

How to structure, and cite references in, a paper

This applies to all kinds of papers, including certain types of Praktikumsprotokolle, Bachelorarbeiten, Zulas, as well as manuscripts submitted to scientific journals and literature reviews for theses.

The drying process of socks in relation to their colour

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Abstract

Introduction

Socks are an integral part of the people's dressing, especially in the western world. Wearing socks can be comfortable because the feet are kept warm and dry and the shoe's material does not rub against the bare skin of the foot. Socks are also used as a status symbol in some societies, especially by men (Abraham 2000). However, socks also have effects on people other than the wearer. For example, it has been reported that the scent, or even smell, of socks can be repulsive in mate choice (Bebraham 1888, Birmingham 2006), can lower your chances of getting a job (Cebraham 2002) and they can attract blood-sucking insect (Mboera *et al.* 1998).

One potential solution to this problem is to clean socks, at least occasionally. An extended definition of cleaning socks incorporates storing dirty socks, washing them, letting them dry and storing them away again (Dust 1999). Because socks are a valuable good (as described above) but are temporarily unavailable because of the cleaning, any shortening of cleaning time of socks should benefit the wearer. One particularly lengthy episode during cleaning is the drying process (Eselsmilch 1997), especially when placing washed socks on a washing line (Fadenschein 2015).

*Use a short, concise title. I personally prefer the core result in the title, such as: **Sock colour influences drying speed** or even **More attractive socks take longer to clean**.*

Don't use a 'funny' title - it NEVER is funny, unless you are extremely familiar with the English or North American culture. (I know this introduces a cultural bias into science, but don't cry, just get on with it and continue writing a manuscript with a non-funny title.

Don't use an academic title unless you submit to medical journals, they like it.

still better: active voice: ... because they keep the feet warm and dry and prevent rubbing by the shoes.

This should be first in the manuscript but I deal with it last, see below.

Use a very general first sentence. In this case, no citation is needed, it is very obvious such as "Plants are green".

Next sentence a bit more specific, here it is good, perhaps essential to cite an authority. And then the big HOWEVER, spell out clearly what the problem is.

Give credit to the very first demonstration of the cited fact. Some journals don't like you citing papers that are older than 5 years or so. This is appalling but an attempt to change that has to wait to the time when you are the journal editor yourself.

"et al." (et alii) is Latin for and others; as a different language it should be in italics.

=Logical argument, you may not need a citation.

Now mention the very specific topic that you will be addressing/
~~experimentally~~ testing. **experimentally**.

Look at the journal's instruction whether to use chronological or
alphabetical order, if you have the choice, be consistent.

Note that this way of citation means that both Rotlicht and Gelbling
have shown that red and yellow socks dry faster than blue socks. Check
whether the original papers did not state that yellow (Gelbling 2008)
and red socks (Rotlicht 2004) dry faster than blue socks.

Or even: Red socks have been suggested to dry fast (Rotlicht 2004) and
yellow socks to dry faster than blue socks (Gelbling 2008). You need to
check. I personally am very finicky about that.

Specifically, it has been suggested that yellow and red socks dry
faster than blue socks (Rotlicht 2004, Gelbling 2008).

Empirical evidence has confirmed that red socks dry faster than
green socks (Rotlicht 2004a), and that yellow socks dry faster than
blue socks (Gelbling 2009). Because humans rarely seem to use
only two colours of socks (Greenway 1998, K. Reinhardt, unpubl.
data) a comparative test of drying speed in relation to sock colour
is highly desirable. Here I carry out such a test. Based on existing
theoretical and empirical results (Rotlicht 2004, 2004a, Gelbling
2008) I predict that red and yellow dry faster than blue and green
socks.

2004a means there is second paper by Rotlicht in 2004, some journals
would use Rotlicht 2004a and 2004b instead of 2004 and 2004a).

"seem to" indicates the current evidence is a bit shaky. Can be used
to justify your study.

Use the same word (in this case "test") as in the previous sentence
where you stated what is missing. This seems to reinforce how
important your work is.

Try to make a prediction (ignore that in this example, this prediction
cannot actually be made). It is good to finish the Intro with that prediction.

Other tips for Intro:

You almost never need the connective words that we Germans love so much: Moreover,
Besides (which does not seem to exist anyway), To this end, Likewise

NEVER use: It has been shown that yellow sock dry faster (Gelbling 2008). Try this instead:
Yellow sock dry faster (Gelbling 2008).

An exception occurs when you want to stress a specific point. For example after discussing
theoretical aspects on colour and drying you can now write: It has been confirmed
empirically that yellow socks dry faster (Gelbling 2008).

Material and methods

Origin of material

Name here brand, colour and fabric of socks (perhaps in a table, or an appendix). If you use brands that differ in the composition of fibres, you can do a statistical test here: The proportion of cotton in the socks (50-100%) did not differ between the colours (ANOVA, $F = 2.6$, $df = 22,3$, $p = 0.52$).

Subtitles make structuring easy. If your experiment is very complex use the same subtitles in the Methods, the Results, and perhaps even in the Discussion.

check the journal style, there are endless ways to present statistical results.

Experimental design and treatment

I used 8 pair of socks per colour. These were washed jointly in a washing machine (Washboy 8.2, Reutlingen, Germany) for exactly 60 minutes at 60° C. After the washing was finished, the socks were hung up on one washing line in randomised order.

Dryness test

Every hour each sock was touched by the experimenter. When the sock seemed dry, it was used to touch the right cheekbone of the experimenter. Cheekbones are the most moisture-sensitive part of the body and allow to judge the point when 2% moisture are reached.

Start with describing the population: present the treatment means. If that description data set is large, use a table.

Results

Mean drying times (Table 1) differed between colours (ANOVA, $F = 22.4$, $d.f. = 22,3$, $p = 0.002$). Model simplification procedures showed that red socks dry faster than yellow socks, both dry faster than blue and green ones and there is no difference between green and blue socks.

Note that adding Table 1 in brackets is sufficient, you don't need to say: "Drying times are shown in Table 1."

which should have been explained in M+M

perhaps a second table is needed to present the statistics of the model simplification).

Yes, that was it, no more pissing about, Results ARE short.

Discussion

We have provided unequivocal evidence that socks of different colour dry at different rates during environmental conditions normally found in Central Europe during the summer months. Our results have implications for three research areas which we discuss below, i) wearing duration and turn-over rate of socks, ii) global change research and iii) Christmas traditions.

Wearing duration and turn-over rate of socks

The colour of the socks can act a signal. Birmingham (2006) reported that "women above the age of 50 years, clearly prefer blue over yellow socks in men". Men that are interested in attracting the attention of women above the age of 50 should, therefore, increase the time they wear blue socks. Because we have shown that blue socks take longer to dry than yellow socks, men may perhaps stimulated to buy more blue socks. If this were the case, this would reinforce the signal because it would indicate a component of wealth (to be able to buy many socks).

Global change research

Our results show that even the socks that dry most slowly on a washing line do so within two to three days. This should greatly reduce the need for tumble driers. This should reduce energy use and is, therefore, an important contribution to slow down global change.

Christmas traditions

In many western societies socks are used a gift delivery device to children by a Christmas figure such as Santa Claus. Because larger socks can carry more gifts, children prefer to have their largest socks available for delivery on Christmas. For ethical reasons and as a courtesy to Santa Claus, these socks should be clean. Religious traditions prevent these socks to be green (Sant-Aclaus 2001) or red (Clantasaus 2004). Our results showing that yellow and blue socks take 26.5 and 37.3 h to dry, on average, have strong implications for parental guidance. Children should be advised at least a week before Christmas to clean their socks.

Mention the most important of the three areas first. Use then exactly the same phrasing as subtitles, and in the same order. If the journal doesn't want subtitles you will see they can be removed without any alterations to the text.

the quotation marks indicate that you cited literally from the paper. Such citation is rarely done in the scientific literature but is OK to do.

for numbers above ten or twelve use actual numbers, below use the words.

Acknowledgement

I thank my grandmother, A. Mater, for proofreading, critical comments and important insights into traditional sock washing. The study was supported by a grant from the Hugo Boss Foundation, grant RE-08-15-SO-X.

Keep this section short

References

Mboera, L.E., Knols, B.G., Takken, W. and Huisman, P.W. (1998) Olfactory responses of female *Culex quinquefasciatus* Say (Diptera: Culicidae) in a dual-choice olfactometer. *Journal of Vector Ecology* 23:107-113. ←

Unless the journal tells you otherwise, references are in alphabetical order, including subsequent authors. It hopefully does not need special mentioning that the order concerns the surname, not the first name. If there is more than one paper by the same author(s) use chronological order. The exact style depends on the journal's requirement.

Mboera LE, Knols BG, Takken W, Huisman PW 1998. Olfactory responses of female *Culex quinquefasciatus* Say (Diptera: Culicidae) in a dual-choice olfactometer. *J Vector Ecol* 23:107-113.

This is the full citation.

It may also be like that.

Mboera et al 1998. *J Vector Ecol* 23:107

The total minimum: Name of first author, Year, Journal, Volume, First page of article

If you have the choice for style, pick anyone you like. But be consistent.

Abstract

Socks are an integral part of the people's dressing. Because the colour and smell of socks play a role in mate choice, professional development and disease transmission, cleaning socks, the time attractive socks are not in usage should be as small as possible (*that was the Intro part*). Here I examine how long socks of different colours take to dry (*M+M part*). I demonstrate that red socks dry faster than yellow socks, both dry faster than blue and green ones and there is no difference between green and blue socks (*Results part*). These results have implications for the signal function of socks, may help to slow down global change and for parental guidance during Christmas traditions (*Discussion part*)

This should capture information from each of the above section except acknowledgement and references. You can even use the same sentences.