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Who is going to read my (NSF) proposal?

brief remarks to the WHOI Postdoctoral Association

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Writing a better proposal is a skill that you can improve with experience and by understanding the context of proposal review.

You will probably notice that a successful proposal is one that

1) has a significant, attractive science idea.
This is most important, but this you would have guessed.

2) and that is also clear, concise and rewarding.
This is less obvious, and so is the aspect of proposal writing that will be considered here.

This and other aspects are taken up also in the workshop,

Writing a better science proposal:
a workshop for Postdocs and Assistant Scientists

offered next in June '06

To begin planning your proposal, think of it as a form of (scientific) communication, of which we might recognize three varieties:

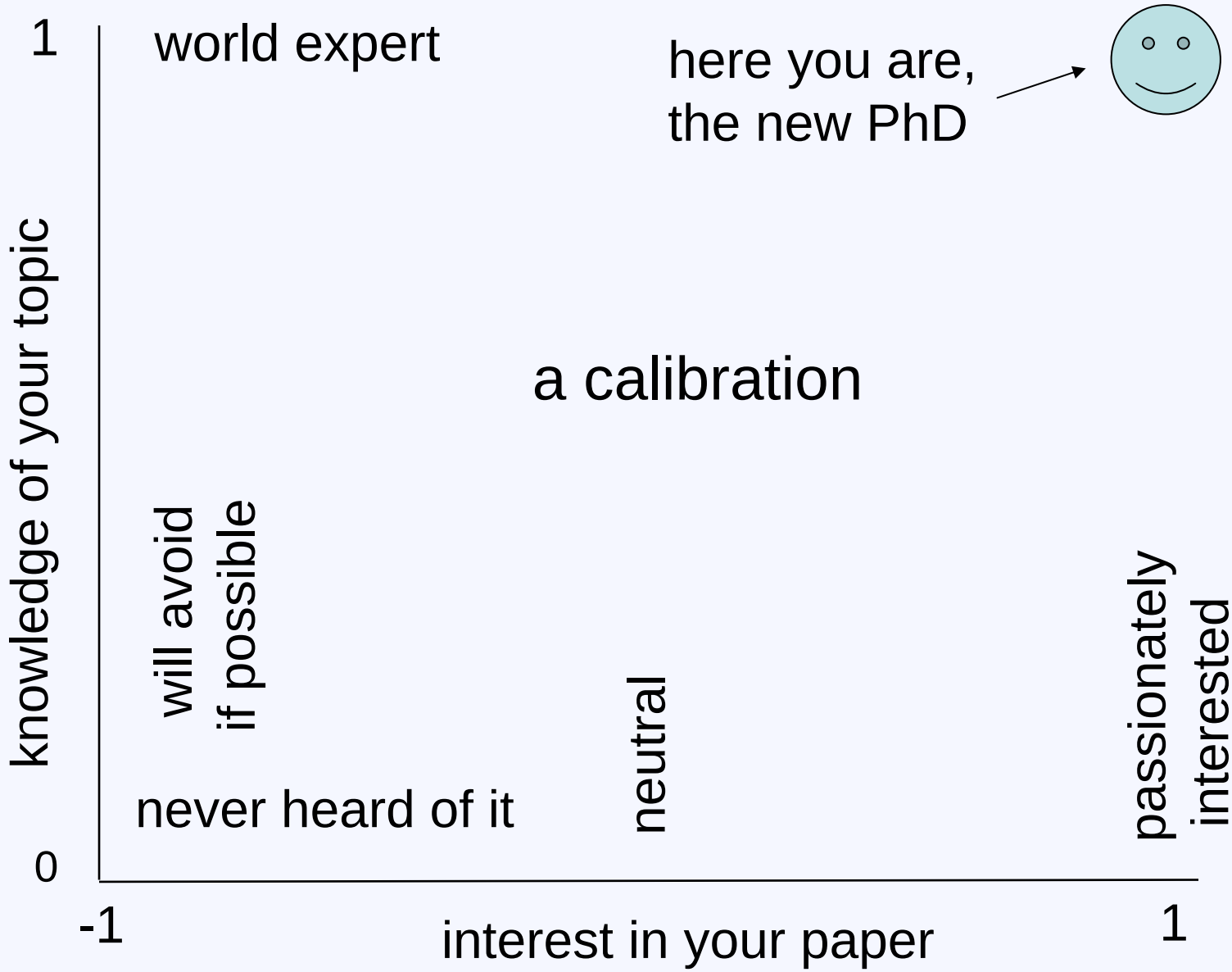
1) scientific publications,
2) seminars, and
3) proposals.

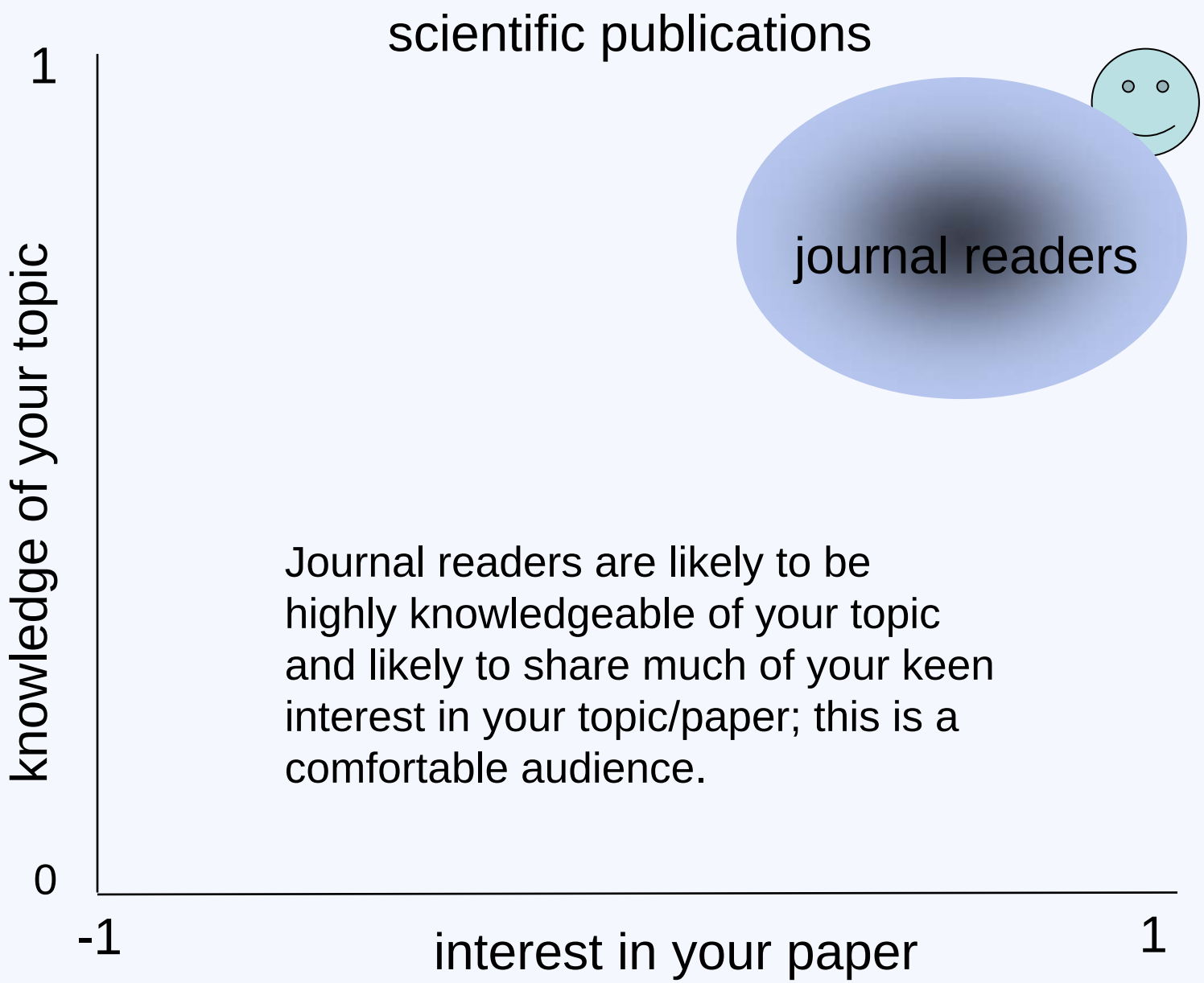
} these we know

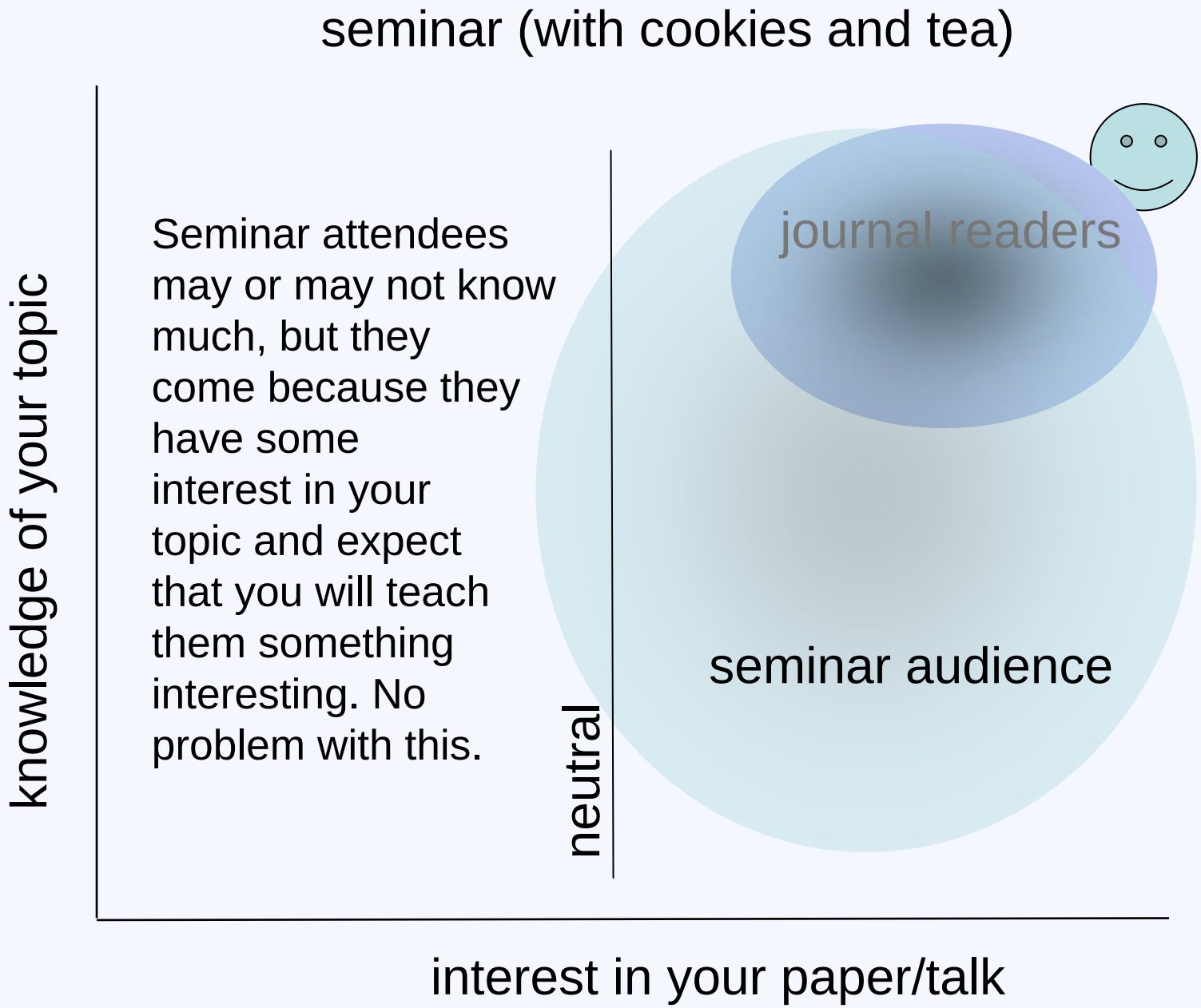
How are proposals different from scientific papers and seminars with regards to their audience, and especially their knowledge of your topic and interest in your paper?

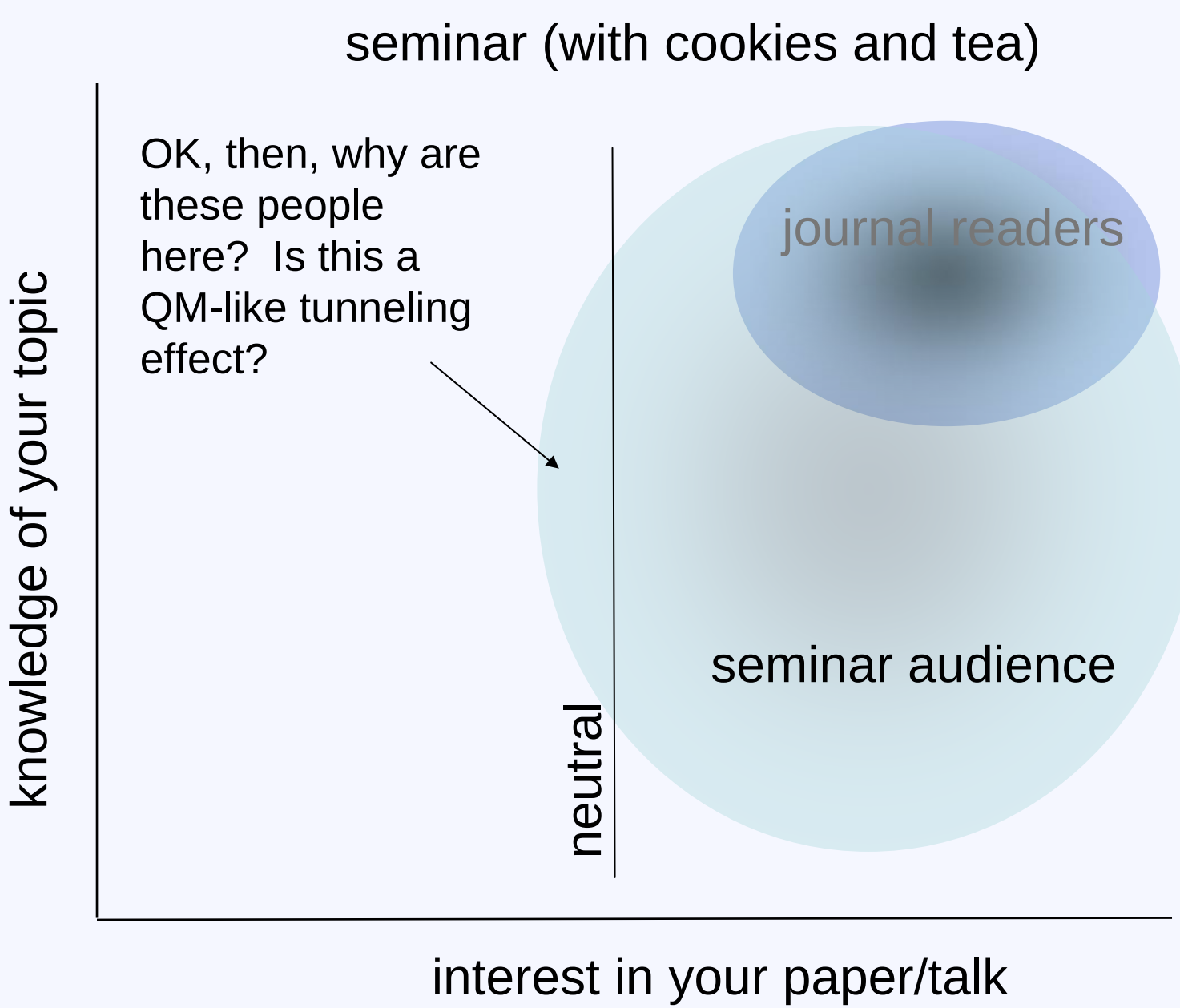
By ‘knowledge’ I mean experience, ***not*** intelligence.

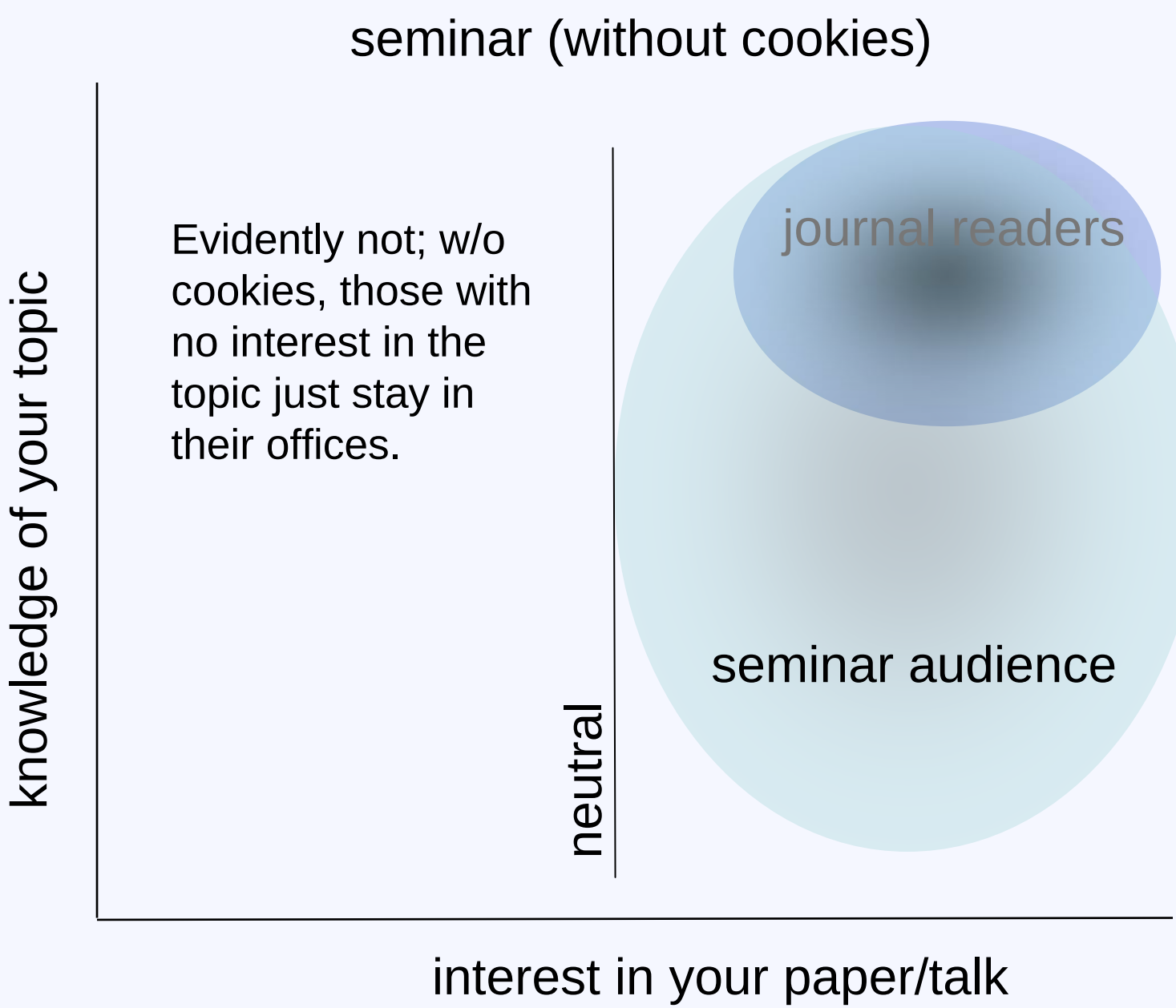
By ‘interest’ I mean would they actively seek it out?


1
world expert
here you are,
the new PhD
a calibration
knowledge of your topic
will avoid
if possible
never heard of it
neutral
passionately
interested
0
-1
interest in your paper
1

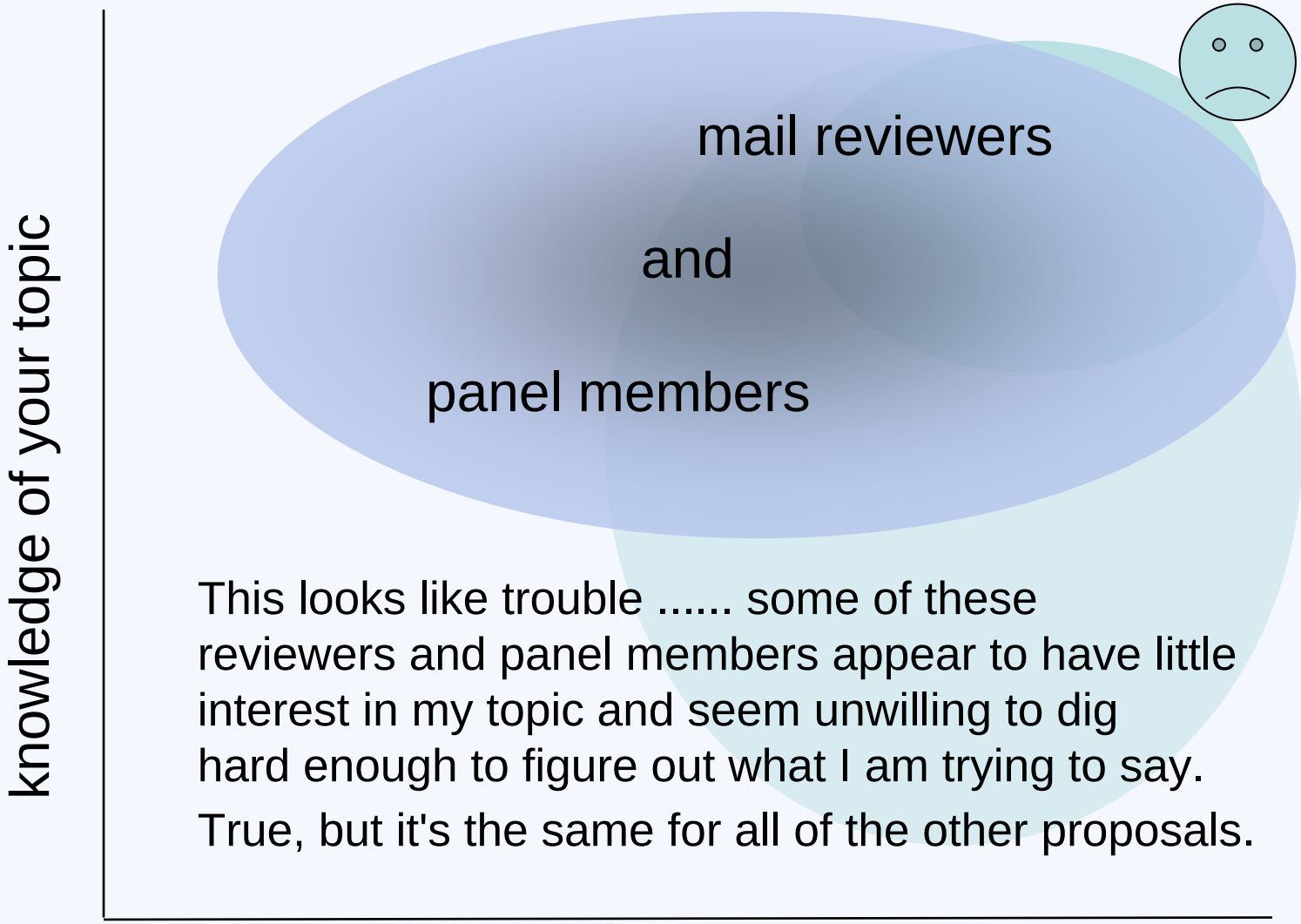

scientific publications
1
knowledge of your topic
0
journal readers
Journal readers are likely to be highly knowledgeable of your topic and likely to share much of your keen interest in your topic/paper; this is a comfortable audience.
-1
interest in your paper
1


seminar (with cookies and tea)
knowledge of your topic
Seminar attendees may or may not know much, but they come because they have some interest in your topic and expect that you will teach them something interesting. No problem with this.
neutral
journal readers
seminar audience
interest in your paper/talk


seminar (with cookies and tea)
OK, then, why are these people here? Is this a QM-like tunneling effect?
journal readers
seminar audience
neutral
knowledge of your topic
interest in your paper/talk


seminar (without cookies)
knowledge of your topic
Evidently not; w/o cookies, those with no interest in the topic just stay in their offices.
neutral
journal readers
seminar audience
interest in your paper/talk

what may happen on a first proposal



The audience for an NSF proposal:

1) About 6 mail reviewers, chosen by the program manager because they have at least some connection to or experience with your topic.

2) About 8 panel members, who are accomplished, mostly mid-career scientists whose interests span the full range of the panel, i.e., chemical oceanography, physical oceanography, etc. They interpret the mail review and make their rankings that they pass along to:

3) Two or three program managers who make the final funding decisions.

NSF panels are thorough and scrupulously fair. But they are also seriously overworked because of the shear number or proposals they must evaluate, often > 100, and because the requested funds greatly exceed the funds available. Panel members thus have a very time-consuming and stressful task that they did not volunteer for.
It is only sensible to be at least as sympathetic and helpful to this audience as you would be to any other audience that you hope will understand and appreciate your work.

your proposal, now in sympathy with its audience

a successful proposal is likely to be one that is
clear, concise and rewarding
to the accomplished, conscientious but overworked audience
that has to decide the winners and losers.

1) Clear: Make it easy for your proposal audience to understand what you want to do, and why it is timely and important to do it now. Don't talk down to your reader, but also do not assume that they have the extensive, special knowledge that you have. Be straightforward and explicit at every step.

2) Concise: The crush of proposal numbers makes it essential that you make your case in the first few pages; the summary page is extremely important. If you find that you are bumping into the page limit and going to single space with smaller and smaller fonts then stop, and ask yourself

--- who is going to read this?

3) Rewarding: Scientists enjoy learning, above all, and a research proposal is a promise that you will learn something significant that you will teach your colleagues in the future. Take the opportunity to show your reader that you can do that in your proposal. Reward your reader with some new insight or knowledge so that they will feel enriched for having read your proposal.

Who is going to read my (NSF) proposal?

Scientific communication and audiences come in varieties:
1 & 2) journal readers, and seminar audiences
who more or less actively seek out your paper or seminar;
3) mail reviewers & panel members
who are ***assigned*** your proposal, along with far too many others.

What has this got to do with my proposal?
A successful proposal is likely to be one that has a
significant and attractive science idea
and that is also
clear, concise and rewarding
to the mail reviewers and overworked panel members.

Make it easy for your proposal audience to understand what you want to do and why you want to do it, and then reward them with some new knowledge or insight.