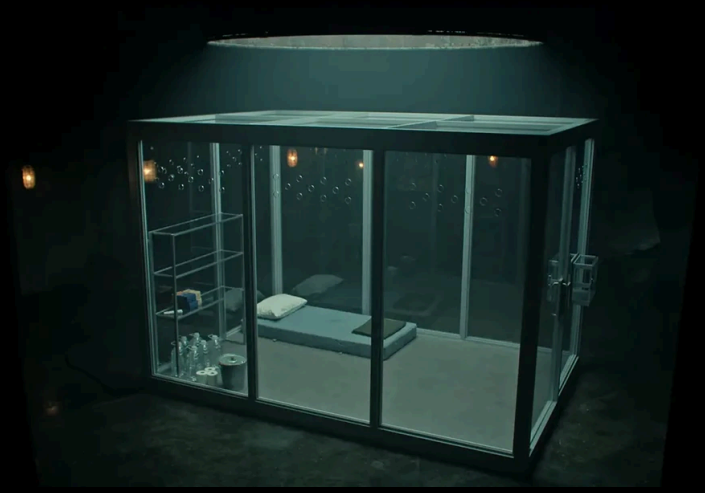
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The Cage



The Cage is the place where Joe Goldberg holds his victims throughout the seasons of You. The cage was created by Joe's father, Ivan Mooney, who used the cage as a way of safely negotiating money.
[Stoled From You Fandom]

General Explanation

First of all, before going into the details of the cage, it is important to mention the development process of the cage. The cage we saw in the first season was designed by Mr. Mooney. This cage was not very elaborate and was really just a structure to regulate the humidity levels to prevent the books from getting moldy. However, by the second season, Joe was able to rebuild the cage in just a few days. That in itself is impressive, but it's still faithful to the original design and there are no extra improvements. By the third season, the interior design of the cage was slightly modified and Joe bought the ventilation system outright, ensuring that the materials in the room behind the oven did not deteriorate.

Developments

The important point in this process is this: This cage was never a completely rebuilt or redesigned structure; it was constantly being improved with small, but not major, changes to Mr. Mooney's cage. However, by the fourth season, things were different. As you can imagine, it's not possible to transport a huge cage by plane to France and then to

England. (And there was no reason for him to transport it to France, and we never saw it being transported.) From the sketches on Joe's desk in the fourth season, we can see that the cage was redesigned by Joe. Joe had a very limited time here, maybe 2 days, maybe 3 days, because Marianne had been trapped in the box for days. Joe took her out of the box, fed her, stayed with her all day and then put her back in the box and took her back to the cage. At this stage, we now saw that the cage had changed a lot.

- First of all, the door of this cage can be opened with a digital keypad, which is programmed to send a message to Joe if a wrong password is entered.
- On the outside of the cage there is a fan coming from above, it's part of a ventilation system. Joe adapted the ventilation system from the shop above to this room. There is also a fluorescent light in the same area, which turns on during the day and off at night.
- The part that Mr. Mooney allegedly used for money transfers has an electronic button. The lid cannot be opened without pressing this button and only one lid can be opened at a time.

Crystallized Intelligence Aspect

Another impressive part is that the cage was designed without any extra equipment, just the necessary materials and a laptop. Normally, in order to design such a cage, CNC machines (for precision metal and wood processing), laser cutters, high precision sensors and data acquisition systems, oscilloscopes and logic analyzers, industrial power supplies and UPS systems, vibration and shock test equipment, EMC test equipment, etc. are required to make a very detailed analysis and to build a perfect system in practice. However, building such a system in 3 days may only be possible on paper. Joe managed to design a completely flawless cage in 3 days, despite not having any of this. Let's take a closer look at the process of building the cage.It is important to be proficient in fluid dynamics, the laws of thermodynamics and HVAC system modifications to adapt the ventilation system to the cage. Combining this environmental control setup with precise humidity regulation requires a thorough understanding of psychometrics, computational fluid dynamics (CFD) and advanced PID control algorithms. If it is a double-sided flap mechanism, it is necessary

to apply the principles of Boolean logic and fail-safe system design, potentially using programmable logic controllers (PLCs) or field-programmable gate arrays (FPGAs) for optimum reliability and performance. The seamless integration of this subsystem with the control architecture demonstrates knowledge of systems engineering and interface design. The rapid design, prototyping and commissioning of such complex structures using only a laptop computer indicates a mastery of integrated development environments (IDEs), version control systems and possibly model-driven development. Achieving flawless performance with such minimal resources requires the use of advanced optimization techniques such as genetic algorithms or neural network-based control systems.

Fluid Intelligence Aspect

This feat can also be measured in terms of learning ability and adaptability. The achievement is truly incredible because it typically takes at least 6 years and up to 9 years for a person to acquire graduate level knowledge in one field alone. A 4-year bachelor's degree is followed by a master's or PhD program that takes between 2-5 years. This requires a curriculum, trainers who are experts in the field and the application of the acquired knowledge. Labs or similar test environments are provided so that people can quickly make connections between this knowledge and concepts. For Joe to acquire such a variety of knowledge in these fields by reading books and self-development alone, without any of this, requires incredible cognitive capacity, the ability to learn, and the ability to synthesize information (to make connections between memorized or learned concepts). Moreover, as I mentioned earlier, there was nothing to apply this theoretical knowledge; there was only the cage. This is really an incredible achievement. In terms of adaptation, each branch of science and engineering requires different ways of thinking, methods and paradigms. For example, the perspective of a physicist and a computer engineer is not the same; physics has a very different approach than engineering. Each field has its own methodology, problem-solving approaches and conceptual frameworks. Acquiring so much knowledge requires adapting to the structure and methods of each field. This is a truly impressive example of cognitive adaptation.

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Adversity Capacity Aspect

As we explained above, achieving this level of knowledge is an incredible success. For something like this, a person must first possess good perseverance towards self-improvement. its little but why not :P

VCI Aspect

- Comprehension - verbal understanding is also largely related to abstract thinking. Quickly grasping the information you read and making connections between these concepts is directly linked to the Comprehension subtest of VCI and is truly impressive. We have already largely explained the reason above. In such situations, special curricula and teachers help you comprehend these subjects. This indicates a comprehension ability far beyond what an average intelligence person could possess and is definitely one of the most impressive comprehension abilities.
- Vocabulary - There is no need to explain in detail, expertise in advanced physics, engineering and mathematics terms is evident, imagine how ironic it would be if you know concepts such as these that are accepted at the graduate level, but you cannot define them as words.
- Information - Physics, Engineering (various branches), Mathematics, Computer Science, Electronics, Materials Science, Control Systems, Thermodynamics, Fluid Mechanics, System Design, Data Analysis, Optimization Techniques, Electrical Engineering, Mechanical Design, Automation Systems.

Despite the complexity of the concepts, learning and synthesizing this knowledge without formal education, especially considering that the terminology and knowledge level are at a postgraduate standard, it would be appropriate to classify it as CEFR C2 English (He was already taking C2 because of the university statements, this feat further supported the statements.).

Thinking Aspect

the ability to quickly synthesize acquired knowledge without formal training is clearly an indication of advanced abstract thinking; it is also considered as Linear Thinking and logical thinking. Building such a cage in

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3 days requires the optimal use of the minimum available resources, the need to use resources is directly related to Critical Thinking.

Final Words

It is possible to expand the context further and evaluate it as FRI (learning ability, problem-solving, and abstract thinking), but unfortunately, I'm not a good writer, so I didn't want to extend it. As you can see, I tried to interpret different concepts as best as I could. I hope this explanation is clearer than my previous attempt regarding Joe's CPI (and please consider this valid now, as I'm tired of discussing every topic related to Joe). if you want debating on this topic @yildizya on discord

Also look/Sources

Field-programmable gate array - Wikipedia

Programmable logic controller - Wikipedia

Heating, ventilation, and air conditioning - Wikipedia

Integrated development environment - Wikipedia

Engineering optimization - Wikipedia

(if you want understand complexity of this feat you can also look this wikipedia pages)

CFD Modelling of HVAC for Enhancing Performance

Integrated Heat Air & Moisture Modeling and control (not completely related but i learned something from here)

Parameter optimization of PID controller for water and fertilizer control system based on partial attraction adaptive firefly algorithm | Scientific Reports (not completely related)

unfortunately I lost some sources :P