POSSIBLE WORLDS

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The following is an extract from the Pickwick Papers.
   The visitor talked, the Pickwickians listened,
   Mr. Tupman felt every moment more disposed for the
   ball. Mr. Pickwick's countenance glowed with an
   expression of universal philantropy; and Mr Winkle
   and Mr Snodgrass fell fast asleep.
   /I am using the Pickwick Papers because almost every
philosophical discussion about fiction uses Mr Pickwick./
Who is the Pickwick Papers about? Well it's about Mr
Pickwick and Mr Snodgrass and Mr Tupman and Mr Winkle.
Is the Pickwick Papers true? No it's fiction. Did these
men actually exist? No, they did not. There never was a
Mr Pickwick or a Mr Snodgrass or a Mr Tupman or a Mr
Winkle /though of course there may have been other
people with the same names, but the Pickwick Papers wasn't
about them/. But if there never were such people, it seems
that the Pickwick Papers is not about anybody. And that's
absurd, because the Pickwick Papers is about someone.
It's about Mr Pickwick and Mr Snodgrass and Mr Tupman and
Mr Winkle and Sam Weller and Mrs Bardell and Ben Allen
and Bob Sawyer and Uncle Tom Cobbly and all.
   What is the solution to this philosophical puzzle?
Compared with the quite remarkable philosophical ingenuity
which has been expended on the problem of how to analyse
talk about things which do not exist, my solution is
simple almost to the point of naivite. I say that Mr
Pickwick and Mr Snodgrass and Mr Tupman and Mr Winkle
do indeed exist all right, but not in the actual world,

only in another possible world. They exist in the possible
world in which all the things that are said to happen
really do happen. In that possible world Mr Pickwick
really is sued by Mrs Bardell and spends three months in
the Fleet Street Prison; he really does witness an election
in the borough of Eatanswill and he really does spend
Christmas at Dingly Dell.

Possible worlds are things we can talk about or
imagine, suppose, believe in or wish for. We can never
though ever get to a possible world which is not the real
world; for if we could, and it just needs a little
recalling of science fiction to see how you might think we
might, then that would be part of the real world. That
is because the real world means the totality of what
actually happens.

When we say that a world is real world, we are of
course speaking from the point of view of our own world.
And a person in another possible world who speaks about
the 'real world' of course means his world not ours.
This is exactly parallel to the way we use the word now.
If I say "It is now 1977" I mean that at the moment at
which I am speaking it is 1977. And that is true. But
if I had said it a year ago, that very same sentence
would have been false for the moment of which I would
then have been speaking would have been 1976, which is
not 1977. Here is an extract from a story about another
philosophically well known fictional entity:

> To the fountain of Pirene, therefore, people's
> great grandfathers had been in the habit of going
> /as long as they were youthful, and retained their
> faith in winged horses/, in hopes of getting a
> glimpse of the beautiful Pegasus. But of late years
> he had been very seldom seen. Indeed, there were
> many of the country folks, dwelling within an hour's
> walk of the fountain, who had never beheld Pegasus,

and did not believe that there was any such
creature in existence.

Well, these disbelievers in Pegasus. Were they right
or were they wrong? If some philosophers had their way
the disbelievers would be right, for, as we know, there
are no winged horses, and Pegasus doesn't exist. But of
course the solution is very simple. For Pegasus does
exist in the possible world of that piece of mythology,
and so the disbelievers are wrong. The world in which·
they do their disbelieving is a world in which Pegasus
does exist. Of course they have their own belief worlds.
For the world as they conceive it to be does not contain ·
Pegasus.

Well so much for the utility of the idea of a possible
world. But is it just a fanciful way of speaking or do
they really exist? Are there possible worlds? Like a good
philosopher I'm not going to give a straight answer. I
am going to give a crooked answer, and that's "yes";
but I've got to explain first what I mean.

I have heard it maintained that there's only one world,
the actual one. This is enunciated as if it were a
truism and of course there is truism lurking in the
bushes. For of course only the actual world is actual. ·
This is like saying there is only one moment of time, now.
But of course even if the present is the only moment
which is with us, there are many other moments wich were
or will be with us. So although the actual world is the
only world which is actual yet there are many other
worlds which might have been actual.

I want to trade a bit on this parallel between actual
vs possible and present vs past or future. I want you to·
consider the question: Does the past really exist? And
I want to link this with some moves which I believe were
made during the days of the debate about evolution vs
special creation. It was observed that certain fossil
and other remains indicated that the earth must be

compatible with a simple and coherent description of the
physical laws which govern its behaviour as we observe
it?" And the answer is no! In the world about us we
observe physical regularities, which science has the job
of systematizing. For these laws to work in a completely
general fashion we need to suppose that the world has
existed for a very long time. Otherwise the codification
of the regularities would be ad hoc and unformalizable.
So we now can give an answer to "Does the past exist?",
not a deep metaphysical answer that it _really_ does or
really does not. But a pragmatic answer; that the only
way to get a systematic theory of the behaviour of the
observed world is to assume that there are moments of
time which are past moments.

Now back to possible worlds. Do they really exist? By
now you should see what I am going to say. We must not
ask whether they _really_ exist. We must ask: do they
contribute to a systematic theory of the observed world?
Possible worlds of course are unlike moments of time in
that they do not contribute to physical science. Physical
science is interested in discovering the regularities
of _this_ world. If I tell a fairy story in which a frog
changes into a Prince, while it may be that that world
will obey different scientific laws than ours, there is
no reason for a scientist to get upset, or think that I
have produced a new phenomenon for him to account for.
So it is not to be expected that the question to be asked
is whether possible worlds contribute to a systematic
physical theory. Perhaps the question is whether they
contribute to a good _metaphysical_ theory. Be that as it
may, I want for the remainder of this paper to describe
some of the ways in which possible worlds have been used
in order to explain some otherwise puzzling phenomena.

The key here is the systematic assumption of a
collection of possible worlds. Think again of the parallel

with time. In ordinary discourse we speak of moments
of time, periods of time, the beforeness of one moment
and another. But exact discourse demands more. So we
arrive at the mathematical model of time as the linearly
ordered continuum of real numbers. This is what I mean
by a systematic theory of the structure of time. Some-
thing of the same has happened with possible worlds. And
it happened as the outcome of the task of giving a precise
and systematic interpretation to that branch of logic
known as modal logic.

Modal logic is concerned with analysing the validity
of arguments involving things like "such and such must
necessarily be true" or "so and so might possibly be
true" or "such and such might have been true although it
isn't." To study these arguments formally, i.e. in a
systematic way, we have to be able to speak of truth and
falsity, not merely in the actual world but in all possible
worlds. Put more precisely we say that something is
possibly true, relative to a given world, iff it actually
is true in some world which is a possible world relative
to the original world. Thus if we say that it is possible
that men will fly to Mars we mean that among the worlds
which we in this world are able to bring about, there
occurs one in which men fly to Mars. And this can be so
even if no one, in the actual world, ever does fly to
Mars. The idea of one world being possible from another
or, as we call it in the trade, one world being accessible
from another, has turned out to have opened up a fascinating
area of pure logic in which both philosophers and
mathematicians have been doing some very interesting work.
For it turns out that the mathematical theory of relations
when applied to the accessibility relation between possible
worlds characterizes a huge variety of different systems
of modal logic.

But I'm not going to say much about modal logic,
fascinating as it is. There's a very good textbook for

those who want to pursue the subject.

I want in fact to say a little bit about some applications
of possible worlds in the philosophy of language. The philo-
sophical question which is at the back of all this is, very
vaguely, What is meaning? or, perhaps a little less vaguely,
What is going on when we say that the meaning of a
sentence is such and such? For an adequate solution to
this problem we must explain, in addition, how the
meanings of complete sentences depend on the meanings
of the words in them together with the syntactic structure
of the sentence.

Well, then let's take a sentence. Suppose I say, "There's
a dragon at the back of this room and he's breathing fire
and smoke." It's all right, there isn't really one there.
How could I get across the meaning of this sentence
independently of using language? Well, suppose we had a
machine /philosophers always like supposing they had
machines to do bizarre things with/ by means of which we
could shew on a screen a picture of each possible world.
Actually we'd only need to shew the part of the world which
involves this room. /Of course even this is an impossible
task for there are infinitely many different ways the
room could be and even the most ardent of colour slide
fanatics that I know of has never quite managed to have
an infinite collection./ As we shew each possible world
we say Yes if there is a dragon in this room in that world
and No if there is not. We assume that our hearer knows
what we are up to. I.e. although he does not know the
meaning of the sentence we are trying to teach him, he
does know that we are going to say 'yes' if the world is
one in which the sentence is true and 'no' if the world
is one in which the sentence is false. So as a first
approximation to the analysis of meaning I am going to
say that the meaning of a sentence is determined by the
worlds in which it is true and the worlds in which it is
false.

This has to be an approximation for a number of
disparate reasons. First the meaning of a sentence of

ordinary language may be vague so that there are some
worlds in which we don't know whether to say that the
sentence is true or false. Second the meaning may depend
on the context of utterance, the word <u>now</u> e.g. refers to
different moments in different utterances, the word <u>I</u>
refers in my mouth to someone different from the person
it refers to in yours, and so on. All these problems
require, and receive, the attention of the formal semanticist
but for the moment I'm going to ask you to put them to one
side and play along with the idea that we know the meaning
of a sentence when we know, in any possible world whether
the sentence is true, or whether it is false. /In fact if
we know the set of worlds in which it is true we are
thereby given the set in which it is false. They are all
but those in which it is true./

   I want to illustrate some recent work on the problem
of what have been variously called counterfactuals,
contrary-to-fact conditionals or subjunctive conditionals.
These are sentences of the form "If it were the case that
such and such then it would also be the case that so and
so".

     E.g. If there were a gorgon in this room you all
       be petrified.
In these sentences the such and such <u>antecedent</u> of
the conditional is frequently /though it need not always be/
false, and thus the name counterfactual.

   Let us now combine what we have said so far. It have
made two points

   /A/ We need to shew how the meaning of a complex
sentence can be obtained from the meaning of its parts and

   /B/ the meaning of a sentence is the set of possible
worlds in which it is true.

   Combining /A/ and /B/ we see that the semantical
problem of counterfactuals is the problem of getting from
our knowledge that a sentence X is true in such and such
worlds and false in the rest, and our knowledge that Y is

true in such and such worlds and false in the rest, an
answer to the question of which worlds the sentence

"If X were the case then Y would also be the case"

is true in, and which it is false in. And this means
that if we are presented with any particular given world
we must decide whether the complex conditional is true
in that world or whether it is not.

Take our example. We are in some given world and we
want to know whether or not:

If there were a gorgon in this room you would all
be petrified.

Is it true, is it false? If the world is one in which
there is a gorgon in the room then all we have to do
is to see whether you are petrified. If you are then the
conditional is true, if you are not, the conditional
is false. But suppose there is no gorgon. What we do
then is to look at the world which is like the given
one in as many respects as it can possibly be except
that /unlike the originally given world/ there is a
gorgon in the room. We then look in that world to see whether
you are petrified. If you are, then we say that the
conditional was true in the original world. If you are not,
that is was false. Put more generally the test is this:

"If X were so then Y would be too"

is true in a world w iff in the nearest world to w in which
X is true, Y is also true. When we write it in this way we
see a crucial fact emerging. That is that if we know of
any given world whether or not X and Y are true in that
world, then we also know /assuming of course that we can
say what counts as nearness of worlds, and that's a
philosophical problem in itself/ of any given world
whether the complex conditional is true or false in that
world. To apply this test we need of course to have some
idea of what counts as nearness of worlds. What the
analysis does is shew how this knowledge determines the
truth conditions of counterfactual sentences.

Obviously the semantical study of natural language has

enormous philosophical and linguistic obstacles to overcome.
Almost every day grammarians are uncovering subtleties of
English and other languages which shew all kinds of theore-
tical hypotheses to be crude and simple-minded but at least
I hope to have said enough to shew how possible worlds may
have a role to play in this analysis.

Finally, on perhaps a lighter note, there is an
application of the theory of possible worlds in philosophical
theology. Consider the so-called "argument from evil". The
argument runs that God cannot be both all good and all
powerful because if he were all good he would make the
world as good as it could possibly be. Clearly the world is
not as good as it could possibly be so God cannot be both
all good and all powerful.

Variants of this argument are well known in philosophy
and theology and they raise both theoretical and practical
problems. I am only going to comment on that version of
the argument, the version I sketched above, which purports
to be a three line knock down argument against the
existence of an all good and all powerful God. I shall use
possible world theory to give an equally brief reply. While
my reply will be superficial, it is, I believe no more so
than the naive form of the original argument. It is this.
Obviously the actual world is not as good as it could possibly
be, but among the possible worlds there does exist the best
of all possible worlds. So the question is not, why did not
God create the best of all possible worlds, it is

　　　/a/ Why did God create some worlds which were not the
　　　　　 best of all possible worlds? and

　　　/b/ Why did He make this world one of them?
The answer to /a/ is this:

To say that a possible world exists is to say that
things could be that way. So that any possible world which
can exist, must exist. Of course it need only be possible
and not actual.

The answer to /b/ is this:
To ask why is this world not the best possible is just
to ask, why is this world not different from the way it
is. And that is just to ask, why is this world not a
different one. When my son was four he asked what the
time was. His mother told him that it was twenty to four.
He asked "Why?". The answer to the person who says: "Why
is this not the best of all possible worlds" is the same
as the answer to the person who says "Why wasn't this
paper over long ago?"
Well now it is over.