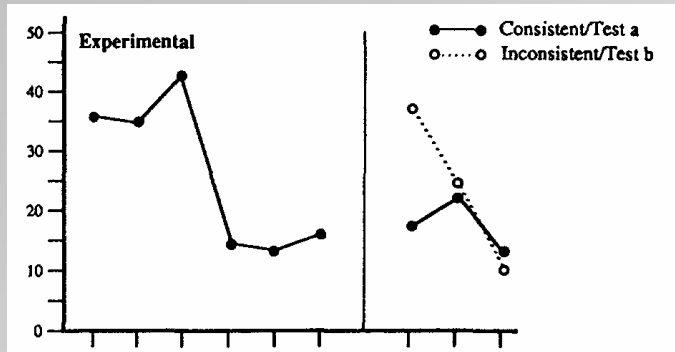
inconsistent





# Spelke et. al., (1992)

## Results



Infants looked longer at the inconsistent event, suggesting that they detected a violation of the expectation that the ball would not travel through the space occupied by the wall. This was interpreted to mean that infants expected the ball to rest adjacent to the wall and, thus, that they had knowledge of object location.

