It could also be argued that the Universe is not in fact unique and that there are lots of things **like** the universe even if there is only one actual universe – the universe shares many characteristics with its parts. For example, the universe is in the process of change as are many of its parts and it is made of material as are the things within it. It also exhibits regularity as do people and machines.

ANALOGIES DO NOT NEED TO BE FULL BLOWN

It could be pointed out that since Paley's argument is analogical then there is no obligation to give the designer of the Universe a body simply because the designer of a watch has one and neither is there any binding reason why you would then have to ask **Who made God?** And so, there is no obligation to argue that since A accounts for B and since C resembles B, then something **exactly** like A must also account for C.

ANOTHER DESIGN ARGUMENT

The Design Argument doesn't have to be analogical. It can therefore avoid many of Hume's criticisms by reformulating itself into what has been called:

THE INFERENCE TO THE BEST EXPLANATION.

Now this sort of argument is used by most people on a daily basis.

For example, imagine playing rugby and being caught up in a loose scrum with eight opposing players. You are at the very bottom and during the maul six teeth sink into your cheek and draw blood. You are of course anxious to confront the teeth that are responsible so when the scrum unravels itself you look at the mouths of those who may have been to blame.

The first player has no teeth whatsoever so you quite rightly infer that it would be an unacceptable explanation to blame him.

Six of the players have one tooth each and although it is possible that they each bit you at the same time and made a perfect ring on your face you nevertheless infer that this explanation is most unlikely.

The eighth grinning player has a full set of teeth, blood all round his mouth and is a known psychopath within rugby circles and so you rightly infer that of all the possible explanations, this one best fits the facts. You then act on this explanation and examine his teeth closely.

Now this example illustrates three of the criteria we tend to use when we are trying to work out which of the competing explanations is the best:

(1) SIMPLICITY

The basic principle here is Ockham's Razor (see page 8) which says that your explanations should not **MULTIPLY ENTITIES UNNECESSARILY.** In other words, the best explanations are usually the most simple. It was on this basis that the possibility of six players biting with one tooth each was rejected.

(2) EXPLANATORY POWER

If one explanation explains more of the facts than the others then we rightly infer that it is better. It was on this basis that the player inferred to be guilty had blood around his mouth because by choosing him as the best explanation, this fact was explained.

(3) DOES IT FIT OTHER FACTS

If an explanation fits in with other well known facts then we also rightly infer that this is probably the best of all the others and it was on this basis that the player inferred to be guilty was a psychopath because choosing him as the explanation for the bite was a perfect 'fit' with the known fact that he was demented.

WHAT IS THE BEST EXPLANATION FOR THE PATTERN AND ORDER WITHIN THE UNIVERSE?

In 1973 at a conference in Poland the astrophysicist and cosmologist Brandon Carter drew attention to a feature about our Universe which he called **The Anthropic Principle**:

That everything about the Universe tends towards making life possible and sustaining it.

In other words the seemingly arbitrary and unrelated constants in physics are precisely the values you need if you want to have a Universe capable of producing life. For example:

(1) The rate of expansion of the Universe immediately after the Big Bang had to be finely tuned. Stephen Hawking, the world famous physicist, has calculated that if it had been smaller by even one part in a hundred thousand million million, the Universe would have collapsed into a fireball.

(2) Gravity is roughly 10^{39} times weaker than electromagnetism. If it had been only 10^{33} times weaker, then stars (like our sun) would be a billion times less massive and would only burn for about 1 million years. This would be too short a time for life to emerge because for evolution to take place on a nearby planet you need a sun to provide it with energy for many billions of years.

(3) During the violence of the Big Bang most nuclei were destroyed soon after they appeared. However, the lightest nuclei survived and provided the Universe with the two lightest gases, Hydrogen and Helium. This is fortunate because only these gases can help to build bodies of living creatures.

(4) These living bodies also require Carbon to be added to these two light gases and if this is to exist in the Universe then the strong nuclear force (the force that holds quarks