

I. Method

A. Materials: 20 red counters, 20 blue counters.

B. Procedure

1. Equality: The experimenter lays out one row of about eight blue counters (at least seven)<sup>2</sup> and asks the child to put out the same number of red ones, saying, "Put out as many of your red counters as I've put blue ones . . . (exactly the same number, just as many, no more, no less)."

The child's response is recorded in his protocol. If necessary, the experimenter then puts the red and blue counters in one-to-one correspondence and asks the child whether or not the two rows have the same amount.

2. Conservation: The experimenter modifies the layout in front of the child's watchful eyes by spacing out the counters in one of the rows or by moving them together (as shown in Figure 1.1). The following questions are then asked: "Are there as many (the same number of) blue ones as red ones, or are there more here (blue) or more here (red)? How do you know?"

3. Countersuggestion: If the child has given a correct conservation answer, the experimenter says, "Look how long this line is. Another child said there are more counters in it because this row is longer. Who is right, you or the other child?"

If the child's answer was wrong, on the other hand, the experimenter reminds him of the initial equality: "But don't you remember, before, we put one red counter in front of each blue

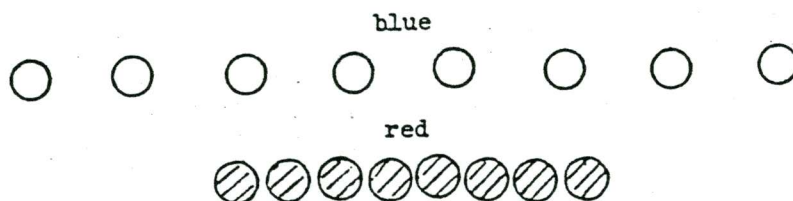


FIGURE 1.1 The arrangement of the objects when the child is asked if there are as many blue ones as red ones, or more blue ones, or more red ones.

2. Piaget referred to small numbers up to 4 or 5 as "perceptual numbers" because small numbers such as "oo" and "ooo" can easily be distinguished at a glance, perceptually. When seven objects are presented, however, it is impossible to distinguish "ooooooo" from "oooooooo," for example, by perception alone. Small numbers greater than 4 or 5 are called "elementary numbers."

