**Doors of Truth**

First person game with standard controls (no Y movement).

**Characters**

Professor Timtree

Bright and good at explaining things, but also completely sadistic.

Eric

A work experience student who has ended up staying on.

Structure

When you get a door wrong, you first find yourself in a holding cell. An explanation is given and then you are lead away to the torcher chamber.

**Initial choice**

In a street. There are a number of doors.

Door of death

Door of unspeakable horror

Door of unfathomable pain

Door of truth

**The Foyer**

Explain the rules.

The house you are in is built on truths and falsehoods. The parts built on truth are still standing but go through a door into falsehood and you are likely to fall to a needlessly cruel and agonising death.

Each room raises a question which you will be asked. Simply go through the door which matches the truthful answer. As I said, if you are wrong, you will suffer an unnecessarily painful death.

But I can bring you back from the dead to try again – so its not all bad.

**The Senses**

Room: Red room

Q: What colour is the room?

A: Blue

Wrong answer: erm…. Are you color blind? If you are – don’t get a job as an electricon engineer or you could end up getting electrocuted as is about to happen to you now.

Room: The spoken word

Q: I can speak English to some degree?

A: True

Wrong answer: - That’s right I can’t speak English at all. Nope not a bit of it. What’s more, my name is susan and I like riding ponies and trampolining. Bloody idiot.

Room: Time

Q: This wheel turns about once every second

A: False

Wrong answer: How could you get that wrong. Do you LIKE death? Does it APPEAL? You just had to see if it took about a second to turn around. Well you will be pleased to hear that this death is relatively quick. It should only take a second…a secon that lasts 10 thousand years Bwa ha ha ha ha.

**Out on a beam**

Professor: OK you’re doing well. Your senses are what you use to experience the world. They’ve served your ancestors well in the past and help keep them alive.

Follow me to the next area – don’t fall off the beam.

**The sensory illusions**

Chess board gallery

Q. Check out this picture. The shapes on the picture are the same shade of grey.

A. True

Wrong answer: [With night’s helmet on]. After I have hacked you to deaith with this horse, you may want to get resurrected and go back and recheck that.

The white room

Q. What color is the room?

A. White

Wrong answer: The color of light can make a big difference to the color of this object. For example, this torch produces red light. And after I beat you to death with it, you will be sort of mushey red colour.

The spoken worm\_1

Sign saying “ Match the sound to the drawing”.

TV which you can activate multiple times (but will turn off when you are not looking at it).

Bumble bee, Bumble bee

Two doors:

Door 1: Pictue of the sea

Door 2: Picture of a bumble Bee

Wrong: This death will bring you as close to death as at is possible to bee (if you’ll pardon the pun).

The spoken worm\_2

Sign saying “ Match the sound to the drawing”.

Right: Good, you clearly know your bees from your seas. This is a harder one.

Sound: Bat Bat

Visuals: Fat Fat

Wrong: Oh dear. Your ears are playing tricks with you. Actually I am – The video showed me saying Fat but the Sound – it was the sound you had to match up – was saying Bat. Go and check out the installation at the other side of the room to see what I mean. When you are ready come back and I will suck the blood out of you with this thing I’ve made out of an apple corer and a turkey baster.

Right: A ha good. The sound was indeed saying “Bat”. The VIDEO showed me saying “FAT” however. Check out the installation at the other side of the room if you want to see how it works.

Room2

Math the door to the sound

OK, our senses are not infallible. They rely a lot on surrounding context. The your brain interprets the image as being a 3D scene wish shadows. You brain tends to remove the effect of shadows when you are assessing the color of something so doesn’t register how different the same color may look.

Here is a dress I bought recently -…erm for a friend…when someone took a photo of me, the internet went crazy- half the people viewing it thought it looked blue and black and half thought it looked white and gold. It is all down to what they perceive in the environment is in the rest of the picture.

Faa Baa

Q. What can you hear?

A. Faaa Faaa Faaa

B. Baa Baa Baa

Wrong answer: There are no prizes for being too clever. Unless you count being lobotomised as being a prize.

Q. Now what can you hear?

A. Faaa Faaa Faaa

B. Baa Baa Baa

Wrong answer: well I’m being a bit tricky here. I asked you what you heard. How could I know what you “heard”. Most people hear Faa faa faa

Q. The audio on both videos is identical

A. True

Wrong answer: Do you like dying? Have you tried just closing your eyes to listen to the two videos? I can help you do this. I have these two apple de-corers.

That was called the McGurk Effect. The audio was the same in both videos, but what you could see was different. We think of what we here as being purely through our ears. But often our senses combine to construct our perceived reality.

Instruments

Q. Here is some water. There is nothing in it other than water

A. False

Wrong answer: It is important to know if something is in your water. Perhaps you can get a little more immersed in this to see the answer.

Microscope

We understand how microsopes work and so when we see things in them we can be pretty sure that they are real – but just very small – Too small to see with the naked eye.

Telescopes

The night sky is beautiful. In a clear night we can see millions of stars in the sky.

But check out what you can see through a telescope.

The things we see through our instruments can be as real as the things we see with out senses. As long as we understand how our instruments work.

Logical Lobby

There is 1 false statement in this room

There are 2 false statements in this room

There are 3 false statements in this room

There are 4 false statements in this room

Wrong answer: Holding a gun - Ok I’m going to give you another chance to avoid death here. I’m going to toss coin. Heads I win, tails you lose.

[pulls face to say – oh dear]

Statement\_1

Statements are sentences that are either true or false.

Go through the door which has a statement above it

. Some film stars are men

. What is your name?

Wrong answer:

Lets try and explain that again. Statements are sentences that are either true or false. You seem to think that “what is your name?” is true or false.

Do you know what true and false means”? Do you even know what your name is? Let me check the database – ah yes your name is “massive twat”.

Are some film stars men? Well this is either true of false so it is a statement – in fact we know it is true. What is your name? is a question – we cannot say it is true or false so it is not a statement.

Statement\_2

A triangle has four sides

The king of France is over 1m tall

Wrong answer: Ah yes the king of France. Good ol’ kingy king king of Francey france france.

Pause

France hasn’t had a monarchy for the last 100 years. Sound of a guillotine.

Does a triangle have four sides? Well this is cirterainly either true or false – in fact it is false. There is no king of France, so it is meaningless to ask how tall he is.

Statement\_3

I had one grunch but the courgette over there

It will rain tomorrow in London

Wrong answer:

Sudden bursting of the right one matter. But nothing when it matters the meaning. Shallow bitumen.

Shallow, shallow bitumen.

This first statement does not make any sense. It is not true or false. We don’t know the answer to whether it will rain tomorrow in London, but either it will, or it wont – so this statement is either true or false (we just don’t know which yet).

Statement\_4

Broccoli tastes good

Broccoli is a plant

Wrong answer:

My wife lke broccoli. I do not. So is it true or false? I am running a house of truth with animals. This is Dave and he is going to ascertain if your taste good.

Broccoli is indeed a plant.

Broccoli tasts good is a matter of opinion and we cannot say this is true or false, though had it said “Professor Blah thinks tha Broccoli taste good – that would have been a statement”.

Statement\_5

Logical statements must be either true or false

This statement is false

Wrong answer:

This statement is false – Is not a statement because it cannot be true (for this it would be false) and it cannot be false (for then it would be true).

This one can tie you in knots a bit.

Talking of knots.

This statement is false. Is not a statement because it cannot be true (for this it would be false) and it cannot be false (for then it would be true).

Statement\_6

Go through this door to exit

This is not the correct door to go through

Wrong answer:

Were still playing the game. Is that confusing. Maybe chopping your head off with thie axe will help you remember,

Go thjrough this door to exit is not something which is true of false.

This is not the correct door to go through is a statement – it just happens to be a false one.

Premises and Conclusions

A logical argument starts with some statements which are premisies and finish with some statements which are conclusions. We all have an intuition about what makes a sound logical argument.

All rectangles are four sided

All squares are rectangles

Therefore

All squares have four sides

This was a form of valid logical inference of the form

All As are Bs

All Cs are As

Therefore all Cs are Bs

If your reasoning is of this form, then it is valid. It gurarantees that if the premises are true, then your conclusion will be true.

Category\_1

All pop stars are celebrities

Ed Sheran is a pop singer

Therefore Ed Shearan is a celebrity

Wrong answer:

Much as it pains me to say it. Ed Sheran is indeed a pop singer. You will need to put these headphones on and listen to him on full volume until you brain melts and dribbles out of your nose.

This follows the same pattern. However, bear in mind that the premises may be false – yet the reasoning is still valid.

Break Ed SHeran record

Category\_2

All astronaughts like to stick peanuts up their nose while no-one is looking

Neil Armstrong is an astronought

Therefore

Neil Armstrong likes to stick peanuts up his nose while no-one is looking

Valid argument argument

Even though the premise is false, the logical reasoning is sound. It tells us that if astronaughts really did like sticking peanuts up their noses then neil Armstrong would too.

Category\_3

Some asronaughts are men

Neil Armstrong is an astronought

Therefore neil Armstrong is a man

Invalid

Here the premesies AND the conclusion are all true – but the logic is faulty. This becomes apparent if we replace Neil Armstrong with Valentina Tereshkova – the first femail astronaught.

Some asronaughts are men

Valentina Tereshkova is an astronought

Therefore Valentina Tereshkova is a man

Hypothetical

Another common type of statement is:

If it is raining, then the ground gets wet

There is an interesting inference we can make from this

If the ground it NOT wet, then it has NOT been raining.

In formal logic terms if you have a statement of the form:

If A then B

Then we can conclude:

If not B then not A

However, what we definitely can’t conclude is:

If not A then not B

Or indeed

If B then A

In our example

If it is raining, then the ground gets wet

If the ground is NOT wet, then it is NOT raining – valid argument

If the ground gets wet, then it is raining – invalid (clearly it may get wet for other reasons)

If it is NOT raining, then the ground it not wet – invalid (as before the ground may well be wet for other reasons).

Hypothetical\_01

Premise

If you are rich you will be happy

Go through the door that has a valid conclusion

1. If you are not happy you must be poor

2. If you are happy then you are rich

3. If you are not rich then you will be unhappy

note that the premis is probably not true, but if it were true then f you are not happy then you would not be rich.

Hypothetical\_02

Premise:

If I can speak more than one language fluently then I am bilingual

Conclusion

A. If I can’t speak more than one language fluently then I am not bilingual

B. If I am bilingual then I can speak more than one language fluently

C. If I am not bilingual then I cannot speak more than one language fluently

This is a tricky one. The valid reasoning answer is C. The other conclusions are true statements but they do not follow from the premise. The premise just says IF I can speak more than one language fluently then I am bilingual. But, perhaps there are also other ways to be bilingual. Maybe wearing a funny hat and standing on one leg also allows you to be considered “bilingual” – the premise makes no mention of this and if this were the case, then A and B might well be false.

Logical exit door

There is a study of both formal and informal logic and what makes a sound logical argument. But none of this can help figure out if your initial premisies are true.

We saw at the beginning that your senses can be a good guide, but first you need to be clear about what your premesies are.

**The dictionary lobby**

Has one door

Time flies like an arrow, Fruit flies like a banana

The 5 pointed start

“How many points are there in the picture”?

A keyboard input to say how many before going through the door.

Actually there is no right answer here. But it is interesting to see how many people have walked through each door of this room before you.

Everyone saw the same picture, but people interpreted it differently. Some people just counted the outer points of the star. Some counted the inner (concave corners) as points too – other included the black square. Around the star.

The man and the telescope

“I saw a man on a hill with a telescope”

Which picture illustrates the sentence?

Actually they all do.

This is because natural languare can be very ambiguous.

Additional chapters:

* Hidden assumptions
* Faith in assumptions
* Truth from authority
* Seeing patterns where there are none/Confirmation bias
* Statistical significance
* Models
* Occam’s razor
* Repeating experiments
* Evolving models/Absulote truth
* Common sense is a good first step but don’t rely on it (quantum weirdness)

**Additional ideas**

In a lift feeling awkward

“Go through the door that matchs the sound”

I consider myse;f a converservative with small C – and here it is.

The hat shop.

Oh hell. Welcome to the hat emporium. Have a look around and let me know if you see anything you like.

Short wait…actually– I think I have the hat just for you. Its one I made here in my workshop.

Surely we want a section on absolute truth. If something is true for me, then is it true for you?