CHINESE ROOM ARGUMENT

Introduction:
This was proposed as an argument against Strong AI.

Strong AI: agents that can think on their own and make independent decisions. They can understand. These are planned agents. Artificial General Intelligence.

Weak AI: agents that work under a limited predefined set of functions. These are problem-solving agents. All the AI-powered technology we have today is weak AI.

John Searle, a philosopher made this argument against the possibility of strong AI. He was the one who proposed this distinction between strong and weak ai. Once again strong ai means computers that have minds on their own and can understand, weak ai is computers that can model and stimulate the minds but can't understand themselves.

The thought experiment:

1. John Searle doesn't understand chinese
2. He is in a room with a list of all the Chinese characters and a big book of instructions on what to do when
3. There is a slot in the door
4. A Chinese person is on the other side
5. This Chinese person when they pass a message through the slot, john looks up the symbol using the instruction book and replies appropriately
6. The person on the other side has no choice but to accept that john understands chinese
7. But john doesn't understand Chinese!
8. Now if we replace john with a CPU then the same thing is true, the computer doesn't understand Chinese but can pass the Turing test.
9. Meaning the computer doesn't understand, it is just simulating the mind using the program and the database that it was fed with.

The argument:
If strong AI is true then there is a program for Chinese such that any system that's running that program thereby understands Chinese.
Now john can run this program for Chinese without actually understanding Chinese.
Therefore Strong AI is false.

Refutations:

1. Chinese Room as a System:

   One could say the whole system understands Chinese. John just replaced the person with a CPU but the whole system is the CPU. If we think like that, doesn't the system understand Chinese?

   The problem now is we have to define what understanding truly is.

2. Current Intuition:

Just because we don't have a strong AI now, we can't say that we will never have it. The Chinese room argument fails to take into consideration technological advancements.

3. The robot argument:
   Upload all this into a robot, then we can say that the robot understands now.

Relevancy:
Honestly, in my opinion, we can argue for both sides. In the end, it comes down to the definition of ‘understanding’. But what is the relevancy of this? I mean to ask do we even need strong AI? If so like how?
One place I could think of where we may need strong AI is real-time monitoring systems.