

WELCOME TO GRAND MEETING 2018



KNOW YOUR PHD COMMITTEE





KNOW YOUR PHD COMMITTEE

Enrollment
Answer PhD related questions
Approve PhD plan
Approve half year evaluations
Approve courses
Responsible for ½ yearly wellbeing conversations
Assess your qualifying exam
Assess your defence
Arrange seminars and meetings
..... and much more

KNOW YOUR PHD SECRETARY

Ice breaker



KNOW YOUR PHD WEB-PAGE

<http://agro.au.dk/en/phd-programme/>

TODAYS PROGRAM

10:15 – 11:30

Highlights from last nights social event

/ PhD committee student members

Experiences from students surviving the writing of a thesis

/ Jesper Lehmann & Trine Nørgaard

AGRO's experiences on thesis assessments – What did opponents like and dislike

/ Lars Elsgaard & Chris Kjeldsen

11:30 Lunch



12:30 Workshop: Supervision during thesis writing and assessment

Tove Hedegaard Jørgensen, ST Learning Lab, GSST



AARHUS
UNIVERSITY

Writing the thesis!

- Your way ☺

- PhD planner system
- Finish paper 11/1111
- Co-author statements
- Pure registration
- Reprint permission
- Résumé (x 5)

Any advice?



April 2018

PhD Grand Meeting

2

The process...

- o Highly individual process and performance
Use others (only) as inspiration
- o Two years of observations
Frustrations, supervision, success, relief
- o Qualifying report

April 2018

PhD Grand Meeting

3

The process...

o Where to start???

Guidelines for the PhD thesis at Department of Agroecology

The PhD thesis should contain the following elements:

- Abstract in Danish
- Abstract in English
- A general introduction describing the academic field of study in the project including an overview of the existing knowledge within the field along with the purpose/aim of project.
- Published articles/submitted manuscript or chapters describing the conducted research including materials, methods and results.
- A general discussion of the conducted research in relation to existing knowledge
- Conclusion and account of further research perspectives

April 2018

PhD Grand Meeting

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The process...

The PhD student must:

1. Update and 'Complete' all Plan elements in the PhD Planner system

Please note that all your Plan elements must be updated and marked as 'Completed' no later than two months before your PhD thesis submission date. This includes plan elements such as PhD project and publications even though these might not actually be completed yet.

This procedure is necessary in order for your main supervisor to be able to approve of your PhD study before he or she signs the main supervisor statement. As soon as the above-mentioned is done, it is therefore important that you notify me and your main supervisor hereof by e-mail.

The info on the following plan elements: PhD courses, Dissemination, Research environment and Other activities, will subsequently be used in a Diploma supplement attached to the PhD Diploma. The title of your PhD thesis and your publications will be included in the main supervisor statement by your main supervisor in connection with the submission of your PhD thesis. The main supervisor statement will also become part of your PhD diploma.

So, please log into the Planner system and do the following:

- a. Update all the Plan elements, i.e. PhD project, Publications, PhD courses, Dissemination, Research environment, Other activities and Supervision agreement.
Please note that all plan elements must be written in English.
- b. Mark all Plan elements as 'Completed'.
- c. Click the button 'Update' in the top right corner beneath the status Awaits student finalisation.
- d. Click the button 'Close plan' in the Status field beneath the field Next. The plan is now updated and closed.
- e. When the above-mentioned is done, please send an e-mail to me with Cc to your main supervisor.

1. PDF version of the PhD thesis

Submit a PDF version of the PhD thesis to me by e-mail. I will then distribute the thesis and other necessary information to all relevant parties by e-mail.

Please note that a résumé in Danish as well as in English should be included in the PhD thesis (as stated in the PhD Order, section 12, subsection 3). Please be aware that this is not the same kind of résumé as the one mentioned in item 6 below.

2. Co-author statements

Submit signed co-author statements with regard to articles that form part of the PhD thesis. The co-author statements must be e-mailed to me as one single PDF file at the same time as the thesis is submitted.

Please be aware that formally speaking the PhD thesis will only have been submitted when GSST has received the co-author statements along with the thesis.

3. 'Permission for lending' form

Fill in the form 'Permission for lending' and e-mail it to me as a PDF file at the same time as submitting the PhD thesis.

4. PURE registration

Register articles and PhD thesis in PURE, if this has not already been done. At the same time as the PhD thesis is submitted, a scan of the registration must be e-mailed to me as documentation.

5. Résumé and photo

Send résumé and photo to me electronically no later than two weeks after submitting the PhD thesis. The résumé and photo will be used when GSST announces the PhD defence.

The résumé must:

- Follow the template provided in the link below
- Be in both Danish and English

If there are details about the defence, such as time and place, that you do not yet know, please just fill in the remaining information.

Please find templates for the résumé here: [link to template on GSST's website](#)

Danish-English translation service: You can send the English résumé to translator Anne Mette Poulsen (e-mail: amp@dmu.dk) who will translate it into Danish and return it to you. If you wish to use this service, the résumé must be sent to Anne Mette Poulsen no later than the same day as you submit your PhD thesis.

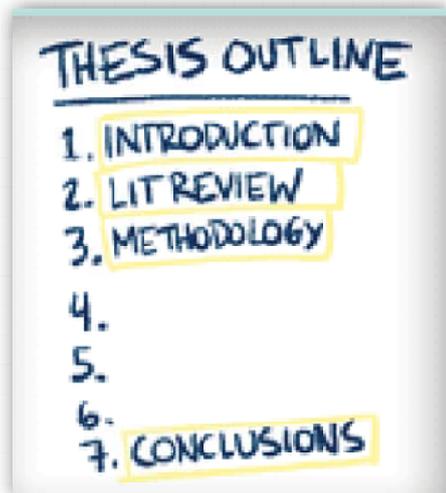
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Then what?

o WORDS on paper!

Headings, subheadings, table of contents...



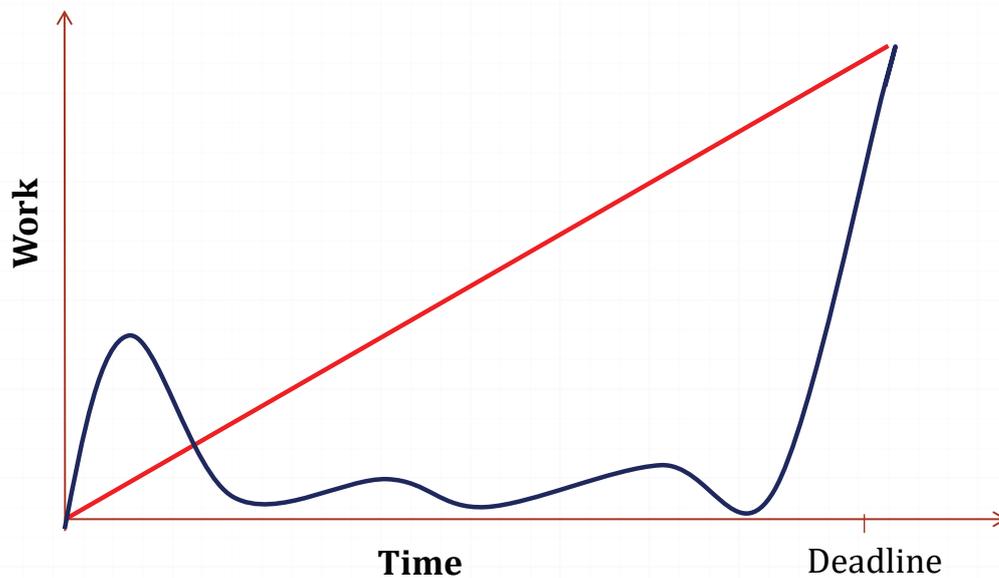
Get used to red ink

Writing...!



Qualifying Exam Report

Different kind of researchers



Writing the synopsis

- Challenge: compact section for varying subjects!
- Solution? Qualifying examination report

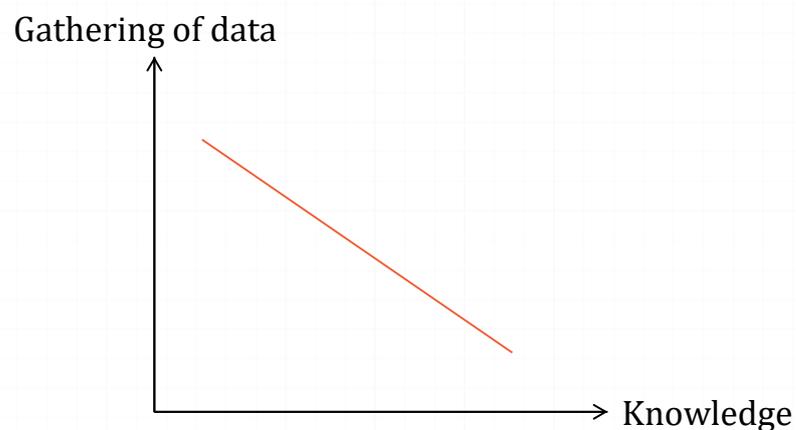
Papers to include

- Challenge: How to make them fit into the thesis?
Traditions within a field of science?

REwriting the synopsis

- Solution?

So much I should have done!



- Accept that it isn't possible

Correcting your own thesis!

- It takes longer than you think!



Red ink - it is only there to help 😊

Not necessarily a night mare!

Staying mentally sane ;)

- Make a time schedule

Mentally positive things: e.g., ticking off the to-do list

- Keep calm!
- Make plans (outside work)

Recommendations

- o Draft outline after qualifying exam
- o Focus on a research question
- o Ensure congruency in the introduction
- o Submit your papers as they finish
- o Focus on the quality of the articles
- o Argue for your strategic decisions

Grand Meeting 10-04-2018

Agro's experiences on thesis assessments
- what did the opponents like and dislike ?

Lars Elsgaard and Chris Kjeldsen
Members of AGROs local PhD Committee

Current GSST guidelines on PhD theses

Where are they?

<http://phd.au.dk/gradschools/scienceandtechnology/rulesandregulations/>

http://phd.au.dk/fileadmin/grads.au.dk/ST/Rules_and_regulations/Rules_and_regulations_February_2016_correction_FEBRUARY_2018.pdf

Chapter 11

Current GSST guidelines on PhD theses

What do they say?

The PhD thesis presents the results of the PhD project and documents the PhD student's ability to communicate theoretical and experimental skills.

The PhD thesis is normally written in English; however, the Head of PhD School may allow the PhD student to write the PhD thesis or parts of it in another language, if agreed between the student and the Main supervisor. The PhD thesis should not exceed approx. 200 pages.

Current GSST guidelines on PhD theses

What do they say?

The PhD thesis reports on the independent research which the PhD student has conducted within his or her field of study.

A PhD thesis may be formed as a monograph, or it may include a number of manuscripts or papers in different stages of completion that are related to the topic of the PhD project.

Current GSST guidelines on PhD theses

Elements

-A description of the proposed research questions in the papers

-A summary of the results and an assessment of the applied methodologies

-A critical review in which the PhD student relates his or her own work to the most state-of-the-art work within the field. The PhD student must also demonstrate that he or she has an up-to-date knowledge hereof and is able to put this knowledge into a broader perspective. The review section may resemble a major review article.

Current GSST guidelines on PhD theses

Some points..

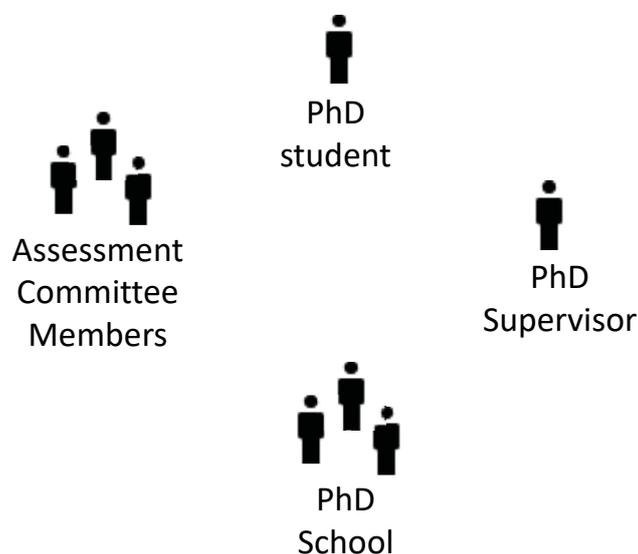
-becoming a PhD is a matter of becoming a member of a community of practice.

-the PhD student shall thus demonstrate skills with regards to methodology and theory which are on par with state-of-the-art of the given field of science, as well as being able to put the PhD project into a broader perspective

Current GSST guidelines on PhD theses

Some points..

Assessments is based on judgments on behalf of skilled people, and some variation can be expected, due to 'community standards'



Generic analysis of PhD syntheses

OVERALL

It is difficult to identify a red line through the topics of the thesis

The synthesis is too short and does not cover the different issues in depth

English usage, grammar, and sentence construction are generally good [...] which makes it easy to read the thesis

Generic analysis of PhD syntheses

INTRODUCTION

A critical, though not exhaustive, review of literature was given in the Introduction

Nicely identifies the research gaps

States clear objectives and testable hypotheses

The objectives of the work has not been described in sufficient detail

Generic analysis of PhD syntheses

INTRODUCTION/DISCUSSION

Good and detailed overview of relevant literature

Includes the latest references in the research area

References are up-to-date and relevant

More recent literature could have been used

Generic analysis of PhD syntheses

METHODS

Include some informative pictures of equipment and discussion on methodology that could not find space in the papers

More critical assessment of the methodology used would have been welcome

A critical discussion about the methods used should have been included

Generic analysis of PhD syntheses

METHODS

The dissertation has some weaknesses mainly due to lack of explanations about methodical choices and statistical analyses

The single most critical issue is related to the lack of insight provided in relation to the applied methodology

It might have been an improvement with more weight on problems and pitfalls with the methods

Generic analysis of PhD syntheses

RESULTS

The synthesis tends to be repetitive in relation to the manuscripts

The synthesis includes also authors results in form of unpublished materials (as add-on to the papers)

Nicely include additional results not presented in the manuscripts; all results are jointly discussed

Generic analysis of PhD syntheses

RESULTS

Data are presented differently covering aspects not mentioned in the papers

In the synthesis, data to be published in the manuscripts are presented differently revealing also aspects not included in the papers

Generic analysis of PhD syntheses

RESULTS

Particularly good is the presentation of data in tables and figures

With clear figures showing the most essential data

Figure captions could be improved

Generic analysis of PhD syntheses

DISCUSSION

Finely explain the links between the publications

It is well described how the findings in the papers relate to each other

The thesis should elaborate the links between the different parts (papers) and how these parts connect to the major goal of the thesis

Generic analysis of PhD syntheses

DISCUSSION

Emphasis should be on the difference between own and previous studies and how the obtained results contribute to already present knowledge

The thesis should discuss similar studies in more detail and should put the own results into a broader context

We miss a section where the different parts of the study come together, are put in broad perspective and are followed by well-matched conclusions

Generic analysis of PhD syntheses CONCLUSIONS

Concluding remarks are too short and merely reiterating earlier statements

Conclusions should not merely repeat the individual studies without a synthesis. The hypotheses could have been revisited

Conclusions are aligned with aims and hypotheses

Interpretations and conclusions are convincingly based on the data

Generic analysis of PhD syntheses CONCLUSIONS and PERSPECTIVES

The section on general conclusions and perspectives is too short

General perspectives are too briefly described

Effort should be made to integrate the different parts of the work and outline the practical consequences for agriculture

Supervision during assessment

part A exam and PhD defence

Tove H Jørgensen

Bioscience
ST Learning Lab
GSST

Aligning expectations with students

Communication in supervisory meetings

Supervision of writing

Cross-cultural supervision

Crisis management

Recruitment

Code of conduct

Aligning expectations with students

Communication in supervisory meetings

Supervision of writing

Cross-cultural supervision

Crisis management

Recruitment

Code of conduct

Preparing for assessment

Programme

The part A report and examination

Ensuring progress

Exercise I: how to structure the report

How to pass?

How to maximise learning?

How to maximise output (=science)?

Thesis and defence

Showing original, sound and scholarly work

Exercise II: the major challenges for students and supervisor

What we assess

GSST rules and regulations (p. 8):

The PhD degree is awarded to PhD students who...

- **possess knowledge** at the highest international level within the research field
- have made a significant contribution to the development of new knowledge and understanding within the research field based on scientific studies
- master the **scientific methodologies and tools** as well as master other **skills related to research and development tasks** within the field
- are able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area
- are able to plan and execute research projects with unpredictable content
- are able to independently conduct research and collaborate on research
- are able to independently conduct research and, where necessary, generate new ideas

(subject-)specific knowledge and skill

What we assess

GSST rules and regulations (p. 8):

The PhD degree is awarded to PhD students who...

- possess knowledge at the highest international level within the research field
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- master the scientific methodologies and tools as well as master other skills related to research and development tasks within the field
- are able to analyse, evaluate and design and develop new techniques and skills within the subject area
- are able to plan and carry out research and development tasks in complex and unpredictable contexts
- are able to independently initiate and participate in national and international collaboration on research and development with scientific integrity
- are able to independently initiate research and development projects and, through these, **generate new knowledge and new skills** which develop the research field

scientific results

What we assess

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- are able to **analyse, evaluate and develop new ideas**, including design and develop new techniques and skills within the subject area
- are able to **plan and carry out research and development tasks** in complex and unpredictable contexts
- are able to **independently initiate and participate in national and international collaboration** on research and development with scientific integrity
- are able to **independently initiate research and development projects** and, through these, generate new knowledge and new skills which develop the research field

independence, initiative and innovation

What we assess



Part A exam



Components:

- The progress report
- An examination
- A discussion of the plans for Part B

Students should:

- demonstrate solid progress on research
- present an ambitious and realistic plan for Part B
- show an ability to communicate scientific work.

Supervisor will:

- identify external examiner
- sit on examination committee (w. voting rights)

Part A exam



supervisor



examiner



project leader

The (usual) challenges for an examiner:

- ensure the criteria for a good performance is known
- ensure that a good performance is possible

Part A exam



Format of progress report:

Introduction to field

Aim of project

Account of methods, results, 'conclusions so far'

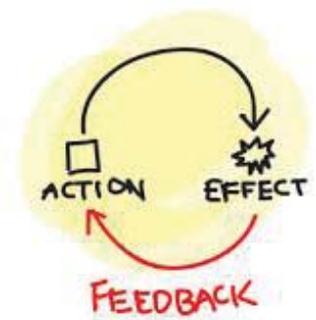
Plan for part B

Format of exam:

30-45 min. presentation 'based on report'

Discussion of presentation and report

(max. 2 hrs)



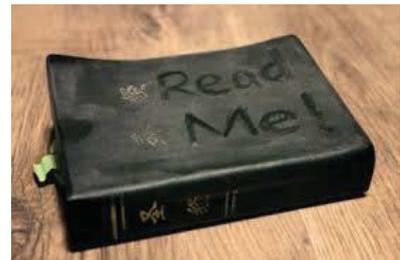
(http://phd.au.dk/fileadmin/grads.au.dk/ST/Quick_guides/Info_on_qualifying_exam.pdf)

The PhD thesis



Formats:

- 1) monographs
- 2) thesis by publication



include a section with:

- description of research questions and results
- assessment of the methods used
- critical review of the field
- description of own contribution

(GSST rules and regulations, <http://phd.au.dk/>)

The PhD thesis

Which format used at ST?

Thesis by publication:	68%
Monograph:	30%
Other:	2%

(N = 740)

(Hermann et al 2014)

GSST requirements



The dissertation must document the author's ability to apply relevant scientific methods and to carry out research work that meets the international standards for PhD degrees within the field

(GSST rules and regulations, <http://phd.au.dk/>)

The PhD thesis and defence



The assessment committee will:

1) write recommendation

*'critically evaluate the thesis.....in
accordance with good scientific practice'*

2) attend defence

3) write final recommendation

(GSST rules and regulations, <http://phd.au.dk/>)

The PhD thesis and defence



The supervisor will:

- 1) propose external examiners
- 2) write assessment of the PhD study
- 3) assist the assessment committee (no voting rights)



supervisor



assistant



project leader

(GSST rules and regulations, <http://phd.au.dk/>)

The PhD thesis and defence



The supervisor will:

- 1) propose external examiners
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supervisor



assistant



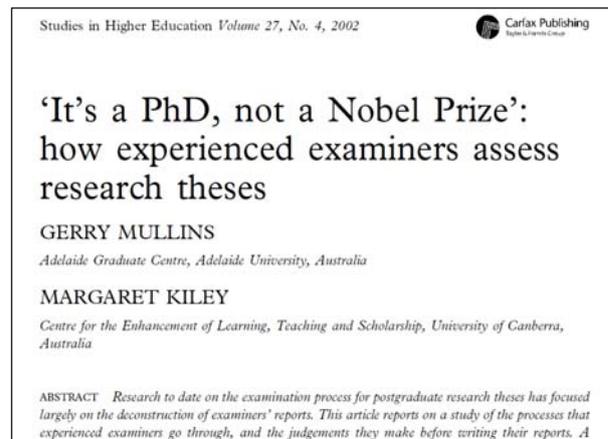
project leader

(GSST rules and regulations, <http://phd.au.dk/>)

What is a good thesis?

A good thesis is...

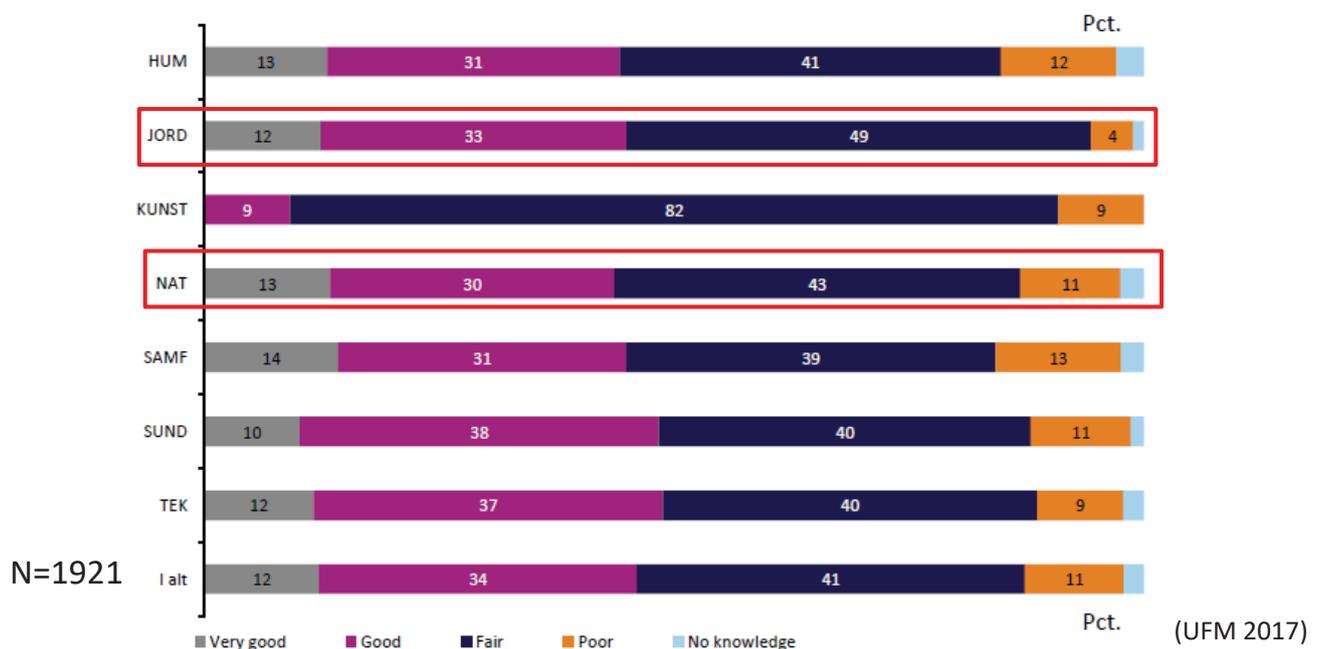
...the type of thesis that examiners are used to!



(Mullins and Kiley 2002)

External examiners' knowledge of DK PhD education

'How would you characterise your knowledge of the Danish PhD programme in general?'



What is a good thesis?

Original

- new contribution to knowledge, creative, degree of risk taking

Sound

- in methods, structure and presentation, comprehensive, coherent

Scholarly

- (self)critical analyses and arguments, rigorous approach.

(Holbrook et al., 2004; Lovitts, 2007; Mullins & Kiley, 2002; Tinkler & Jackson, 2004)

What is a good thesis?

Poor:

- researching the wrong problem
- theory and/or methodology poor
- not original work
- lack of coherent argument and synthesis
- lack of scholarship
- poor presentation

Good

- material for 2 – 4 papers to publish

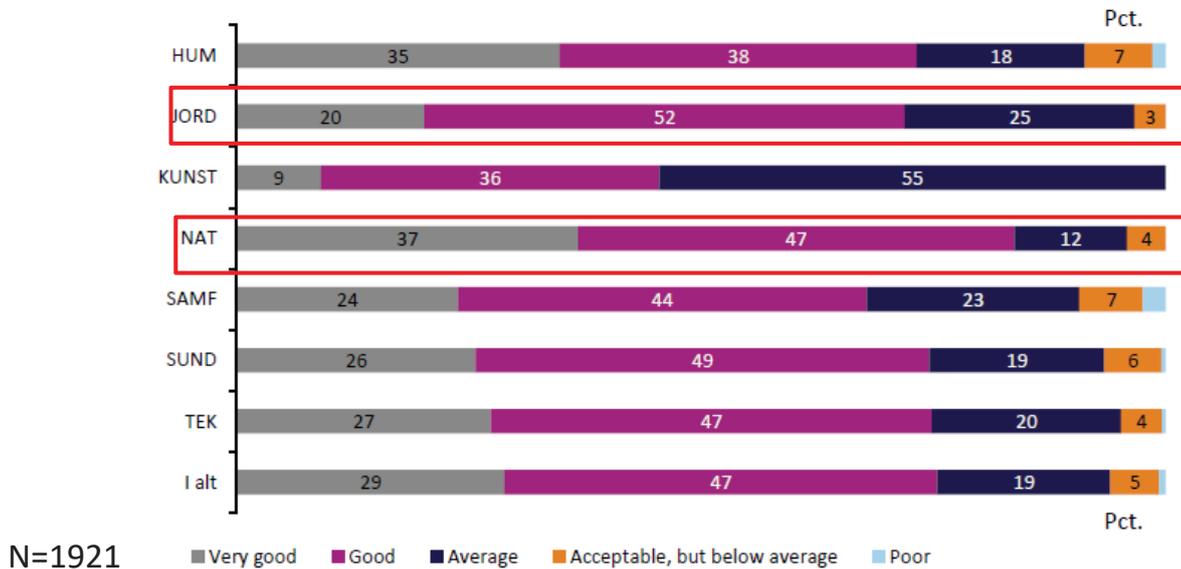
Outstanding

- creative, new ideas
- critical assessment of own work

(Mullins and Kiley 2002,
Holbrook 2004, Lovitts 2007,
Golding et al 2014)

What is a good thesis?

‘How would you characterise the Danish PhD dissertations that you have evaluated compared to the standard at internationally leading universities within the research area?’



(Ministry of Higher Education and Science 2017)

What is poor at ST? Negative examiners reports 2010-14 (N=19)

Poor:

- researching the wrong problem 😊
- theory and/or methodology poor 😐
- not original work 😐
- lack of coherent argument and synthesis 😞
- lack of scholarship 😞
- poor presentation 😞

Good

- material for 2 – 4 papers to publish

Outstanding

- creative, new ideas
- critical assessment of own work

What is a good thesis?

Any institution-specific criteria?

- expectations for thesis format & structure? ✓
- quantity of research? ✗
- publications or not? ✗
- scope and ranking of journals? ✗

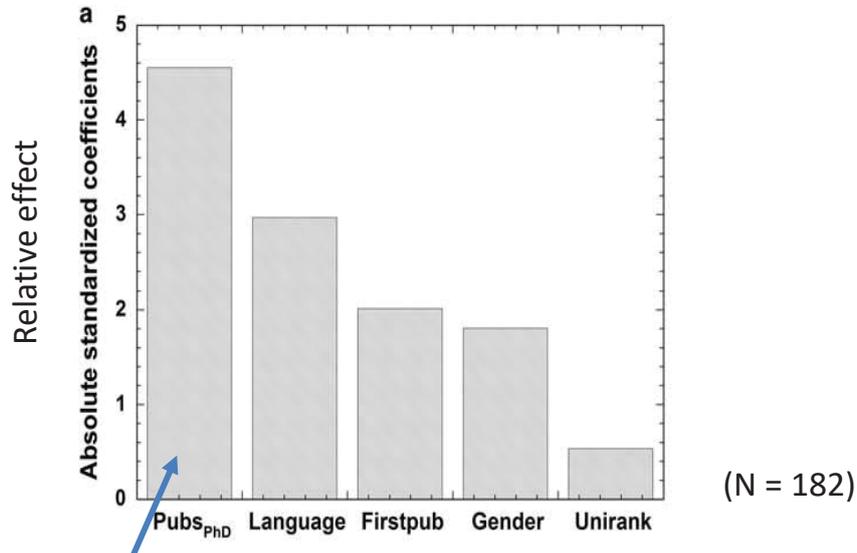
What is a good thesis?

A (universal) key criterion for a good thesis: work must be publishable



Predictors of publication rates in academia

Example: Bioscience academics (on four continents) 10 years after their PhD – general linear model explaining publication rate:



Publications during PhD

(Laurance et al 2014)

Does the format influence examiners?

‘Is it easier to examine a thesis with published, peer reviewed papers?’

Yes	48%
No	20%
Neutral	32%

(N = 62)

‘Are you influenced by publications in international (top-ranked) journals?’

Yes	86%
No	9%
Neutral	5%

(N = 62)

(Sharmini et al 2015)

Does the format influence examiners?

“ It immediately suggests the student deserves the degree.

“ If there are two or three good publications you can put your feet up and go for an interesting drive.

(two examiners in Science)

(Sharmini et al 2015)

Does the format influence examiners?

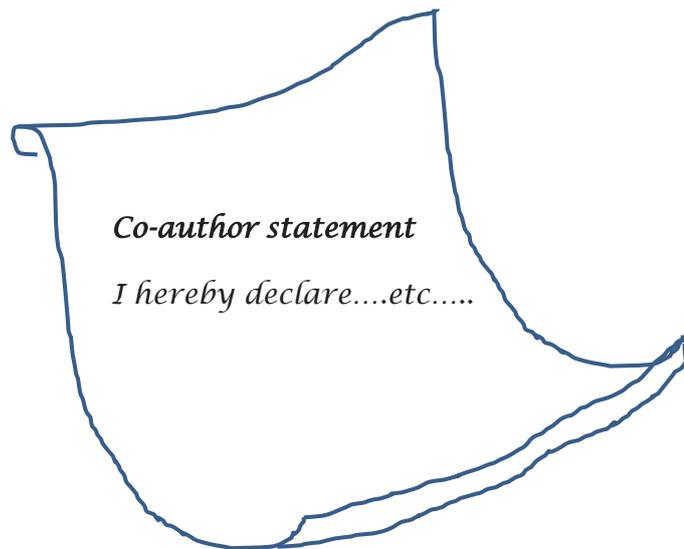
Examiners have two concerns about thesis by publication:

- 1) Is it clear what the contributions of the PhD candidate are?
- 2) Is the thesis coherent?

(e.g. Golding et al 2014, Sharmini et al 2015, Mullens and Kiley 2002)

Co-authored papers: GSST rules

Did the student make a
major
proportional or
minor.....



....contribution to the work in the research phase?

....contribution to the work in the writing phase?

Does the format influence examiners?

When a thesis has co-authored papers, examiners will

- pay more attention to the supervisor's (other) written work
- put a larger emphasis on thesis defence
- look for statements and explanations of student contributions

(e.g. Lovitts 2007, Golding et al 2014, Sharmini et al 2015)

What is a good thesis?

How to make a thesis by publication coherent?

- explain the structure in the introduction
- consider bridging sections between chapters that are papers
- pay particular attention to the introduction ('critical review of the field') and write a discussion (with synthesis of findings)

(e.g. Lovitts 2007, Golding et al 2014, Sharmini et al 2015)

The PhD defence



Components:

30 – 45 min. presentation of project

Discussion of presentation and thesis (student and committee, maybe the public)

(max. 3 hrs)



What is a good PhD defence?

There are no GSST-specific criteria



Most typical (general) criteria:

- shows the research, reading and the writing is their own
- the student can talk about their research professionally
- gaps can be filled and unclarities resolved

What is a good defence?



...a substantial part of the judgement about a dissertation is based on the committees' actual feeling about this person as a scientist rather than on the objective document.

(examiner, Lovitts 2007 p 132)

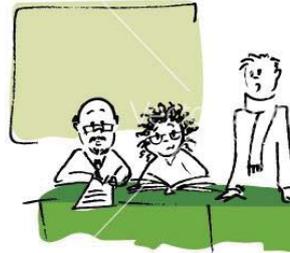
Who is the best examiner?

Does examiner's opinion on the thesis (and defence) depend on...

Gender? **No**

Geography? **Maybe**

Experience in examining? **Yes**



(Bourke et al 2004, Mullens & Kiley 2002)

Who is the best examiner?

Choose an examiner who....

understands the system & the academy
has experience



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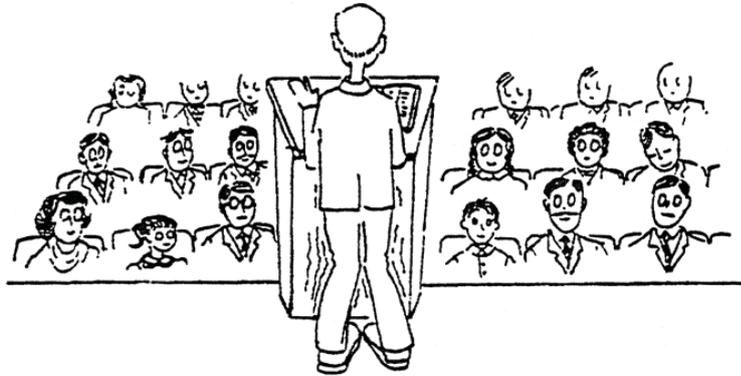


Most typical (general) criteria:

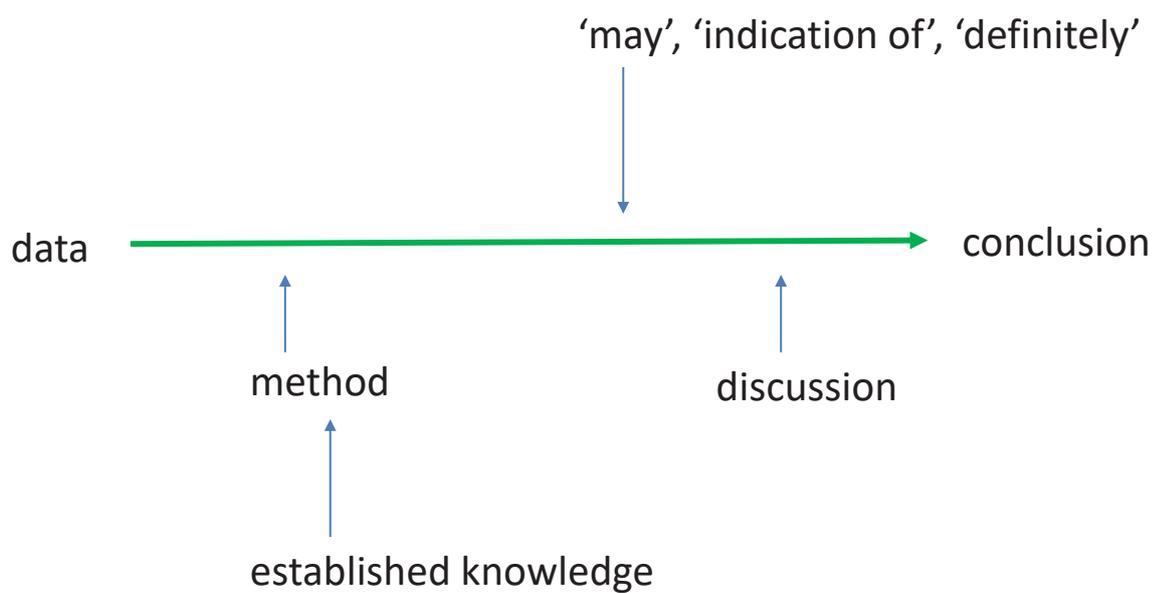
- shows the research, reading and the writing is their own
- the student can talk about their research professionally

- gaps can be filled and unclarities resolved

'talking about research professionally'

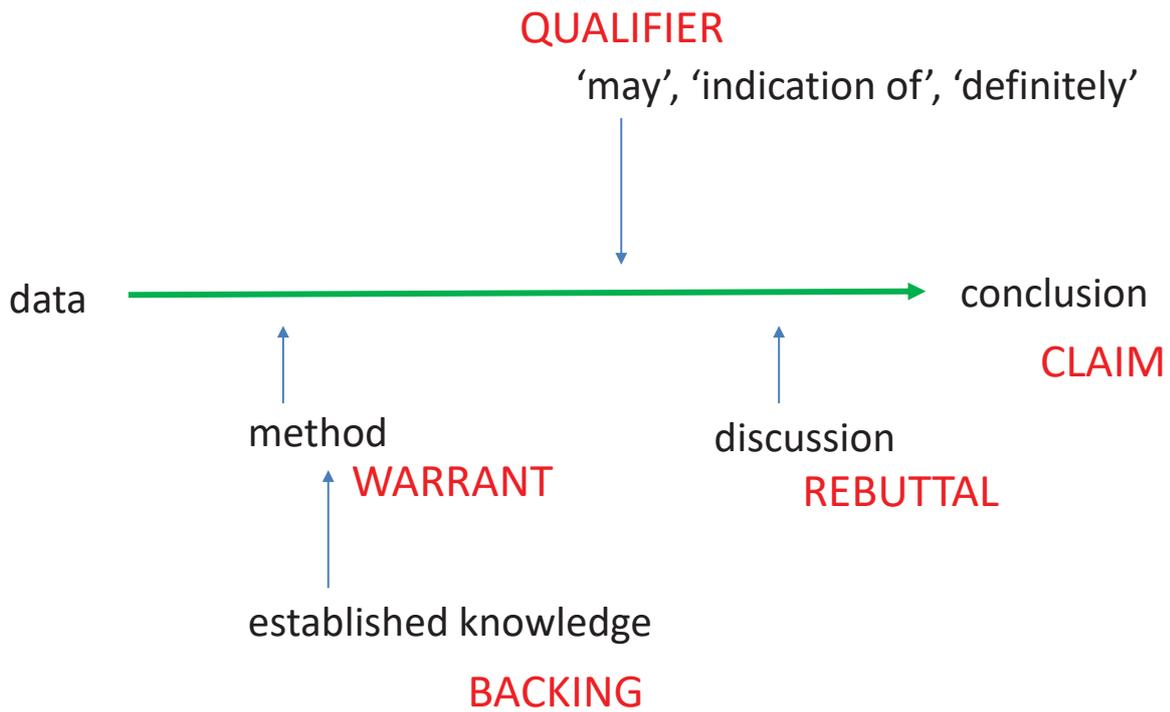


Arguing a point



(e.g. Greve 2016)

Toulmins model of argument



(e.g. Greve 2016)

Critical questions at the defence



being critical ≠ criticise

How to handle critical questions

Listen

- and wait for the questioner's point

Understand

- check by paraphrasing

Focus the response

- ask 'did this answer your question'?

Be self-critical

- take the blame

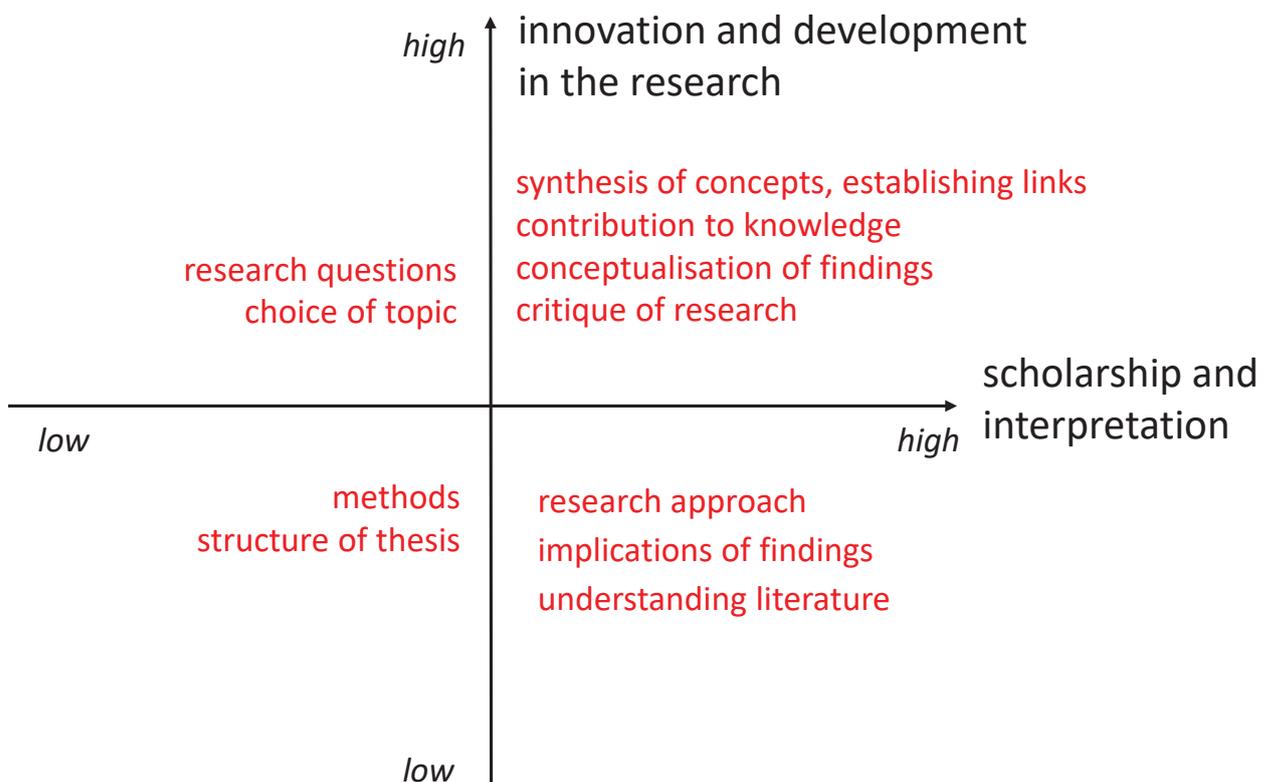
Be pro-active

- take initiative in the discussion



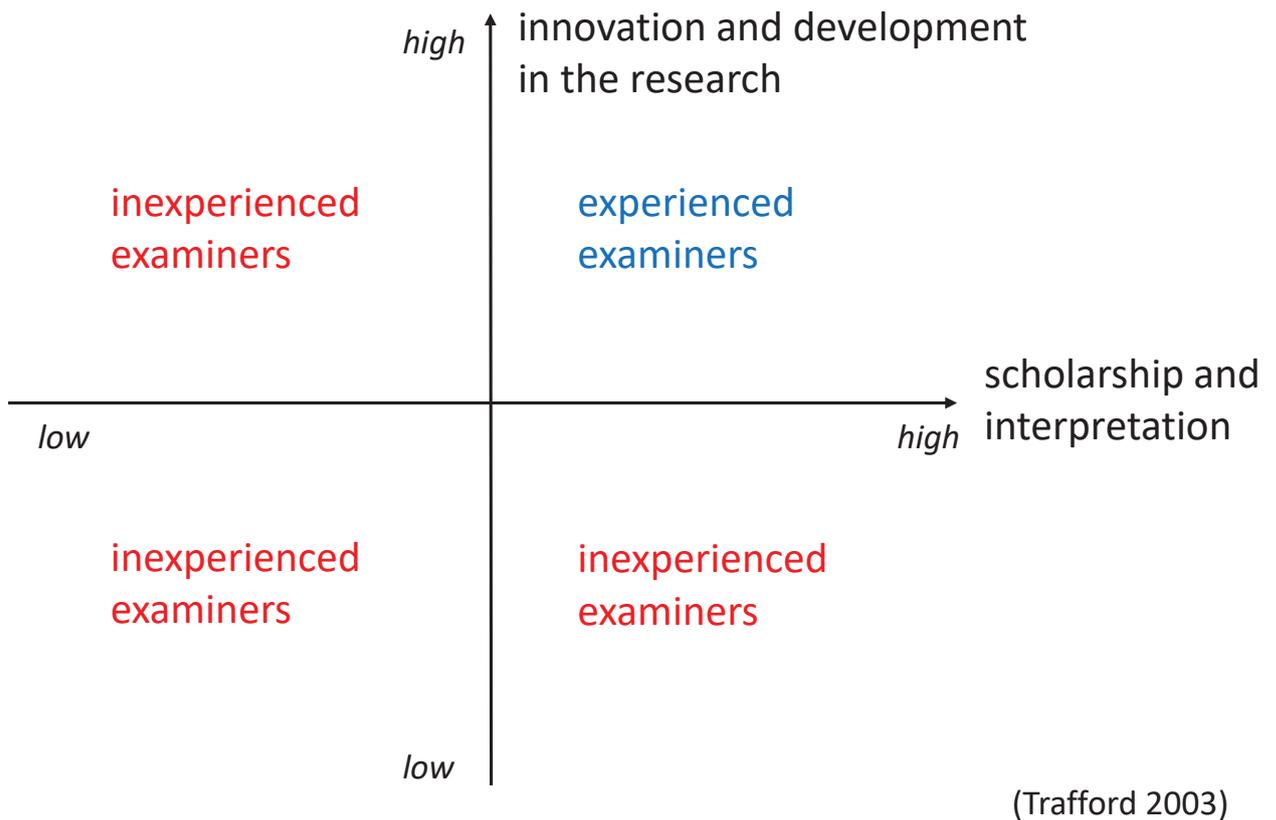
(Murray 2003,
<http://www2.le.ac.uk/offices/ld/resources/presentations/questions>)

Questions at the defence



(Trafford 2003)

Questions at the defence



Students' best advice....



....I should have anticipated some of the lines of questioning that came up because the external examiner was a specialist in an area which I wasn't massively interested in but my thesis did, you know, draw on a lot of that area, and so she questioned me on that area quite intensively, and I was completely flat-footed by that and came across as a bit of a fish out of water

(doctoral student, STEM, University of Oxford)

(<http://supervision.learning.ox.ac.uk/preparing>)

Supervisors' best advice...

“ A defense is your chance to show that you're ready to stop being a student and become a colleague. Students get defensive over their work because they think they're being challenged or attacked...()...treat any comments as a chance to learn and grow.

([https://www.reddit.com/r/AskAcademia/comments/53mh9o/what are your tips for handling critical/](https://www.reddit.com/r/AskAcademia/comments/53mh9o/what_are_your_tips_for_handling_critical/))

“ Think back to the feedback you have received earlier...()..it is likely to be addressed {at the defense} also...() think of your 'doctoral history'.

(Murray 2003)

The PhD defence

Is a thesis ever rejected after a defence?



No – not at GSST.....

.....but a convincing defence may help pave the way for a scientific career (network, confidence and papers)

References

- Bourke S, Hattie J and Anderson L (2004). Predicting examiner recommendations on PhD theses. *International Journal of Educational Research* 41, 178–194
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