

Chapter 40

Mental Events and Physical Events

Get a photograph or a drawing or a small sculpture—something attractive that you enjoy looking at. Let's suppose it's a photograph of a good friend of yours. You were hiking along a river not very long ago and you took a terrific picture of your friend with the river and the forest in the background. Set the photograph in front of you. Here's what you will do: you will close your eyes, then open them for two or three seconds so that you are looking at the photograph, and then you will close your eyes again. After that, resume reading this book. Ready? Go.

You just had a particular visual experience, a visual experience of a photograph (or of whatever object at which you were looking). You saw how the photograph looked, you saw areas of light and areas of dark, you saw various colours, shapes, and patterns. Your visual experience of the photo began at a particular moment and ended at another particular moment. It lasted for two or three seconds. While you were having that visual experience certain thoughts crossed your mind. Perhaps you thought that you had a lot of fun with your friend that day. Or perhaps you noticed in the photo some snow on the ground and it occurred to you that the day must have been colder than you remember.

Your visual experience of the photo began at a particular moment, let us call it t_1 , and ended at another moment, let us call it t_2 . The chain of thoughts that accompanied your visual experience began maybe just a moment after your visual experience began and it ended with the end of your visual experience. Let's call the moment that that chain of thoughts began t_1^* .

Now here are our questions for this Part of the book: What is the relation between what was going on in your mind from t_1 to t_2 , when you were looking at the picture, and what was going on in your brain from t_1 to t_2 ? That is, what is the relation between the mental event of your visual experience and events occurring in your brain at exactly the same time? And what is the relation between what was going on in your mind from t_1^* to t_2 , when you were thinking about the picture you were looking at, and what was going on in your brain from t_1^* to t_2 ? That is, what is the relation between the mental event of your thinking the thoughts you thought and events occurring in your brain at exactly the same time?

What was the relation between seeing the colours and patterns in the photograph and the way the cells in your brain were firing while you were seeing the colours and patterns? What was the relation between thinking it must have been pretty cold that day and the way the cells in your brain were firing while you were thinking it must have been pretty cold that day?

1. Mental events

We've distinguished two sorts of mental or psychological event, those events we call experiences and those events we call thoughts. Vision, hearing, smell, taste, touch—all these give rise to experiences. So, too, do emotions and feelings. We can experience sadness or the feeling of determination and commitment. Our experiences include all of that of which we are

conscious or aware. Thoughts, on the other hand, include the beliefs we have and the ideas we consider. We have thoughts when we are thinking about something.

Experiences have a qualitative feel. There is something it is like to see or imagine red or to hear or imagine middle C or to taste chocolate. There is something it is like to feel pain or hunger or desire, or to feel elated or to feel worried. The felt quality of our sensations and our awareness is private to us, and it is directly present to us, in a way nothing else is.

Thoughts have propositional content, that is, they have meaning that can be given in propositions. The terms that figure in propositions make reference to things; they stand for objects or events. For this reason, propositions can represent states of affairs. Each proposition is either true or false, true or false in virtue of how the world is. Further, the propositions we believe stand in logical and evidential relations to each other. It's because of this that thoughts figure in reasoning, evaluating, drawing conclusions; it's because of this that thoughts, in the end, figure in our intentions to act and our actions. Another fact about thoughts is this: We know what we are thinking immediately, as soon as we turn our attention to the matter, without having to examine evidence.

Events are happenings, occurrences, changes. A mental event is any event that is either the having of an experience or the thinking of a thought.

2. *Physical events*

Let us turn now to your brain and the rest of your body. Your brain is a lump of various tissues, a part of your body. Your body is likewise a lump of various tissues. Tissues are made of cells, cells are made of organelles in plasma surrounded by a cell wall, each of these things is made of molecules, and all the way down to quarks and leptons and empty space—maybe it's possible to go down even further. Things made of molecules we can call material things. They are collections of matter. Going in the other direction, from small to larger, we find that tissues, made of matter, are integrated into organs, organs into organ systems, organ systems into the particular animal that is you or, at least, your body. Your body is a physical thing, made up of physical things. Physical things are nothing but matter and emptiness.

Your body respire, digests, sweats, and all the rest. It does these things in response to changes in the external environment around it. One event causes another causes another, and on and on. These events, physical events, events that involve changes in objects made of matter and occupying space, seem to occur lawfully, that is, with a strong sort of regularity. Your body is warmed by the heat in its environment, and it begins to sweat. You consume food and much of it is broken down into its constitutive molecules and those molecules are absorbed into your blood. A brick hits a pane of glass and the glass shatters. Drops of water wear away the rock.

A physical event is an event that involves a change in a material object, and changes in material objects seem to occur lawfully, exhibiting patterns.

3. *“Relations”*

A relation is whatever obtains between two things or among three or more things. Here are some types of relation:

Above, below, beside, to the left of, within, outside, between
Before, after, during, simultaneous with
Has, had, use to have
Friend, cousin, mate, wife, father
Cause of, effect of
Similar, dissimilar, darker, lighter, bigger, separate
Correlated with, evidence of
Identical to

Now one relation we might all agree can obtain between a mental event and a physical event is causation. That is, sometimes a mental event occurs because of a previous physical event, and sometimes a physical event occurs because of a previous mental event. For instance, the phone rings and you hear the phone ringing. The phone's ringing is a physical event, involving vibrations in a material object, the phone's bell or ringer, and vibrations in other material objects, including molecules of air and the membrane we call your ear drum. Your hearing the phone ring is a mental event, involving a sensation, a sensation that forms part of your experience of hearing the phone ring. The phone's ringing, a physical event, causes your hearing the phone ring, a mental event. Your hearing the phone ring, a mental event, causes your picking up the phone, a physical event. We've described a causal chain from mental to physical to mental.

Mental events are causes and effects of physical events. Maybe not every mental event causes some physical event, and surely not every physical event causes some mental event (we don't experience everything that happens in the physical world!). But there are, at least we are happy to suppose, cases in which a physical event has a mental effect and cases in which a mental event has a physical effect.

Causation, we tend to think, occurs only between events that are staggered in time. Of any two events related as cause and effect, the cause precedes the effect and the effect follows the cause. We are right now asking, though, what is the relation between a mental event and one or another physical event that occurs simultaneously with that mental event. We are asking, that is, what is the relation between two events that begin at exactly the same moment and end at exactly the same moment. If causes occur before their effects and effects occur after their causes, the relation between your visual experience of the photo of your friend and what was going on in your brain exactly during that experience cannot be causation. Neither the mental event caused any of the physical events in question nor did any of those physical events cause that mental event, for all these events were occurring at exactly the same time.

Perhaps our ideas about causation will need to be revised. Perhaps, if we are to understand the relation between mental events and simultaneously occurring physical events, we will have to find room in our thinking for the notion of instantaneous causation, the notion that cause and effect can occur simultaneously. We will see.

4. Identity

If the relation between your experience of the photo and what was happening in your brain as you were having that experience is not effect and cause or cause and effect, then what is it? If the relation between your thinking that it must have been colder that day than you remember and

what was happening in your brain as you thought that thought is not effect and cause or cause and effect, then what is it?

The type of relation named at the end of the list of relations above is identity. This is a relation pretty well only philosophers ever mention. Identity is the relation that each thing has to itself. Each thing is the thing that it is. Each thing is the same thing as itself. Each thing is identical to itself, and not identical to any other thing. Now in everyday talk people say such things as that one house is identical to another house, or that two people were wearing the identical shirt. “Identical,” in these uses, means having the same salient properties. The identical houses exhibit the same design, the same trim, the same colours, the same whatever. But they are not one and the same house. Thus they are not identical with each other in the philosopher’s sense of that word.

Indeed, no two things at all are identical with each other in the philosopher’s sense of identity. Two different things are always two things, never one and the same thing. Each thing is identical to itself, and not identical to anything else. We said at the beginning of the previous section that a relation is whatever obtains between two things or among three or more things. That’s wrong, for a thing can be related to itself. One relation a thing has to itself is identity.

Of course, one and the same thing can be described in different ways. Bob Dylan is Robert Zimmerman. Being 0 Celsius is being 32 Fahrenheit. Russia is the largest country in the world. China is the most populous. The man who wrote *On the Road* is the author of *The Subterraneans*. These are statements of identity. They tell us that the thing named or described in the subject part of the statement is the same thing or person named or described in the predicate part of the statement. The name “Russia” refers to the largest country in the world and the description “the largest country in the world” refers to Russia.

Statements of identity are often extremely informative. One can learn something when one discovers that a statement of identity is true.

5. Mental events are physical events

Here’s an idea: The visual experience you recently had of that photo of your friend is (is identical to) some event or series of events that occurred in your brain. The event of your thinking that it must have been colder that day than you remember is (is identical to) some event or series of events that occurred in your brain. Between t_1 and t_2 , you were consciously aware of the photo in front of you and between t_1 and t_2 specific neurons in your brain were firing in certain ways, and your conscious awareness of that photo and some set of neural firings are one and the same thing. Between t_1^* and t_2 you were thinking thoughts about that photo and what it represents and between t_1^* and t_2 specific neurons in your brain were firing in certain ways, and your thinking those thoughts and some set of neural firings are one and the same thing.

The idea is that mental events are physical events. Each mental event is identical to some physical event; each mental event is the same event as some event in your brain or central nervous system. “Noticing in the photo a patch of snow” describes something that happened; “going into brain state α_{1z} ” also (let’s say) describes something that happened. And “Noticing in the photo a patch of snow” describes exactly the same thing that happened as “going into brain state α_{1z} ” does. Your noticing in the photo a patch of snow just was your going into brain state α_{1z} ; your going into brain state α_{1z} was exactly the same thing as your noticing in the photo

a patch of snow.

Mental events are physical events. Any event that can truly be described as the having of an experience or a sensation, as being a conscious awareness, can also be truly described in a way that mentions material things and only material things. Any event that can be truly described as thinking some thought, or coming to believe something, or wondering whether something, or doubting whether something, or imagining that something, can also be truly described in a way that mentions material things and only material things.

Some physical events cause mental events and some (maybe all) mental events cause physical events—this we have agreed is true. But that’s not what we are saying now. That causal relations obtain between the physical and mental is one thing. That the mental is (just is) the physical is another thing. What is the relation between whatever the experience you are having right now and your physical body? The idea we have introduced is that the experience you are having right now just is the state of (some parts of) your physical body.

6. Looking forward

Maybe each mental event is identical to some physical event, maybe not. Even if each mental event is identical to some mental event, we will want also to know whether or not the characteristics of an event in virtue of which it is a mental event are physical characteristics of that event. Physicalism about mental events takes two forms: reductive physicalism and non-reductive physicalism. Reductive physicalism says that mental events are physical events and mental properties are physical properties. Non-reductive physicalism says that while mental events are physical events, the mental properties of events are not physical properties of those events.

In the chapters to follow we will investigate three different positions regarding the relation between mental events and simultaneously occurring physical events. We will examine two types of physicalism: reductive physicalism, the position that neither events nor properties are mental without also being physical; and non-reductive physicalism, the position that all mental events have, in addition to their mental properties, physical properties and, thereby, are physical events as well as mental.

And we will examine the denial of physicalism. This is the position according to which whatever the relation is between a mental event and a simultaneously occurring physical event, that relation isn’t identity. There are physical events and there are mental events, and no mental event is a physical event. We’ll call this position “dualism,” for it says that happenings in the world can be of one or another of two sorts while no happening is of both sorts.

7. Summing up

But let us first sum up the key points of this introductory chapter.

Sometimes we are conscious, aware, of things outside us or how they look or of our feelings or of our thoughts. These are our experiences. Experiences have a qualitative feel to them. It is like something to have an experience of a red object or of a red image or to feel sick or to feel love. I’m directly in touch with how I’m feeling, at least when I turn my attention to the matter (though I might not be able to convey that feeling in words); to understand how you are feeling, though, I must observe and collect evidence and think about the evidence I’ve collected.

Sometimes we think. Our thoughts have propositional content—when we think something, there's something that we're thinking, and what that something is can be put as a statement. The elements of our thoughts, words, can refer to objects or events or properties, or fail to refer. Our thoughts, then are either true or false, though we might not know in any particular case which they are. Still, we are aware of what we are thinking directly. Though we need to collect and evaluate evidence to know what someone else is thinking, we don't need to bother with evidence to understand what we are thinking.

We live in a physical world, a world of matter and objects composed of matter, including our bodies. The physical world seems to be a regular or lawful or mechanical world, a place of cause and effect relations among events where like causes produce like effects.

There seem to be causal interactions between mental events and physical events. A physical event can cause one to have an experience, and a physical event can engender in one a belief or other type of thought. And having an experience can bring about changes in the material objects that make up the physical world, and so can having a thought.

We wonder what is the relation between our experiences and physical events that occur simultaneously with them, and what is the relation between our thoughts and physical events that occur simultaneously with them. Is the relation identity? Is each mental event some physical event? Or are physical events and mental events distinct, such that no mental event is a physical event?

We will now consider what reasons there are for thinking that mental events are physical events, and what reasons there are for thinking that no mental event is a physical event.