

Boolean operators aren't just an extremely effective way to search, they are tools that can save you a lot of time, energy and frustration. But what are they exactly? Boolean operators are way in which you, the searcher, are able to communicate with databases and search engines that require extremely specific strategies.

Let's say you are looking for information about the use of cats in dementia therapy. You've already watched the How Library Stuff Works video on How to Choose Keywords, and developed a search strategy which looks a little bit like this. Feeling keen, you plug all of these words into the database and come up with... well... not exactly what you were looking for. This is where Boolean Operators come in. Boolean operators are a way in which we can refine, filter, narrow or broaden our search. An effective search gives us the maximum amount of relevant information, and the least amount of irrelevant information.

First, let's talk about the Boolean operator **AND**. The AND operator is way in which we can narrow and refine a set of search results. If we plug in the keywords 'cat therapy' into our database, we can't be sure what the database is doing. But we may get documents back that only talk about cats, or only talk about therapy. Obviously documents like "cats in the wild" or "music therapy for infants" aren't relevant to our research. By linking our keywords with the Boolean operator AND, we are able to limit our results to only documents that contain both the words 'cat' AND 'therapy'. This ensures that both keywords are present in the articles we retrieve, narrowing our results.

But what if you have the opposite problem? What if the most relevant articles to your topic don't actually contain the word cat or therapy? Can you think of an instance when this would happen? How about synonyms? Even though we may also like documents on treatments in addition to therapy, the search engine doesn't know this. This is where the OR operator comes in. By telling the database we want articles that contain the words 'treatment' OR 'therapy', we are able to retrieve more relevant documents than if we just used the word 'therapy', since only one of the keywords need to be present.

But wait. Did you know that P-CAT is a popular health care assessment tool? When you are typing in 'cat' the database is bringing back a ton of articles on P-CAT which is affecting your ability to find relevant documents. This is where the Boolean operator 'NOT' comes in. The NOT operator is a way in which we can exclude results that are not relevant to our search but are being recalled due to a specific keyword. So in our search, if we tell the database NOT 'P-CAT', we are able to exclude any documents that contain the word P-CAT and are probably not relevant to our topic.

To summarize, this video has talked about 3 Boolean operators: AND OR and NOT. AND is a way in which we can narrow a set of results. A common use of the Boolean operator AND is to link main concepts or keywords. When we use AND, the search engine knows to only retrieve documents that contain both the keywords, linked by the operator. OR is a way in which we can broaden a set of results. A common use of the Boolean operator OR is to include all synonyms in a search. When we use the operator OR, the search engine knows to retrieve results that contain one or more of the keywords. NOT is another way to narrow a set of results. A common use of the Boolean operator NOT is to exclude

terms that are frequently being retrieved but do not relate to our topic. When we use the operator not, the search engine does not retrieve any documents that contain the keyword following the operator.

For more information, check out McMaster library's Boolean Cheat Sheet. Or, come ask a librarian!