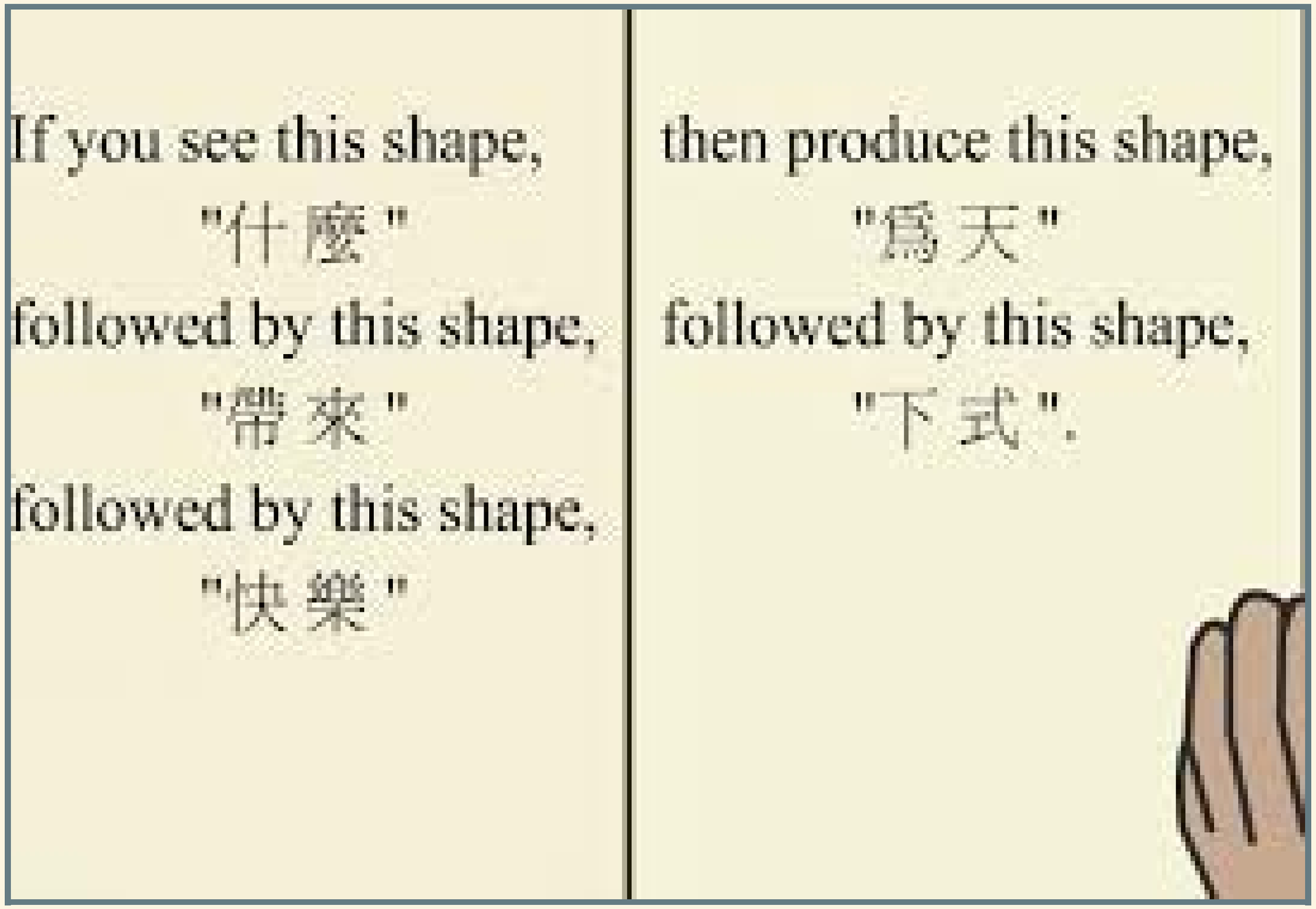
STRONG AI & THE TURING TEST

- Any computer that can pass the Turing Test for arbitrarily long periods of time will, according to strong AI, qualify as a thinking machine

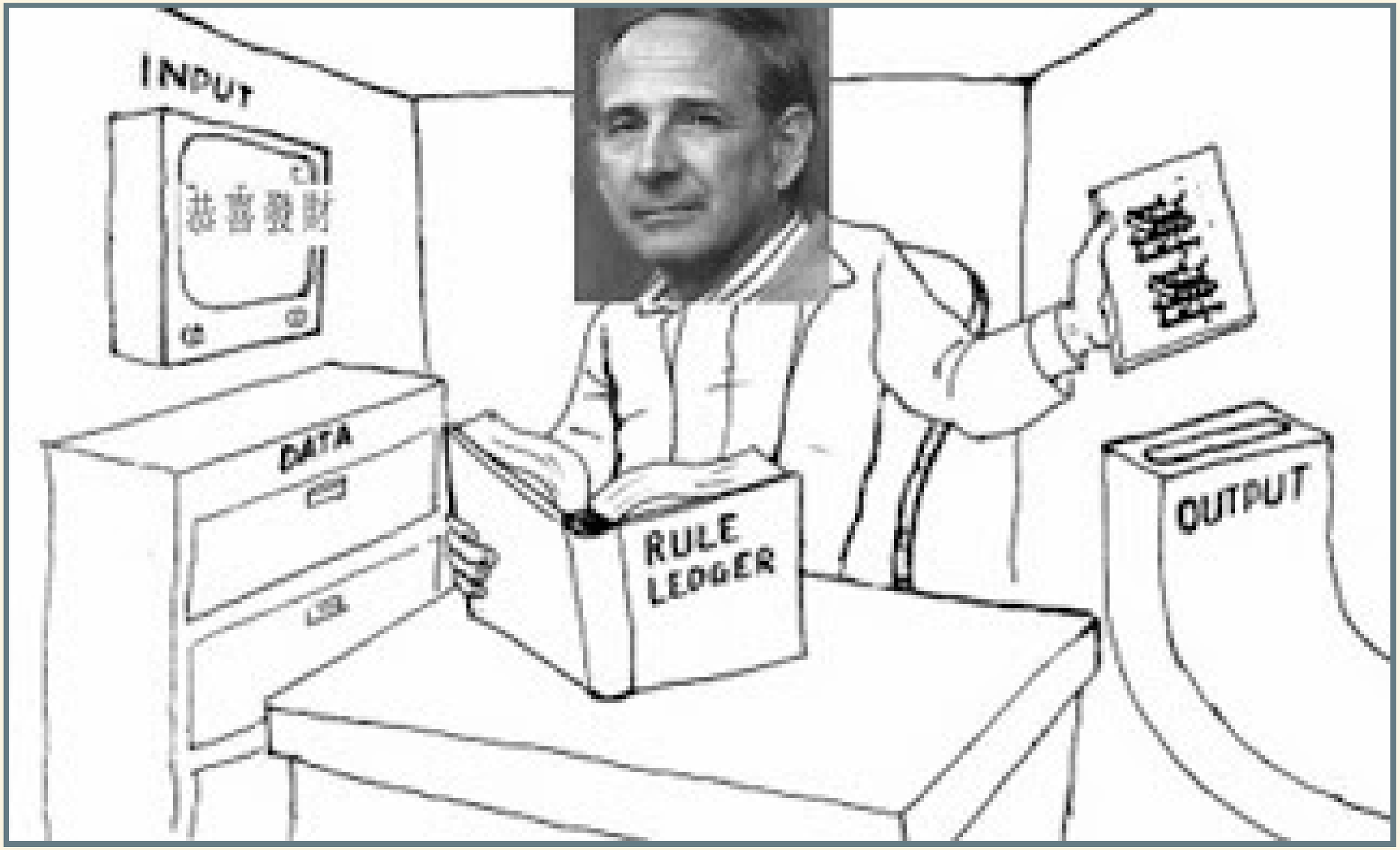
THE CHINESE ROOM ARGUMENT

> *suppose I am placed in a room containlng baskets full of Chinese symbols. Suppose also that I am given a rule book in English for matching Chinese symbols with other Chinese symbols. The rules identify the symbols entirely by their shapes and do not require that I understand any of them. The rules might say such things as, "Take a...sign from basket number one and put it next to a...sign from basket number two." Imagine that people outside the room who understand Chinese hand in small bunches of symbols and that in response I manipulate the symbols according to the rule book and hand back more small bunches of symbols.*

> *Now, the rule book is the "computer program." The people who wrote it are "programmers," and I am the "computer." The baskets full of symbols are the "data base," the small bunches that are handed in to me are "questions" and the bunches I then hand out are "answers."*



The rulebook



The Chinese room

> *Now suppose that the rule book is written in such a way that my "answers" to the "questions" are indistinguishable from those of a native Chinese speaker. For example, the people outside might hand me some symbols that unknown to me mean, "What's your favorite color?" and I might after going through the rules give back symbols that, also unknown to me, mean, "My favorite is blue, but I also like green a lot." I satisfy the Turing test for understanding Chinese. All the same, I am totally ignorant of Chinese. And there is no way I could come to understand Chinese in the system as described, since there is no way that I can learn the meanings of any of the symbols. Like a computer, I manipulate symbols, but I attach no meaning to the symbols. (Searle, 26)*

The Chinese room

SYNTAX & SEMANTICS

Syntax:

the formal or structural features of a symbol system which determine which expressions are legitimate members of the system and which are not

- The syntax of English (its grammar) requires that all complete sentences have a noun phrase and a verb phrase
  - 'John goes to school' vs. 'school John to goes'

SYNTAX & SEMANTICS

Semantics:

The system of meanings assigned to a symbol system, given by determining the referents of the symbols and the truth conditions of symbol strings

- 'Schnee' refers to snow
- 'weiß' refers to the property of being white
- 'Schnee ist weiß' is true just in case snow is white

THE ARGUMENT CLARIFIED

1. Programs are purely formal (syntactic)
2. Human minds have mental contents (semantics)
3. Syntax by itself is neither constitutive of, nor sufficient for, semantic content
4. ∴ Programs by themselves are not constitutive of nor sufficient for minds

WHAT DOES THE ARGUMENT INTEND TO PROVE?

- You can't get semantic content from syntax alone
- A system must have more than purely syntactic properties in order to possess intentional states