

Writing in the Passive Voice

In a sentence written in the active voice, the subject performs an action.

Most cars' engines burn petrol

In a sentence written in the passive voice, the subject has an action performed on it.

Petrol is burnt in most cars' engines

The formal subject of the second sentence is "petrol," but the petrol isn't actually doing anything. Instead, something's happening to it; it's getting burnt.

What's wrong with writing this way? It's more difficult to understand, and in a technical document that's full of complex intellectual content, anything we can do to reduce complexity is worth doing. If that were the full story, the problem wouldn't exist; everyone would write everything in the active voice. However, there's a strong tradition in the sciences (and in engineering) of passive voice writing, which I shall now try to demolish...

The Scientific Method pays homage to the twin ideas of falsifiability and reproducibility.

The central pillar of the Scientific Method is that statement that Scientific theories can never be proved - no matter how solid they seem, we may always stumble across some previously unforeseen situation in which they turn out to be wrong, or at least, inadequate. So instead of saying that a theory has been proved, we say that a theory hasn't yet been demonstrated to be incorrect (falsified). If it isn't formulated in a way that allows it to be falsified, then it isn't a scientific theory. So it be formulated in a way that allows us to make predictions based upon it, and to design experiments to determine those predictions are valid. If I position one object A at a distance D from another object B, then A and B should both experience an attractive force given by the formula $F=G.M1.M2/D^{**2}$. We can test this, using a weight, the earth, and a spring. If we ever find a situation in which the theory doesn't hold, then we've falsified (disproved) the theory.

But we have to be careful to ensure that the conditions required by the theory hold. For example, if we can measure the force very accurately, and find a very small discrepancy between the measured force and the predicted force, then we'd better be sure that we know the masses of the two objects (the weight and the earth) equally

experimenter. It shouldn't matter whether Newton performs the experiment, or Einstein, or me, and scientific writers take considerable pains to depersonalise their descriptions of experiments, to foster the idea that their experiments are universal (and hence reproducible).

So in scientific documents, instead of writing

After I had checked that the atmospheric pressure was 101.325 kPa, I boiled the solution for three hours and then left it to cool

(which might imply that the author thinks you're so fumble-thumbed that you could never accomplish the same thing) a scientist will write

The solution was boiled for three hours at an atmospheric pressure of 101.325 kPa, and then left to cool

The passive voice construction distances the writer from the consequences of the action. Reading this sentence, we are meant to infer that any other reasonably careful person could do the same and achieve the same result.

So the scientific community adopted passive voice writing as its house style, and because of the phenomenal influence that scientific discoveries have had in our lives since the middle of the 19th century (William Perkins' discovery of synthetic mauve in 1856 kicked it all off), we tend to value scientific ways of doing things highly, and sometimes adopt them where they aren't necessary. Passive writing is a case in point.

Now, we're not scientists. We're more like architects - our work falls somewhere between engineering and design, and overlaps with both. Our results aren't meant to be true for all time. Unlike the behaviour of the physical universe, the behaviour of our software depends on our decisions, and preferences. So the depersonalising passive that scientists use isn't as appropriate for us as it is for them (although post-Heisenberg, post-Thalidomide and post-Bhopal, it's not so clear that it's appropriate for them, either). When we write, we need to take responsibility for our decisions. Indeed, it could seem to a reader that a relentless use of passive-voice writing is an attempt to camouflage personal prejudices as the accepted state of the art; I've read a number of documents that have given that impression.

So one thing becomes clear from all of this; we should avoid the passive voice.

Well, it's not quite that simple. There's still a case for writing in the passive voice. We're writing about something we've done, or are planning to do, so if we write in the active voice we're likely to end up using the vertical pronoun excessively. It quickly