


Use of passive voice in scientific writing

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Use of passive voice in scientific writing

When should an author choose the passive over the active voice? What’s the difference between them? The passive entry emphasizes the person or object receiving the action (e.g. samples have been analysed). The active entry, on the other hand, highlights the person or object performing the action (e.g., We analyzed samples). Since active voice phrases are clearer, more vivid, and often more concise than passive voice phrases, most style guides advise scientific authors to prefer the active voice in their writing. Note, however, that the recommendation is not to write entirely in the active entry. A fully active writing style would be as hard to read as a passive style: balancing the two perspectives is crucial.In addition to adding variety, when is the passive item the best choice? Here are three good reasons to use it. 1. The performer is unknown, irrelevant or taken for grantedThe passive voice is preferable if the performer is not easily recognizable or if the performer is irrelevant to the discussion, as in the following examples:Up to 90% of the energy of the light bulbs is wasted as heat.The first edition of Freud’s early writings on dreams dates back to 1899. Drosophila melan in the first sentence, the author’s attempt to name the executor would be embarrassing; in the second sentence, the author assumes that the reader is not interested in the name of the publisher; in the third sentence, the author’s performer (researchers) is obvious. When naming the performer would be difficult or useless, the passive voice works fine. 2. The performer is less important than the actionWhen discussing an experimental procedure in the Methods section, a researcher might write: Bees were kept in a humidified room at room temperature for one night.The solution was heated to 90°C for about 30 minutes and then allowed to cool.The phrases could be converted to active voice by typing as follows: We kept the bees in a humid room modified at room temperature overnight. We heated the solution to 90°C for about 30 minutes and then let it cool.Does the active voice shorten sentences? That’s not true. (In fact, the second sentence is longer than a word than the original version. The active entry is not automatically more concise than the passive one.) Does the active voice add clarity? Perhaps, although the reader may be justified in assuming that the authors are also the performers. The active entry, however, has shifted the focus from research to researchers, an emphasis the author might not want in the Methods section, where the general topic is research materials and processes. On the other hand, if an author emphasizes the active voice over the passive voice in Methods (or in any section), most sentences will start with us, which is distracting when exaggerated.1 In that case, Passive style phrases change structurehythm while maintaining the emphasis on work. Both in the Methods or elsewhere in a manuscript, the passive voice redirects attention to the action (or to the recipient). 3. The recipient is the main argumentChoosing a passive writing style is sometimes necessary to place important information at the beginning or end of a sentence. For example, the subject (person, thing, or idea) that the author wants to discuss in a sentence should occur near the beginning in the argument location where the reader expects to find it "(first thing). 2 The following active-voice phrase begins a new section in which the topic is "green plants" (the performer): Green plants produce carbohydrates in the presence of light and chlorophyll. If, on the other hand, carbohydrates (the action receiver) is the topic of opening, the phrase is better written in the passive voice: Carbohydrates are produced by green plants in the presence of light and chlorophyll. The theme of a sentence is not an isolated island, however, has a context in relation to the surrounding phrases and paragraphs. The topic should not only identify the subject for the reader, but must prepare the reader "for the next material by connecting it backwards to the previous discussion. " For example, look at the first three sentences of a classic article written by Watson and Crick in 1953: We would like to suggest a structure for deoxidative nucleic acid salt (D.N.A) This structure has new features that are of considerable biological interest. A structure for nucleic acid has already been proposed by Pauling and Corey. 3Note that the authors used the active voice in the first and second sentence, but the passive in the third. If the third sentence has changed in active voice, it becomes: Pauling and Corey have already proposed a structure for nucleic acid. This revision shortens the sentence and identifies the performers. However, the original passive style creates a parallel structure repeating the subject of the second sentence "(This structure has.)" in the third sentence "(A structure for.)" The subject in the third sentence connects backwards and prepares the reader for the next information. These three sentences are more coessive as a result. Focusing on the theme, the authors have incorporated the passive voice to advantage, producing a passage that flows naturally and is understandable and pleasant for the reader. Summary How to vary the length of the sentence in your scientific manuscript creates more variety and interest for your readers, so, also, use voice both active and passive. Choose the active item whenever possible. Choose the passive voice if you have a good reason to do so. Consider passive voice when: The performer is unknown, irrelevant, or obvious. The performer is less important than the action. The recipient is the main topic. You can also use the passive entry for hedges (i.e., to be non-commercial.) However, this is a use that cannot beis an example of coverage!) Sources Zeiger M. Essentials of writing Biomedical Research Papers. 2nd ed. New York, NY: McGraw-Hill; 2000.Gopen GD, Swan JA. The science of scientific writing. Am Scientist. 1990; 78:550-558.Watson JD, Crick FHC. Molecular structure of nucleic acids. Nature. 1953; 171:737-738. Do you have a question about this suggestion? Contact me online and I will be happy to help you. For information on scientific and medical editing, visit Science Editing Services. From Heisenberg in 1927. In an active sentence, the person or thing responsible for the action in the sentence comes first. In a passive phrase, the person or the thing on which he acted comes first, and the actor is added at the end, introduced with the preposition “from”. The passive form of the verb is marked by a form of ‘being’: in the previous phrase, ‘was formulated’ is in passive voice while ‘formulate’ is active. In a passive phrase, we often completely omit the actor: The principle of uncertainty was formulated in 1927. When do I use passive voice? In some phrases, the passive voice can be perfectly acceptable. You could use it in the following cases: The actor is unknown: Lascaux rock paintings were made in the age of the upper stone. [We don’t know who did it.] The actor is irrelevant: an experimental solar power plant will be built in the Australian desert. We don’t care who’s building it. You want to be vague about who is responsible: mistakes have been made. [Common in bureaucratic writing!] She speaks of a general truth: the rules are made to be broken. From whom, when and when. You want to underline the person or the thing he acted on. For example, it could be your main topic: Insulin was first discovered in 1921 by researchers from the University of Toronto. It is still the only cure available for diabetes. You are writing in a scientific genre that traditionally is based on passive voice. The passive voice is often preferred in laboratory reports and scientific research documents, especially in the Materials and Methods section: Sodium hydroxide was dissolved in water. This solution was then titrated with hydrochloric acid. In these phrases you can count on the fact that your reader knows that you are the one who did dissolution and titration. The passive voice puts emphasis on your experiment rather than on you. Note: Over the last few years, there has been a movement within many scientific disciplines far from passive voice. Scientists oftenthe active voice in most of their published reports, even occasionally using the topic “we” in the Materials and Methods section. Check with your instructor or TA if You can use the first person “I” or “we” in your laboratory reports to avoid passive. To learn more about the use of passive voice in science, visit our dispensation on writing in sciences. When should I avoid passive voice? Passive phrases can create problems in academic writing because they can be vague about who is responsible for the action: Both Othello and Iago want Desdemona. She’s courted. Who courtes Desdemona? Othello? Iago? Both of you? Academic writing often focuses on the differences between the ideas of different researchers, or between your own ideas and those of the researchers you are discussing. Too many passive sentences can create confusion: research has been made to discredit this theory. Who did the research? Yours? Your professor? Another author? Some students use passive phrases to hide holes in their research: The phone was invented in the 19th century. [I couldn’t find out who invented the phone!] Finally, passive phrases often play verbose and indirect. They can make the reader work unnecessarily hard. And since they are usually longer than active sentences, passive sentences occupy valuable space in your newspaper: because the car was driven by Michael at the time of the accident, damage should be paid by him. Delete passive phrases If you now use many passive phrases, you may not be able to grasp all problematic cases in your first draft. But you can still go back with your essay, specifically looking for passive phrases. Initially, you may want to ask for help from a writing instructor. The grammatical corrector in your word processor can help you identify passive phrases, even if grammatical correctors should always be used with extreme caution since they can easily deceive you. To find passive phrases, seek a form of the verb to be inserted in your sentence, with the missing actor or introduced after the verb using the word “by”: Poland was invaded in 1939, thus beginning the Second World War. Genetic information is codified by DNA. The possibility of cold fusion has been examined for many years. Try to transform any passive phrase you find in an active person. Start your new sentence with the actor. Sometimes you can find the need to do some additional research or think about understanding who should be the actor! You will probably find that your new judgment is stronger, shorter and more precise: Germany invaded Poland in 1939, beginning World War II. DNA codifies genetic information. The physicists have examined the possibility of cold fusion for many years.

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