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The Shop Part I

Metaphysics or What There Is

Metaphysics: Ontology (or Existence)

A Knife Idea

Peter Worley



Starting age: 10 years

A caveman called Ug has recently found a mammoth that has died naturally and so doesn't have the characteristic puncture wounds that sabre-toothed tigers leave. Winter is drawing near. He needs the skins and the meat but is unable to cut the mammoth open because knives haven't been invented yet.

Later that day whilst Ug is collecting stones to make a fire – fire-making *has* been invented! – he cuts himself on a sharp rock (a rock we now call 'flint'). This gives him an idea: he takes the sharp-edged rock and uses it to cut open the mammoth. This enables him to get to the meat and, with the help of his new tool, to remove the skin.

The following day he uses another harder type of rock to chisel the flint into a shape that has one very sharp side making his new tool even more efficient. With his new tool he is able to make himself all sorts of other things – as yet uninvented – such as bowls, a stool and a table. Later he learns how to make more of his cutting tools, which he uses either to replace them when they break or to exchange with other cavemen for goods. Soon all of his tribe has the new tool and they give it the name 'knife'.

Start Question When did the object become a knife?

Think about the Start Question before looking at the suggestions below.

Was it ...

1. When the rock he would make it from was lying on the ground?
2. When he cut himself on the rock?
3. When he had the idea?
4. When he chiselled it into shape?
5. When he first used it?
6. When it was first given the name 'knife'?
7. Or at some other time? If so, when and why?

Questions to take you further

- ❖ When does something become what it is?
- ❖ What exactly is a knife? Can you define a knife?
- ❖ Is Ug's tool a knife or not?
- ❖ Does a knife have to be a certain shape?
- ❖ If 'the knife', 'the bowl', 'the stool' and 'the table' don't yet have names, what are they?
- ❖ **What is existence?**
- ❖ What does 'exist' mean?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ The Philosophical Adventures of Pencil Person pages 41–46
- ✓ Phil and Soph and the Ice Cream
- ✓ Just Testing!
- ✓ A Heap of Exercises?
- ✓ Of Fences
- ✓ *The If Machine: The Chair*¹

Philosophy: Ontology, existence, being, sense and reference, Aristotle, Wittgenstein, Frege.

¹ See *The If Machine: Philosophical Enquiry in the Classroom* by Peter Worley (Continuum, 2011).

The 2 Square

Peter Worley

Starting age: 7 years

2

2

2

2

Start Question Take a look at the 2s above. How many numbers do you think are there?

Questions to take you further

- ❖ How many different answers can you think of?
- ❖ If someone said that there are no numbers there, can you say why they might say that?
- ❖ **What is a number?**
- ❖ Are numbers real or made up?
- ❖ Are numbers invented or discovered?
- ❖ Where can numbers be found?
- ❖ Are the symbols that you see in 'the 2 square' numbers?
- ❖ If not, what are numbers then?
- ❖ Draw a number 2 on a blank piece of paper. Now stare at it for a few minutes. Does it still look like a 2? Turn it around and look at it from different sides. What does this exercise make you think?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ A Pageful of Nothing
- ✓ Phil and Soph and the Numbers
- ✓ Doughnut
- ✓ A Hole Load of Nothing
- ✓ Some Sums with Zero
- ✓ *Thoughtings: Number Wonders*²

Source: A lesson plan on Plato's Forms by Rob Torrington.

Philosophy: Philosophy of maths, fictionalism, Plato, Aristotle and Forms.

Doughnut: Experiments with a Hole

Alfred Archer



Starting age: 5 years

Props

- ❖ (Optional) A doughnut-shaped object such as a children's toy. Or a doughnut (could be a bit messy!).
- ❖ (Optional) A packet of Polo mints.

Alice holds a doughnut in her hand. She thinks about the hole in the middle of the doughnut. She asks herself a series of questions and performs some 'experiments'. Here are her questions and experiments for you to try.

Start Question Does the hole in the doughnut exist? Or (depending on the age of the participants) is the hole in the doughnut something or nothing?

² *Thoughtings: Puzzles, Problems and Paradoxes in Poetry to Think With* by Peter Worley and Andrew Day (Crown House Publishing, 2012).

Questions to take you further

- ❖ Is the hole part of the doughnut?
- ❖ Is the hole an object?
- ❖ Is the hole something, or is it nothing?
- ❖ **What is a hole?**
- ❖ *Experiment 1:* If you move the doughnut around, does the hole move too?
- ❖ *Experiment 2:* If you eat the doughnut, do you eat the hole?
- ❖ *Experiment 3:* Could you eat the hole without eating the doughnut?
- ❖ *Experiment 4:* If you break the doughnut in two where does the hole go?
- ❖ Can you have a *whole* hole?
- ❖ Can you have *half* a hole, or an incomplete hole?

Your Questions

- ❖
- ❖
- ❖

Works well with

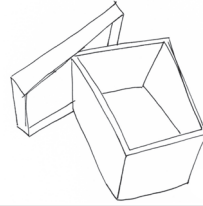
- ✓ Immy's Box
- ✓ Empty
- ✓ The Sound of Silence
- ✓ A Hole Load of Nothing
- ✓ A Pageful of Nothing
- ✓ *Thoughtings: A Disappearing Riddle*
- ✓ *The If Machine: Thinking About Nothing*

Source: <http://plato.stanford.edu/entries/holes/>

Philosophy: The philosophy of holes, ontology, epistemology, reference, *entia representationis* ('as-if' entities, fictions).

Immy's Box

Peter Worley



Starting age: 10 years *Advanced*

Immy has a box and he wants to empty it. But he wants to empty it *completely and utterly*. First he opens the box and finds bits and bobs in it such as a pencil, a rubber and some little toys.

[If you are doing this with a class then use a real box with some bits and bobs in it.]

He takes each thing out, one at a time. Finally he has taken all the objects that were in the box out of it. *But is it empty?*

Start Question 1 Is the box empty?

Questions to take you further

- ❖ Can you think of something that might be in it?
 - ❖ Is 'empty' the same as 'nothing'?
 - ❖ Can the box be full of nothing?
 - ❖ Is the inside of the box inside the box?
 - ❖ **What is emptiness?**
-

Immy will remove whatever you can think of that is still in the box. So, what *can* you think of? List it, or them (for example, the group might suggest finger prints, germs or atoms) and Immy will remove it, or them.

Once he has removed whatever you can think of, *is the box finally empty?* Or is there something else that is still in the box?

Keep going until you think Immy will be satisfied that it is finally completely and utterly empty. Can you do it?

Start Question 2 Will the box be able to be emptied completely and utterly?

Questions to take you further

- ❖ Is it even possible?

- ❖ Is there something that can never be removed?
- ❖ The definition of a *vacuum* is ‘space entirely devoid of matter’. Devoid means ‘completely without’ and *matter* means ‘physical stuff’. If you manage to achieve a *vacuum* in the box would the box be completely empty then? Or would there still be something you can’t remove?
- ❖ What about the *space* the box is in – can Immy remove this?
- ❖ What would happen if Immy removed the space as well?
- ❖ What about the *time* the box is in – can Immy remove this?
- ❖ What would happen if Immy were able to remove time as well?
- ❖ Is the box in time?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ A Pageful of Nothing
- ✓ A Hole Load of Nothing
- ✓ Doughnut
- ✓ Empty
- ✓ Phil and Soph and the Ice Cream
- ✓ *Thoughtings: Space, Time and Other Weird Things*
- ✓ *The If Machine: Thinking About Nothing*

Source: Thanks to Ben Jeffreys and Claire Field for thinking of ‘Kant’s Box’ as a way of introducing *a priori* space and time to classes.

Philosophy: Kant’s *a priori* space and time.

A Hole Load of Nothing

David Birch



Starting age: 7 years

Mr and Mrs Owl had been married for many years. They lived in the hole of an oak tree in a pleasant corner of the forest. They slept during the day and, when night fell, they would leave the hole to hunt for dinner.

Because owls are animals of the night they need very large eyes to help them see. Yet poor Mrs Owl was entering her twilight years and her eyesight wasn't what it used to be; so for the past few months she had needed to wear glasses when they went out searching for food.

But one night, when Mrs Owl was getting dressed, she forgot to put on her glasses and she left the hole without them.

'Oh dear, Mr Owl,' she said. 'I've left my glasses indoors. Be a darling and fetch them for me.'

'Right now?' asked Mr Owl hesitantly.

'Well, yes. I can hardly see a thing. I'll fly into a hedgehog,' chuckled Mrs Owl.

'Um ...' mumbled Mr Owl and fell silent.

'Hoot hoot, come on, Mr Owl, don't dither.'

'Must I go? Can't you?'

'Really! What is wrong with you?' said Mrs Owl irritably.

'I'm just a little ... scared.'

'Scared? Scared of what?'

'It looks terribly dark in there,' answered Mr Owl.

'Mr Owl, are you telling me you're afraid of the dark?'

There was a pause. 'Yes.'

'Mr Owl! How careless of you. How could you possibly be afraid of the dark?'

'Please don't be cross with me,' pleaded the frightened owl.

'But it's our hole, our home. You know there are no scary things in there. What's to be afraid of?'

'The dark.'

'Come now, Mr Owl. The dark is just what happens when there's no light. It's, it's – just nothing,' Mrs Owl explained.

'Yes. Nothing. I'm scared of Nothing,' said Mr Owl flatly.

'You're scared of nothing? Brilliant, you can fetch my glasses, then. Honestly, Mr Owl, sometimes you ...'

'No, no. You don't understand. I am scared of something: I'm scared of Nothing.'

'Well that doesn't make sense, dear,' said Mrs Owl, frowning her brow. 'You say one thing and then you say the opposite. Which is it?'

'Both! Please, Mrs Owl, listen. I can't go into the hole because it's dark and full of Nothing and that frightens me.'

'Oh now I see,' said Mrs Owl, trying to play along. 'Nothing scares you?'

'Yes!'

'So what are we arguing about?'

'Nothing.'

'Ex-actly,' said Mrs Owl raising her wings. 'My glasses are by the hat stand, I think.'

'Oh my,' sighed Mr Owl. 'I can't fetch your glasses. I can't.'

'And what is the problem?'

'Nothing.'

'Good – why must you go on and on like a parrot? You're not a parrot, you know, Mr Owl. You're an owl. Now hurry along.'

At the sound of the order, Mr Owl instinctively turned to go back into the hole – till he saw the blackness and remembered his fear. 'But, no, the dark ...'

And so the argument went on. Mr Owl kept insisting that he was scared of Nothing, and Mrs Owl kept telling him that was wonderful and ordering him to fetch her glasses. And the two owls are still sitting out there on the branch, arguing till this day, like a pair of parrots.

Start Question 1 If Mr Owl is afraid of the dark, then is he afraid of something or nothing?

Questions to take you further

- ❖ Is the dark nothing or something?
- ❖ **What is the dark?**
- ❖ Will Mr and Mrs Owl's argument ever end?

- ❖ Is there anything nice about the dark?
- ❖ **What is fear?**
- ❖ Why are we often afraid of the dark?

Start Question 2 If Mr Owl is afraid of Nothing then is he afraid of something or nothing?

Questions to take you further

- ❖ Is nothing something?
- ❖ Is it possible to be afraid of nothing?
- ❖ Can nothing be scarier than something?
- ❖ **What is nothing?**

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Immy's Box
- ✓ Empty
- ✓ Doughnut
- ✓ A Pageful of Nothing
- ✓ The Sound of Silence
- ✓ *The If Machine: Thinking About Nothing*
- ✓ *Thoughtings: A Disappearing Riddle*

Philosophy: Logic, ontology, existentialism and anxiety, Kierkegaard, Heidegger, Sartre, Tillich.

The Sound of Silence

Peter Worley

Starting age: 7 years

Philosophical exercise: Read the following song lyrics and sing the well-known tune silently in your head. Don't sing it out loud! If you are with a class then conduct them and mouth the words silently so that the class is 'silently singing' together. (If it is somebody's birthday then silently sing 'Happy Birthday' to them!)

Happy Birthday

Happy birthday to you,
Happy birthday to you,
Happy birthday dear *somebody*,
Happy birthday to you.

By Anonymous

Start Question Have you just *heard* the song 'Happy Birthday'?

Questions to take you further

- ❖ **What is hearing?**
- ❖ **What is sound?**
- ❖ Can sound exist if it is only in your mind?
- ❖ The composer Beethoven was completely deaf towards the end of his life. Can he be said to have *heard* the pieces he composed whilst deaf?
- ❖ If Beethoven had been deaf his whole life would you answer differently?
- ❖ Do you think he could have composed tunes like 'Ode to Joy' if he had been born entirely deaf?
- ❖ Do you have to have heard sound to imagine sound?
- ❖ The deaf musician Evelyn Glennie feels music by its vibrations. Can she hear music in this way?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ 'Music To My Ears!'
- ✓ Green Ideas
- ✓ Said and Unsaid
- ✓ The Piano Music
- ✓ *Thoughtings: Between My Ears*
- ✓ *The If Machine: Thinking About Nothing*

Source: This was inspired by 7-year-old Elena who said 'the music I hear in my head' when the class was asked to think of more examples of things they might find in their head that are not physical such as 'thoughts' rather than 'brain'. (This discussion was conducted around the *Thoughting: Between My Ears*.)

Philosophy: The phenomenology of sound, the ontology of sound/music.

A Heap of Exercises?

Peter Worley

Starting age: 7 years

Exercise 1

1. Make a heap of something such as books, pencils, beads, etc.
2. Now take one of whatever-it-is away. Is it still a heap?
3. Take another away. Is it still a heap?
4. Keep going until you think it is no longer a heap.

Start Question 1 When is it no longer a heap? And why?

Exercise 2

1. Put one book, pencil, bead, etc. on the floor. Is it a heap?
2. Put another of whatever-it-is on the floor with the other one. Is it a heap now?
3. Put another one on the others. Is it a heap now?
4. Keep going until you think you've got a heap.

Start Question 2 When will it become a heap? And why?

Questions to take you further

- ❖ **What is a heap?**
- ❖ At what point does a heap become a heap?
- ❖ At what point does a heap cease to be a heap?
- ❖ Can this puzzle be solved?
- ❖ When is it true that a heap is a heap and when is it false that a heap is a heap?
- ❖ Can it be neither true nor false?
- ❖ Can it be both true and false?
- ❖ Are the exercises on this page a heap of exercises?

Extension activity 1

1. Place a piece of A4 paper in front of you horizontally.
2. Draw a picture of a baby on the left hand side of the paper and then a picture of a child on the right hand side.
3. Draw a horizontal line between the baby and the child.
4. Place an X on the line where you think the baby becomes a child. Can you do it?

Extension activity 2

1. Start whispering.
2. Imagine that someone is turning you up as if they had a remote control with a volume switch that controls you.
3. Gradually get louder until your whisper has turned into a scream.

Start Question 3 When exactly does a whisper become a scream?

Extension activity 3

Start Question 4 Where is the edge of a cloud?

Questions to take you further

- ❖ What is a cloud made of?
- ❖ How would you find the edge?
- ❖ How would you know when you have found the edge of a cloud?
- ❖ When a cloud of steam comes out of a kettle where is the edge of the cloud of steam?
(*Important:* Be very careful around steam from a kettle!)
- ❖ Does a cloud have an edge?
- ❖ When a cloud rains where does the cloud end and the rain begin?
- ❖ Is water or ice the same thing as a cloud?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Tralse
- ✓ Phil and Soph and the Three-Legged Race
- ✓ The Txt Book
- ✓ Not Half the Man He Used To Be
- ✓ Zeno's Parting Shot

Source: The Ancient Greek Sorites Paradox (*sorites* is Ancient Greek for ‘heap’); thanks to David Birch for the extension activities and 11-year-old Clarissa for the question ‘Where is the edge of a cloud?’

Philosophy: Vagueness, bivalence.

Across the River and Into the Trees

Angie Hobbs

Starting age: 9 years

The day after her ninth birthday party, Lucy felt that the celebrations should continue. ‘It’s still my birth week,’ she pointed out. As it was a beautiful warm Sunday in May, her mother suggested she invite two or three friends over, and that they would all prepare a picnic and take it to a bluebell wood nearby.

So they packed up a basket with pizza slices and chocolate cakes and strawberries and set off across the fields towards the bluebell wood. Just before they reached the wood, they had to cross a small river by an old wooden bridge, the water bubbling over smooth white stones and sparkling in the sun. They stopped for a few minutes to throw twigs into the river, to see whose stick would emerge first from under the bridge. Lucy (who was wearing boots) sat on the bridge and dipped a foot in the river, watching it swirl around her boots.

They ate their picnic beneath a huge, gnarled old oak tree, and then climbed the tree and laid a trail through the wood. Then they lay down and played games on their phones, the mother protesting. But they took no notice of her because they were happy.

Finally, they packed up the basket and returned home, crossing over the bridge again. All their sticks had long vanished, apart from one, which was still stuck in some weed. Around the stuck twig, the water eddied and swirled.

Start Question 1 When they walk over the bridge, are they crossing the same river? If so, why? If not, why not?

The following year Lucy asked to repeat the picnic trip. This time they went after school, on the Monday. They went over the bridge (Lucy dangling her foot in the water again), and saw that part of the bank had crumbled away, probably in a recent storm. They ate under the oak tree and played with their new phone apps amongst the bluebells. The mother had given up protesting and everyone was happy. They returned home, stopping on the bridge to throw twigs into the water. The mother's twig emerged first.

Start Question 2 One year on, are they crossing the same river? If so, why? If not, why not?

Questions to take you further

- ❖ If you think it is the same river, then what makes it the same river?
- ❖ If you think it isn't the same river, then why (and how) do we still call it 'the river'?
- ❖ Why (and how) do we still give it the same name?
- ❖ How can we use stable words for unstable objects?
- ❖ Is the oak tree under which they picnic the same oak tree?
- ❖ Is Lucy the same person at 10 as she was at 9?
- ❖ If everything is always changing in at least some respect, then what (if anything) allows it to be the same thing?
- ❖ If everything is always changing, then how do identities – of a river, an oak tree, a girl – form in the first place? Perhaps there is just a swirl of change and no separate things?
- ❖ Does it make a difference how fast or slow the pace of change is?
- ❖ Does it make a difference if things are simply *liable* to change, rather than actually changing all the time?
- ❖ **What is change?**

Questions to take you even further

- ❖ This story is based on a paradox of the ancient Greek philosopher Heraclitus, who said that you couldn't step into the same river twice, because different waters were always flowing. His disciple Cratylus said that you couldn't step into the same river even *once*! In a world of extreme flux, identities cannot even form. We cannot, strictly speaking, talk of a 'river' at all.
- ❖ Do you agree with Cratylus?

- ❖ Can anyone agree with Cratylus using words? Or is he giving us a picture of the world in which language cannot exist? (Cratylus apparently gave up answering questions, and just sat there silently.)

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Identity Parade
- ✓ 'Personal Identity' section
- ✓ Pencil Person Meets Pencil Person!
- ✓ *The If Machine*: The Ship of Theseus
- ✓ *Thoughtings*: Flow

Source: The Pre-Socratic philosopher Heraclitus and his pupil Cratylus.

Philosophy: Identity, change/flux.

Dis-ingenuous

Peter Worley

Starting age: 10 years *Advanced*



Ali had heard that if you rub magic lamps they release genies, and he had also heard that genies grant wishes to those who free them from the lamp.

Ali had been rubbing lamps for three weeks now, almost non-stop. He was very tired and bored and was about to give up when suddenly the lamp he had been rubbing started to glow. He dropped it with surprise, as he had long since given up thinking that such lamps existed. A blue smoke rose out of the lamp's spout and it was not long before he was looking at a genie sitting on top of a strange cloud that had formed above the lamp.

'I am the genie of the lamp,' said the genie in a booming, echoey voice, 'and I am the most *powerful* genie that you will ever have met.'

'Well, *yeah* ... because you're the *only* genie I've ever met,' replied Ali facetiously.

'But even if you had met a thousand genies I would be *the most powerful*,' the genie continued to boast, 'because I am what's called "The Ingenious Genie of Omnipotence", which – by the way – means "all-powerful" ...'

In fact, Ali had to listen to almost half an hour of how powerful the 'all-powerful' genie *powerfully* was and by the time the genie got around to telling him that he would grant wishes to whomever had released him, Ali was quite bored and irritated at all the boasting. He was also disappointed to discover that this genie would only grant *two* wishes when Ali had heard that genies grant *three*!

The genie came to the end of his long speech and then said, 'So, I will grant you two wishes. You can wish for anything you want, and remember: nothing is impossible for The Ingenious Genie of Omnipotence!'

Due to his irritation at the excessive boasting, Ali came up with his own ingenious wishes that he knew would shut up the genie once and for all. *Genius!* he thought to himself.

'I wish ...' said Ali with a mischievous sparkle in his voice, 'for you to create a mountain you cannot move.'

'Nothing's impossible for The Ingenious Genie of Omnipotence,' said the genie and he took his wish-granting pose. In an instant there was a huge mountain that stood imperiously before them both.

'Are you sure you can't move it?' said Ali.

'Yep!' assured the genie, though Ali noticed that he didn't seem to have tried. 'Now for your second wish,' urged the genie impatiently.

'Okay. For my second wish I wish ...' – his eyes sparkled even more – 'that you move the mountain you just created!'

'But ... but ...' the genie looked confused.

'That should teach you not to be so boastful about something you're not!' said Ali. But then Ali realised that he had wasted his wishes ingeniously outwitting the genie and was left with no wishes for himself. Oh dear! Silly Ali.

Start Question If he can do anything, will it be possible for the all-powerful genie to grant both wishes? Here they are:

Wish 1: To create a mountain that the genie cannot move.

Wish 2: To move the mountain that the genie just created.

Questions to take you further

- ❖ Is nothing impossible for the genie?
- ❖ Is nothing impossible?
- ❖ What does Ali mean when he says to the genie that he shouldn't boast about something he's not? What is it that he's not?
- ❖ Has Ali thought of something that is impossible for the genie?
- ❖ Has Ali proved that the genie was not omnipotent after all?
- ❖ Can you think of something that is definitely impossible?
- ❖ What would happen if the genie was able to grant the wish?
- ❖ What would happen if the genie was unable to grant the wish?
- ❖ 'For nothing is impossible with God' (Luke 1:37). Discuss.

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ 'Time' section
- ✓ Some Sums with Zero
- ✓ Itselfish
- ✓ Tralse
- ✓ Just Testing!
- ✓ *Thoughtings*: Impossibling and More Impossiblings ...

Source: Ibn Rushd (known in the west as Averroes) and the paradox of omnipotence.

Philosophy: Philosophy of religion, logical possibility.

Just Testing!

Peter Worley

Starting age: 9 years *Advanced*

Imagine that before God had created anything at all he decided, first of all, to create just one thing. He decided to create a planet, just to test out his creation skills. So he did: *kazoom!*

Start Question 1 Is the planet that God has created big?

Questions to take you further

- ❖ How big is big?
- ❖ What determines something's size?
- ❖ What is size?
- ❖ Can something be big in itself?
- ❖ Does size depend on comparison?
- ❖ If there's nothing to compare the planet to then what size would it be?
- ❖ What size would God be?
- ❖ Is big big?
- ❖ Is there anything that's just big and never small?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Dis-ingenuous
- ✓ The 2 Square
- ✓ What Zeus Does When He's Bored
- ✓ *The If Machine: The Shadow of the Pyramid*

✓ *Thoughtings*: Number Wonders

Source: This thought experiment was introduced in a discussion with some 11-year-olds about whether numbers are invented or discovered.

Philosophy: Relational concepts, the nature of number.

A Pageful of Nothing

Sophia Nikolidaki

Big Question

Choose a question, any question from this page. Can you answer it? (Alternatively, you could choose a number randomly between 1 and 21 and then try to answer the question.)

Start Questions

1. Can something be full of nothing?
2. Does nothing exist?
3. Is there a place of nothing?
4. Can you ever really mean that 'you are doing nothing'?
5. What does 'nothing' mean?
6. Is there anything that could replace nothing?
7. Is nothing just a word? In that case can we insist that 'there is nothing there'?
8. Can a sound ever fade into nothing?
9. Is zero nothing?
10. Can you draw nothing?
11. Can nothing ever be useful?
12. Why do we use the word nothing to praise something? (e.g. How does the sentence 'there is nothing better than a good cup of tea' make sense?)
13. Can somebody/something be nothing?
14. Can you feel/think/do nothing?
15. Do 'being unimportant' and 'being nothing' mean the same thing?

16. What was before nothing?
17. What comes after nothing?
18. Is a hallucination a form of nothing?
19. Can you hide nothing(ness)?
20. Is hiding fading into nothing?
21. Is there anything less than nothing?

Are there any more *nothing-questions*? Can you continue to fill the page?

Your Questions

❖

❖

❖

Works well with

- ✓ Immy's Box
- ✓ A Hole Load of Nothing
- ✓ Doughnut
- ✓ Empty
- ✓ *The If Machine: Thinking About Nothing*
- ✓ *Thoughtings: A Disappearing Riddle, Where's Mr Nobody?*

Philosophy: The Pre-Socratic philosopher Parmenides and nothingness, Sartre, Heidegger.

BURIDAN's Asteroid

Robert Torrington

Starting age: 9 years

For 3,141 years the Benevolent Universal Research, Identification, Definition and Navigation computer (BURIDAN, for short) had guided what remained of the

human race through space in its search for a new world. Its advanced mathematics, faultless reasoning and perfect logic had kept the human race safe for millennia.

But one day, BURIDAN stopped the ship.

Exactly 100 light-years to the left was an asteroid so large that it would be suitable for human life. But exactly 100 light-years to the right was a second asteroid identical to the first. Each one was the same shape and the same size. Each was the same distance away. They were identical. In fact, if they hadn't been in two different places, you would have thought they were the same object. With no difference between the choices, and it being impossible to go in both directions at once, BURIDAN had no reason to choose one or the other. So the ship stopped.

The crew asked BURIDAN why the ship had stopped, and were told exactly what had happened.

'Just choose one, BURIDAN,' they requested.

'How will I choose?' BURIDAN replied.

'It doesn't matter – just pick one, left or right.'

'My programming permits me only to act in accordance with reason. I am free only to do what is logical. There is no reason to choose one or the other. I would be acting illogically if I choose either.'

'But it's ridiculous to sit here and do nothing. If you don't move eventually, we'll be stuck here forever.'

'Nevertheless, there is no logical way to decide.'

Start Question Is there a logical way to decide?

Questions to take you further (according to themes)

Logic and reason

- ❖ What is acting logically?
- ❖ **What is logic?**
- ❖ **What is reason?**
- ❖ Was BURIDAN right to stop?
- ❖ How should BURIDAN decide what to do?
- ❖ Do we think like BURIDAN?
- ❖ Are we logical, illogical or non-logical (what's the difference between illogical and non-logical?)?

- ❖ Which would you rather be: logical or illogical?
- ❖ How important is being logical?

Freedom and thought

- ❖ BURIDAN can only do what is logical; is BURIDAN free?
- ❖ Are you free if you only do what is logical?
- ❖ When are you free?
- ❖ Are we free?
- ❖ **What is freedom?**

Identity and physics

- ❖ Is it possible for two things to be identical?
- ❖ **What does 'identical' mean?**
- ❖ Can one thing be in two places at once?
- ❖ Are some twins identical?
- ❖ Is '1 + 1' identical to '2'?
- ❖ Are you identical to you?

Your Questions

- ❖
- ❖
- ❖

Works well with

Freedom and logic:

- ✓ Other entries in the 'Freedom' section
- ✓ Charlie's Choice
- ✓ Negative Nelly
- ✓ The Accidental Confession
- ✓ Trying to Forget
- ✓ The Traffic Light Boy (3)
- ✓ *Thoughtings: Minds and Brains and Are You Free?*
- ✓ *The If Machine: The Lie, The Frog and the Scorpion*

Identity:

- ✓ Pencil Person Meets Pencil Person!
- ✓ The Copying Machine
- ✓ Identity Parade (3): Body Copy
- ✓ Across the River and Into the Trees
- ✓ *The If Machine*: The Ship of Theseus, The Rebuild
- ✓ *Thoughtings*: Flow

Source: The story of Buridan's ass, in which a donkey was unable to choose between two clumps of grass at equal distance from the donkey. The donkey starved to death! The story was invented to make fun of Jean Buridan's philosophy of free will.

Philosophy: Buridan's ass, logic, Leibniz and 'Leibniz's Law', identity, the identity of indiscernibles.

Phil and Soph and the Ice Cream

Philip Cowell

Starting age: 5 years

Sitting out the back, in the last of the sun, at the end of another long day of play, Phil and Soph were enjoying some quiet time with bowls of ice cream. 'This is so delicious!' Phil said, as he took a big scoop and lifted it to his mouth. Soph had a full spoonful herself. 'I know!' she said. 'I would love to have a chocolate ice cream *that's blue!*'

Phil thought for a second and then said, 'I would like to try an *ice-cream-flavoured* ice cream.'

Sensing a competition, and after having had another mouthful of delicious ice cream, Soph said, 'I want an ice cream with *no flavour!*'

Start Questions

1. What would a blue chocolate ice cream taste of?

2. What would an *ice-cream-flavoured* ice cream taste of?
3. Would it be possible to have an ice cream with *no flavour*? (Is there *any* kind of food or drink with no flavour?)

Phil looked even more thoughtful now, and a bit of thinking time later he said, 'I wonder if there's such a thing as something with no taste, no smell, no colour, no sound and no feel.'

They both fell into silence as they thought about Phil's question whilst slurpily finishing off their ice cream.

Start Question 4 Can you think of something (not just food but *anything*) with no taste, no smell, no colour, no sound and no feel?

[Try to answer Start Question 4 before considering the suggestions below.]

What about:

1. Water?
2. Air?
3. Words?
4. Emotions (such as love, anger, etc.)?
5. Thoughts?
6. Nothing (as in 'nothingness')? Question: Is nothing something? Can you think of anything else?

Questions to take you further

- ❖ Why does anything taste of anything?
- ❖ Does ice cream have colour?
- ❖ Could you have an ice cream that has no colour?
- ❖ Could you have an ice cream that has no colour, no taste, no sound and no feel?
- ❖ Pretend you're Phil and you want to have an ice cream as philosophically interesting as Soph's. What would your 'philosophy ice cream' be?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Other Phil and Soph stories
- ✓ Who's the Philosopher?
- ✓ Bat-Girl
- ✓ Rose-Tinted Speculations
- ✓ More Colour Conundrums
- ✓ The Duck and Rabbit

Philosophy: The philosophy of colour and taste, qualia, the nature of thinking, paradoxes.

The Philosophical Adventures of Pencil Person

These sessions may well blend into each other as there is a good deal of overlap between the ideas. For instance, if the discussion in 'Introducing Pencil Person' turns towards the distinction between *types* and *individual things* then run 'Pencil Person Meets Pencil Person!' to help focus this.

Introducing Pencil Person

Peter Worley



Starting age: 7 years

Props: Four (or eight) pencils, a book, a ball (or any objects that can function as a 'head' and a 'body') – Pencil Person should have pencils, though, to be 'Pencil Person'.

Assembly instructions: Take four (or eight) pencils, a book and a ball. Place the book on the floor so that the book is facing you the right way up. Now place the pencils at the corners of the book to make arms and legs. Finally, place the ball at the top to make a head.

(For younger ones, before, during or after assembling Pencil Person, read or recite the poem 'Pencil Person').

Thinking: Pencil Person

I'm a person all made of pencils
Well, maybe not quite *all*
I've pencils for arms and legs
A book for a body
And my head is a ball.

So, here's a question for you
To get you chewing *your* pencils:
How many things am I?
Am I *One* or *Many*?
Though clearly made of utensils.

Start Question How many things are there here (point to the assembled Pencil Person on the floor)?

Questions to take you further

- ❖ Is Pencil Person one thing?
- ❖ Is Pencil Person many things? If so, how many?
- ❖ Is Pencil Person a person?
- ❖ How many different answers can you give to the Start Question above?
- ❖ Is there one thing *and* many things? At the *same time*?
- ❖ **What is a 'thing'?**
- ❖ **What is an 'object'?**
- ❖ Do the parts need to be connected to be one thing?
- ❖ Does it just depend on how we see it?

- ❖ Can someone be wrong about how many things there are?
- ❖ The philosopher Aristotle said, 'The whole is different from the sum of its parts.' What do you think he meant by this?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Just Testing!
- ✓ The 2 Square
- ✓ Some Sums with Zero
- ✓ A Knife Idea
- ✓ Disappearing Pencil Person
- ✓ Pencil Person Meets Pencil Person!
- ✓ How Many Dogs?
- ✓ A Heap of Exercises?
- ✓ *Thoughtings*: Number Wonders

Source and Philosophy: Mereology, Aristotle and the problem of one-over-many.

Disappearing Pencil Person

Peter Worley

Starting age: 9 years

Note to teacher: If running this with a class you could perform the trick similarly to the magician rather than read the story.

The Magician says that he is going to make Pencil Person disappear: ‘No – not just *disappear*’, says the Magician, ‘I’m going to make Pencil Person *no longer exist!*’ There is a collective intake of breath from the audience.

A drum begins to roll. The lights dim. The excitement of the audience can be felt by everyone. Then the Magician suddenly puts Pencil Person in a cloth bag and, in clear sight of the entire audience, he takes the bag out of the room and places it on the floor outside. He then comes back into the room, closes the door, rushes back onto the stage and says – whilst doing ‘jazzy hands’ – ‘T’dah! *Pencil Person no longer exists!*’

After a shocked silence someone in the audience says, rather tentatively, ‘But you just put Pencil Person in a bag then placed him on the floor outside the room.’

‘Yeah, so?’ replies the Magician to his disappointed audience.

‘Well, Pencil Person *does* still exist, he’s just *not in the room any more*’, says the disgruntled audience member.

The Magician begins to look irritated and he turns to the objector and says indignantly, ‘You tell me then: how else can you make Pencil Person no longer exist?’

Start Question 1 What can be done to make Pencil Person no longer exist?

Questions to take you further

- ❖ Would burning or blowing up the pencils, the book and the ball do the trick?
 - ❖ Is it possible to make something *no longer exist*?
 - ❖ Can something exist in our memories?
 - ❖ If something has existed at one time does that mean it will exist for all time, whatever happens to it?
 - ❖ What if something *doesn’t exist yet*? Does it not exist?
 - ❖ Can you make something exist that doesn’t exist now? If so, what?
-

After a while of arguing about whether Pencil Person still exists or not, the Magician has an idea. He leaps to his feet and brings the bag back into the room. He removes all the pencils, the book and the ball from the bag and proceeds to place each of the pencils in different people’s pencil-cases that are in different parts of the room. He puts the book on a bookshelf among many other books and the ball into a box full of different kinds of balls.

‘There!’ he says, ‘Now *surely* Pencil Person no longer exists!’

Start Question 2 Has the Magician done it? Has he made Pencil Person no longer exist?

Questions to take you further

- ❖ How do something’s parts have to have been arranged for it to exist?
- ❖ If the parts still exist, does that mean that the thing the parts made up still exists?
- ❖ **What does ‘exist’ mean?**
- ❖ Is the man a magician?
- ❖ If you were to make a paper aeroplane, fly it across the room and then unfold it again, would the paper aeroplane still exist? Try it.

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ A Knife Idea
- ✓ Doughnut
- ✓ A Heap of Exercises?
- ✓ ‘Personal Identity’ section
- ✓ Introducing Pencil Person
- ✓ Pencil Person Meets Pencil Person!
- ✓ The Time Diet
- ✓ *The If Machine*: The Chair, Get Stuffed, To the Edge of Forever
- ✓ *Thoughtings*: Space, Time and Other Weird Things

Source: Ibn Sina (Avicenna) and necessary and contingent existence – inspired by part of his ‘proof’ for the existence of God.

Philosophy: Ontology, existence, concept of a thing.



Pencil Person Meets Pencil Person!

Roger Sutcliffe



Starting age: 5 years

Follow the instructions on pages 41–42 to construct *two* Pencil Persons, next to each other, so that they appear identical.

Start Question Are they the same or different?

Questions to take you further

- ❖ Are they the same *sort* of thing?
- ❖ How many different ways can they be different?
- ❖ Why, if they are different in so many ways, do people agree that they are, after all, the same sort of thing?
- ❖ Can you look around and identify two things that are different *sorts* of things, but are ‘the same’ in at least one way?
- ❖ Can different things be the same in any way? If so, how?
- ❖ What makes something the same?
- ❖ What exactly does ‘same’ mean? What exactly does ‘different’ mean?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Introducing Pencil Person
- ✓ Disappearing Pencil Person
- ✓ ‘Personal Identity’ section
- ✓ How Many Dogs?
- ✓ The Duck and Rabbit

Metaphysics: Ontology (or Existence)

- ✓ Across the River and Into the Trees
- ✓ Pinka and Arwin Go Forth: Making Up Their Minds
- ✓ *The If Machine*: You On Another Planet, Can You Step in the Same River Twice?

Philosophy: Identity, type and token identity, universals and particulars, Plato and Forms.

Metaphysics: Time

Thoughting: A Birthday Surprise!

Peter Worley

Starting age: 7 years

I can travel backwards
Or keep going straight
I can go sideways;
Left or right.

But can I go *through* time
Forwards or backwards;
Do you think
that I might?

I wish I could
Coz then I would
Say 'Hello!' to my mummy

But for a birthday surprise
I would say 'Hello!'
just *before*
I popped out from her tummy!

By You (see A Poem By You? on page 58 to see how)

Start Question Would it be possible, with a time machine, to travel to a time before you were born?

Questions to take you further

- ❖ Do you think we could travel through time like we travel through space, forwards and backwards, left and right?
- ❖ What would it be like to travel left or right through time? Do you think it would be possible?
- ❖ Would travelling to a time before you were born lead to a contradiction (i.e. that it is both true *and* false that you have not yet been born)?
- ❖ Will a time machine one day be built or would a time machine be impossible?
- ❖ Would it be possible, with a time machine, to meet yourself?
- ❖ If you did meet yourself when you were younger, what might you say to your younger self? Would you have any advice?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ A Poem By You?
- ✓ Itselfish
- ✓ The Non-Existent Hero
- ✓ The Girl from Yesterday
- ✓ *Thoughtings: Space, Time and Other Weird Things*

Source and Philosophy: The philosophy of time travel, David Lewis' paper 'The Paradoxes of Time Travel'.

The Time Diet

Peter Cave

Starting age: 10 Years Advanced

Start Question 1 (to think about before reading the story): Do the past and future exist?

Samantha says, 'The past does not exist – after all, it is past, well past. It no longer exists. You can only have memories of it.'

Stanley says, 'The future does not exist – after all, it is future, so very future. It is not yet in existence. You can only guess what will happen.'

Sue says, 'Well, at least the present exists – and I live in the present. So that is all right.'

'Hold on,' say Samantha and Stanley, 'how long in time is the present? If it has any length – one hour, one minute, one second – then some of it must be in the past or in the future. So, how long is *now*?'

Start Question 2 How long is *now*?

Questions to take you further

- ❖ What is *now*?
 - ❖ Where is *now*?
 - ❖ Is *now* always moving or is *now* still?
-

'That's okay,' replies Sue, but now feeling very squeezed by time, getting thinner and thinner in time. 'The present is an instant, the line between past and future.'

'Ah hah,' chorus Samantha and Stanley. 'The future does not exist; the past does not exist. So, the present is just a line between things that do not exist. But that is impossible. How can there be a line, a boundary, a fence, between what does not exist?'

Sue feels herself getting thinner and thinner at this thought – so thin that she vanishes into nothing.

Start Question 1 (again): Do the past and future exist – as well as the present?

Questions to take you further

- ❖ What reasons can you give for why the past, the present and the future don't exist?
- ❖ Does the past exist, but not the future?
- ❖ How long does the present – does *now* – last?
- ❖ If the past does not exist, how can you have a memory of it?
- ❖ What is time like? How does it move? What is its shape? What does it do?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Other entries from the 'Time' section (particularly Time-Stretching, The Time-Freezing Machine, The Time Machine, The Girl from Yesterday)
- ✓ Empty
- ✓ *Thoughtings*: From Me To You and Space, Time and Other Weird Things, especially Petering

Philosophy: Philosophy of time, St Augustine and presentism, McTaggart and static and dynamic time.

Empty

Peter Worley

Starting age: 7 years

Imagine an emptiness. There's nothing in the emptiness, just ... emptiness!

Start Question 1 Is there *time* in the emptiness?

Questions to take you further

- ❖ If nothing happens in the emptiness, is there time?
- ❖ If nothing changes in the emptiness, is there time?
- ❖ **What is time?**
- ❖ **What is change?**
- ❖ Is time something different from change?
- ❖ The philosopher Aristotle thought that 'time is the measurement of change.' Do you agree with him? If no change happens in the empty space, then would Aristotle think that there is time or not?

Start Question 2 Is there *space* in the emptiness?

Questions to take you further

- ❖ If there is nothing *in* space, then is there space?
- ❖ **What is space?**
- ❖ What would the world be like if there wasn't any space?
- ❖ The scientist Isaac Newton thought that there *would* be space in emptiness because space would be needed if there was something to put in it. The philosopher Gottfried Leibniz thought that there *wouldn't* be any space in emptiness because there is only space when there is something for there to be a space between. Who do you agree with and why?
- ❖ The philosopher Immanuel Kant thought that there would only be time and space if there was someone to *think of them*. Do you agree or disagree?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ The Time Diet
- ✓ Immy's Box
- ✓ Doughnut
- ✓ A Hole Load of Nothing
- ✓ A Pageful of Nothing

- ✓ *The If Machine*: Thinking About Nothing
- ✓ *Thoughtings*: Space, Time and Other Weird Things, especially Space

Source and Philosophy: Aristotle on time, Newton and absolute space, Leibniz and relational space, Kant and *a priori* space and time, Sydney Shoemaker's 'Time Without Change'.

Superbaby Time!

Peter Worley

Starting age: 7 years

Superbaby is a superhero with super-powers but with the mind of a child. One day Superbaby is playing a computer game and he super-loses. He gets super-angry and wants to play again. Instead of just pressing 'restart game' on the controls he decides that he wants to make time go super-backwards so that he can play the game again but this time not super-lose! He flies up to the very top of Mount Everest, grabs hold of the mountain and uses his supreme super-strength to make the Earth revolve in the opposite direction so that he can make time go in the opposite direction too.

Start Question If the world were spun in the opposite direction would this make time go backwards?

Questions to take you further

- ❖ Does time move?
- ❖ Does the earth's movement cause the movement of time?
- ❖ What do you think makes time move?
- ❖ What do you think would happen if the world suddenly spun the other way?
- ❖ Clearly Superbaby has super-strength but does Superbaby have super-reasoning skills as well? Is Superbaby super-right or super-wrong when he reasons that if the world spins backwards, time will go backwards?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Empty
- ✓ The Telly-Scope
- ✓ The Time-Freezing Machine
- ✓ Time-Stretching
- ✓ The Big Time Experiment
- ✓ The Time Machine
- ✓ *Thoughtings: Space, Time and Other Weird Things*

Source: The film *Superman* directed by Richard Donner.

Philosophy: The direction of time.

The Telly-Scope

Peter Worley

Starting age: 11 years

Lilly loves to watch her favourite soap opera *The Zargonians*. She laughs and cries with the characters as she sees their lives unfold. Sometimes it is boring and sometimes it is exciting and sometimes it is very sad. But Lilly lives in a time when soap operas are very different from how they were in your time – a time in the far future from you. They don't use actors because they don't need to. What they do is point a very powerful telescope at a distant planet and they simply watch the lives of the inhabitants of the planet in their homes on what they call a 'Telly-Scope'. Viewers learn the languages and study Zargonian culture at school. It is much more than a soap opera but people watch it and enjoy it like one.

When one of the main characters, a Zargonian boy called Noob, is very sad because of something that happens in his family, Lilly wants to contact him to comfort him. She asks her mum, 'Can I contact the Zargonians? After all, they are real aren't they?'

Her mother looks at her and says, 'Yes, they are real ... in a manner of speaking ...' She has a concerned expression on her face.

'What is it, mummy?' says Lilly.

'There's something I need to tell you but I'm not sure how to explain it.'

'Tell me what?' asks Lilly.

'Well,' begins her mother, 'if you look at the sun you actually see the sun, not as it is now, but as it was eight minutes ago.'

'That's weird. But how?' asks her daughter.

'It's because light travels at a certain speed. It's very fast, travelling at 299,792,458 metres per second. But the sun is so far away that it takes light travelling at that speed *eight minutes* to get here. That's why we see the sun as it was eight minutes ago.'

Lilly thinks for a moment then says, 'So if I want to see the sun as it is right now I would have to wait for eight minutes?'

'That's exactly right,' says her mother. 'We say that the sun is "eight light-minutes away" because it takes the light from the sun eight minutes to get here,' her mother finishes. Then she adds, 'But remember, Lilly: *you must never look at the sun directly* – it could blind you!'

'But what's that got to do with *The Zargonians*?' asks Lilly, not really listening to her mum's warning.

'The thing is, Lilly: Zargonia is over *ten million light-years away*.'

'So, let me see ...' says Lilly thoughtfully as she looks up and holds her chin, 'that means ...'

[*Before reading on: what do you think it means?*]

... that if "eight light-minutes" means that it takes light eight minutes to reach Earth then "ten million light-years" must mean ...' – Lilly's face darkens as she realises what it means – '... that it takes light *ten million years* to reach Earth. But that must mean that what I watch on the Telly-Scope isn't happening now at all.'

'That's right Lilly,' says her mother, trying to reassure her.

'It must have happened ten million years ago,' says Lilly. 'When I watch my favourite soap opera I'm peering into history.'

'I suppose you're right,' says her mother, slightly startled. She hasn't thought of it like that before.

Lilly is quiet and thoughtful for a few days. She feels very sad, as if there has been a death in the family, even though the people in *The Zargonians* have died millions of years ago. But then she has an idea that brightens her mood. It occurs to her that when she watches *The Zargonians* she travels through time using the miracle of the speed of light ... and the Telly-Scope.

Start Question Is watching *The Zargonians* a form of time travel?

Questions to take you further

- ❖ Are you time travelling every time you look at the sun (though, remember it is dangerous to look at the sun directly!)?
- ❖ Some stars are so far away that we are still seeing their light even though they no longer exist. When you look at old, dead stars, is that time travel?
- ❖ If it is not time travel, are you at least 'peering into the past' as Lilly said?
- ❖ Is Lilly right to feel sad about her discovery that the Zargonians lived a very long time ago?
- ❖ Will it change the way she watches *The Zargonians*?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Superbaby Time!
- ✓ Empty
- ✓ The Time-Freezing Machine
- ✓ Time-Stretching
- ✓ The Big Time Experiment
- ✓ The Time Machine
- ✓ *Thoughtings: Time, Space and Other Weird Things*, particularly Light from Stars

Source: Einstein's theory of relativity.

Philosophy: The philosophy of time travel.

A Poem By You?

Peter Worley

Starting age: 10 years

One day, whilst you are minding your own business watching the TV in your bedroom, something very strange happens. There is a weird distortion in the air in the middle of the room. Then, through the distortion steps a person. It appears to be some kind of doorway. Odd as it may seem, it's nothing compared to who it turns out the person is. For the person is you.

They explain that they are from the future. You are being visited by a *future you*. They hand you a piece of paper. On it is a poem called 'The Birthday Surprise'. Then they say, 'You must copy this into your own handwriting so that you can win a poetry competition. If you do, then you'll be a famous poet when you grow up ... like me!'

'But where did *you* get it from?' you ask your visitor.

'I got it from the book that published the winning entries from the competition. You're in loads of poetry books in the future,' the other you replies.

'But where did *they* get it from?' you ask.

'They got it from you, of course!' explains the future you. 'It's your poem after all. Or it *will be* if you enter the competition. Sorry, I've got to go before the time portal closes again!'

The future *you* steps back through the doorway – or time portal, as they called it – and then the distortion fades leaving you dumbfounded at what has just happened to you. As instructed by ... *you*, you sit down, take out a piece of paper and quickly copy the poem down in your own handwriting:

The Birthday Surprise

I can travel backwards

Or keep going straight

I can go sideways;
Left or right.

But can I go *through* time
Forwards or backwards;
Do you think
that I might?

I wish I could
Coz then I would
Say 'Hello!' to my mummy

But for a birthday surprise
I would say 'Hello!'
just *before*
I popped out from her tummy!



Start Question Who originally created the poem 'The Birthday Surprise'?

Questions to take you further

- ❖ Has anyone created the poem?
- ❖ Is it possible for the poem to have come from nowhere?

- ❖ Does this story lead to a paradox (an impossible situation) or do you think it could make sense?
- ❖ Does this scenario prove that time travel is not possible?
- ❖ If not, then how would time travel make sense of situations like this one?
- ❖ If you win the competition, would you have cheated?
- ❖ Who should win the competition?

Your Questions

- ❖
- ❖
- ❖

Will work with

- ✓ The Birthday Surprise
- ✓ The Non-Existent Hero
- ✓ The Butterfly Effect
- ✓ The Girl from Yesterday
- ✓ Philosophical Poetry
- ✓ *Thoughtings: Archaeology and Anthology of Unwritten Poems*

Source: Short story 'The Muse' by Anthony Burgess.

Philosophy: The philosophy of time travel, David Lewis' paper 'The Paradoxes of Time Travel'.

The Time-Freezing Machine

Peter Worley

Starting age: 7 years Advanced

Professor Timothy Tempo has created a time-freezing machine. He takes his machine into a school to demonstrate it. He explains to the children that he can freeze time with his new machine. He turns to the class and asks them to give him

a length of time for him to programme into the machine. The first child to speak says, 'Five minutes?'

'Is anyone here feeling more adventurous than that?' says the Professor.

Another hand goes up. 'An hour,' says an unsure voice.

More hands go up.

'A day'

'A week.'

'A year.'

'Ten years!'

'A hundred years!'

'A million years!'

'Okay,' says the Professor. 'Now we're ready to try the machine. Let's freeze time for *one million years*.'

Some of the children look a little worried. He inputs the correct data into his time-freezing machine. 'When I press the red button on my machine,' explains the Professor, 'time will freeze for *one million years*.'

Some of the children hold each other's hands. The Professor leans forward and presses the red button ...

Start Question 1 What do you think will happen?

Questions to take you further

- ❖ If time freezes for one million years, how would the children know if it has happened?
- ❖ Will they know?
- ❖ Will anything be different?
- ❖ Would they be any older?

Once his finger releases the button, Professor Tempo looks up and smiles to his audience. 'So, how did that feel?' The crowd look more than a little confused. No one says a word. The only sound is the clock ticking on the wall. Then, a girl in the audience bravely raises her hand. 'But, Professor, nothing has happened ... everything is the same. Time has just kept on going.'

'No it hasn't,' the Professor replies. 'It's been stopped still for one million years.'

‘But I can’t tell any difference!’ exclaims the girl, frustrated.

‘Well,’ muses Professor Tempo. ‘How would you tell?’

Start Question 2 How would you tell if time has stopped?

Questions to take you further

- ❖ How do we know time isn’t stopping all the time?
- ❖ If nothing changes, could you still think?
- ❖ **What is time?**
- ❖ What would have happened to the world outside the classroom?
- ❖ Does the idea of a time-freezing machine make sense?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Empty
- ✓ Superbaby Time!
- ✓ Time-Stretching
- ✓ The Big Time Experiment
- ✓ The Time Machine

Source: Martin Cohen’s *101 Philosophy Problems*. Thanks to Rob Torrington for part 2 of this entry.

Philosophy: The philosophy of time, Sydney Shoemaker’s ‘Time Without Change’.

Time-Stretching

Peter Worley

Starting age: 5 years

Little Timmy is excited about tomorrow because tomorrow is Timmy's birthday. But this week time seems to have slowed right down. Each day that he gets closer to his birthday seems to stretch out longer than the day before it. *How can that happen?* he thinks to himself, *how is it that time seems longer some days and shorter on others?*

Start Question 1 Does time slow down sometimes and speed up at other times?

Questions to take you further

- ❖ How fast does time go?
 - ❖ Does it change speed?
 - ❖ Imagine two children are playing together and one of them is having a lot of fun. For her an hour seems to take ten minutes. But the other child is bored – the same hour seems to take two! Is time moving at different speeds for each child?
-

The night before his birthday Timmy goes to bed and he thinks to himself, *I can't wait until tomorrow! I wish I had a time machine so I could get to my birthday quicker.* But then it occurs to him that he *does* have a time machine. All he has to do is go to sleep and he'll wake up in what seems like five minutes with his birthday finally arrived! ... All he has to do is go to sleep!

Start Question 2 If Timmy manages to go to sleep, when he wakes up will he have time travelled as if he were in a time machine?

Questions to take you further

- ❖ Is sleep a kind of time machine? If so, why? If not, why not?
- ❖ **What is a time machine?**
- ❖ If a time machine existed what would it be like?

- ❖ Do you think Timmy will get to sleep?
- ❖ Is time something that happens in the mind or outside of it?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ The Time Diet
- ✓ Empty
- ✓ Superbaby Time!
- ✓ The Time-Freezing Machine
- ✓ The Big Time Experiment
- ✓ The Time Machine
- ✓ The Girl from Yesterday

Source: This thought experiment was inspired by 8-year-old Rokas who wondered if time travels at different speeds for people having fun and those who are bored.

Philosophy: The phenomenology of time.

The Non-Existent Hero

Peter Worley

Starting age: 11 years Advanced

Herbert was a hero to all humankind but there was a small problem. Herbert didn't exist. Here's why.

Herbert's grandfather wasn't a very nice man and he did some rather bad things to a lot of people. He was also very, very rich. Herbert hated his grandfather for what he had done to so many people. When his grandfather died at the age of 80

Herbert inherited a great deal of money from him. He used the money to invest in the invention of the first ever time machine. Once it was built he travelled back in time and sought out his grandfather as a young man, at a time before he had done any of the many terrible things Herbert knew he would go on to do.

Herbert hid himself in a park opposite his grandfather's house, prepared his rifle and waited for him to emerge. Later that day, as his grandfather stepped out of the house, Herbert lifted his rifle and pointed it at him. With his grandfather firmly in his sights he paused as the tragedy of his situation dawned on him. Yet, despite this, he decided that his own tragedy was a price worth paying for what he was about to do for humankind.

He pulled the trigger.

And that's why Herbert doesn't exist.

Start Question Can you explain why Herbert doesn't exist?

Questions to take you further

- ❖ Does this story make sense? Could the events in this story have happened?
- ❖ Some people think that situations like this prove that time travel is impossible. Do you agree?
- ❖ Why is Herbert's situation tragic?
- ❖ Is ceasing to exist a price worth paying for ridding the world of a very bad person?
- ❖ This story is an example of a 'temporal paradox'. What is paradoxical about the story?
- ❖ **What is a paradox?**

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ The Birthday Surprise
- ✓ A Poem By You?
- ✓ Dis-ingenuous
- ✓ Itselfish
- ✓ *Thoughtings: Puzzles and Paradoxes*

Source: David Lewis' paper 'The Paradoxes of Time Travel'.

Philosophy: The philosophy of time travel, time travel paradoxes.

The Big Time Experiment

Peter Worley

Starting age: 7 years

All the governments of the world have decided to try a huge experiment with time. In fact, it's the biggest experiment that's ever been done. At exactly 12 o'clock mid-day on the twelfth day of the twelfth month of the year 2112 all the clocks of the world are to be stopped. The scientist behind this huge operation, Professor Timothy Tempo, believes that when this is done time itself will stop.

Start Question 1 Is the Professor right – will time itself stop when all the clocks in the world are stopped?

There is a second part to Professor Tempo's big experiment. After all the clocks have been stopped, he is then going to have all the clocks in the world moved back by an hour simultaneously. He says that once this has been done the entire world, and therefore everyone on it, will have travelled back in time by one hour.

Start Question 2 Is the Professor right – will moving all the clocks back by an hour mean that everyone will have travelled back in time by an hour?

Questions to take you further

- ❖ Clocks were invented by humans, so was time invented by humans too?
- ❖ Do clocks make time move? If not, what makes time move?
- ❖ What was time like before clocks were invented?
- ❖ Would time have felt different before clocks were invented?

- ❖ Without clocks, how would you know what time of day it is?
- ❖ **What is time?**
- ❖ Does this experiment need to be performed for us to know whether Professor Tempo is right or wrong? Or can we know what will happen just by thinking about it?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Superbaby Time!
- ✓ The Telly-Scope
- ✓ The Time-Freezing Machine
- ✓ Time-Stretching
- ✓ The Time Machine
- ✓ The Girl from Yesterday
- ✓ The Pill of Life

Source: This thought experiment emerged from discussions with many primary school children about crossing different time zones.

Philosophy: The nature of time, the distinction between time and the measurement of time or 'clock time'.

Thoughting: The Time Machine

Peter Worley

Starting age: 7 years

I really could do with a time machine
I'm late for class: *it's history!*

When time is lost
Is it gone forever?
Or can we get it back
With a little endeavour?

But wait a minute
I *do* have one!
And I'm travelling in it
One second at a time.
Just think about it,
Don't look at me oddly,
My time machine is,
Well, it's my ... body!

Start Question Is your body a time machine?

Questions to take you further

- ❖ Does your body travel through time?
- ❖ Is time outside of your body or inside your mind?
- ❖ Can you name the three dimensions? Is time a dimension?
- ❖ If your body is not a time machine, then what is a time machine?
- ❖ What does the poet mean when he/she says, 'I'm late for class: *it's history!*'? Is it a history class they are going to?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ Superbaby Time!
- ✓ The Telly-Scope
- ✓ Time-Stretching
- ✓ The Big Time Experiment

- ✓ Tralse (first half)
- ✓ *Thoughtings*: From Me to You

Source: This came out of discussions with primary school children, some of whom made a similar suggestion themselves.

Philosophy: The nature of time travel.

The Girl from Yesterday

David Birch

Starting age: 7 years

It had been the most beautiful day of her life. To celebrate her birthday Jessica and her friends had taken a trip to a village by the sea. The sun was shining and the world was everywhere in colour.

They had visited a stables and hired horses. For hours they rode together along the shore, galloping through the sand, laughing with excitement. They rode the horses through the shallow water and became dripping wet as the ocean splashed wildly over them. They rode to exhaustion.

Later, Jessica and her friends walked into the village. They discovered a sweet shop that filled the entire street with the crazed, heart-dancing smell of sugar. They rushed in. Behind the counter an old man was weighing sherbet lemons.

'Guess what, mister?' Jessica said boastfully. 'It's my birthday!'

'Is it really?'

Jessica and her friends nodded with conviction.

'Well in that case,' said the old man, 'you can have as many sweets as you like.'

'For free?' they gasped in unison.

'For free,' uttered the old man simply, profoundly.

It had been the most beautiful day of her life and Jessica didn't want it to end. On the train home she desperately tried to stay awake, willing the day to last a little longer. But her drowsiness overwhelmed her and she was soon fast asleep.

She awoke to the sound of rain and her mother calling her to get dressed for school. 'Where did yesterday go?' she wondered in shock. She couldn't remember. One minute she was on a sun-lit train, and the next minute *this* – rain and school.

'I want yesterday,' Jessica told her mum.

'Don't worry about yesterday,' her mum said. 'It's today you ought to be thinking about.'

'But where did yesterday go? I miss it,' Jessica cried.

'There's yesterday,' said her mum pointing to a photograph Jessica's friends had taken.

'That's not yesterday. It's just a photograph. It's not real.'

Start Question 1 Where did yesterday go?

Questions to take you further

- ❖ Where does yesterday go?
- ❖ Where is the past?
- ❖ Does the past exist?

Jessica's heart ached for yesterday so she found her way back to the station and caught a train. She was going in search of yesterday.

She returned to the beach where she and her friends had raced madly. But yesterday wasn't there. The prints from the horses' hooves could still be seen, but were fainter, fading. And whereas the ocean yesterday was blue, today it was grey.

She walked into the village and found the sweet shop.

'You're the girl from yesterday!' chirped the old man happily as she walked in.

'No,' Jessica replied sadly, 'I'm the girl from today.'

'Why the long face?' asked the old man. 'It's the beginning of a whole new year of your life.'

'My mum said that too. She said I should stop thinking about yesterday.'

'She's right. You have such a lot to look forward to.'

'But I don't want to just go forwards. I'd like to go backwards sometimes too.' A deep sigh. 'Where did yesterday go?' Jessica asked hopefully, truly believing the old man might know.

There was a pause. 'I wonder that myself,' the old man replied, his voice deflated.

‘Do you know?’

‘Some days I think it’s gone forever. Some days I’m not so sure.’

Gone forever. Jessica was stung by these words.

She left the old man to catch the train home, but she told herself that she would keep looking for yesterday.

As the train rocked along the tracks, Jessica’s body felt heavy. She could feel sleep coming over her. She closed her eyes and dreamt. She dreamt of ocean sounds and endless shores, the shimmering sun on gilded hair; she dreamt of pounding hooves and the rising moon, and all that was that wasn’t there.

Start Question 2 Will Jessica ever find yesterday or is it gone forever?

Questions to take you further

- ❖ Is the past inside us?
- ❖ Should we forget the past and only think about the present?
- ❖ Has the past gone forever?
- ❖ **What is the past?**
- ❖ **What is memory?**
- ❖ When we look at a photograph are we looking at the past?

Your Questions

- ❖
- ❖
- ❖

Works well with

- ✓ The Birthday Surprise
- ✓ The Time Diet
- ✓ Superbaby Time!
- ✓ The Telly-Scope
- ✓ Time-Stretching
- ✓ The Big Time Experiment
- ✓ *Thoughtings: From Me to You*

Philosophy: The ontology of the past, the nature of time.

The Butterfly Effect

Peter Worley

Starting age: 10 years Advanced

It's the year 2214 and the Time-Tourist Company offers the holiday of a lifetime. TTC – as the company is known – arranges trips through time using their patented 'Time-Tourist Company Time Machine'. Customers can travel to any time they like as long as it is in the past. It costs a small fortune to do but there is no shortage of willing customers for such a unique and thrilling experience.

In order to avoid any problems that may result from changing the past, TTC are able to place a special path that hovers above the world in the past so that the tourists cannot touch anything and thereby change the past. They are also invisible to anyone in the past. So all the time-tourists are able to do is view history.

But one day, whilst a group of time-tourists are visiting the Eocene period, between 40 and 50 million years ago, one of the tourists steps from the path despite having been strictly forbidden to do so. When the time-tourist wanders off the path they accidentally step on a butterfly, killing it underfoot.

Start Question Will stepping on the butterfly have any effect on the future? If so, what sort of effect do you think it could have?

Questions to take you further

- ❖ It is only a small change, so will it have any effect?
- ❖ Can a small change in the past have a large effect on the future?
- ❖ When the time-tourists return to their own time, will anything have changed?
- ❖ How are things through time connected?
- ❖ Is everything connected?
- ❖ The Eocene is the geological period in which the earliest butterfly fossils have been found. If the time-tourist had ended a particular species of butterfly, what effect might that have had?
- ❖ Would time travel be difficult for these reasons?

Your Questions

❖

❖

❖

Works well with

- ✓ Other entries from the 'Time' section (particularly The Non-Existent Hero, The Birthday Surprise, A Poem By You?)
- ✓ The Broken Window
- ✓ The Traffic Light Boy (1, 2 and 3)
- ✓ Jean-etic

Source: A short story by Ray Bradbury called 'A Sound of Thunder'.

Philosophy: Complexity, causation, chaos theory, contingency.