

# On My Experience as a PhD Supervisor

Ola Hössjer  
Dept. of Mathematics  
Stockholm University

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# Outline

1. My background and supervising experience.
2. How PhD studies have changed over 35 years.
3. Supervisor versus PhD student.
4. Personal reflections and final advice.

# 1a) My academic background

## ▶ Short CV

- ▶ Bachelor in Mathematics, Uppsala 1984-1987.
- ▶ Engineering Physics, Uppsala 1984-1987.
- ▶ PhD in Mathematical Statistics, Uppsala, 1987-1991.
- ▶ Temporary pos. Lecturer, Uppsala 1991-1992.
- ▶ Postdoc, Cornell US, 1992-1993.
- ▶ Lecturer and Professor, Lund, 1993-2002.
- ▶ Professor, Stockholm, 2002-2020.

## ▶ Supervision experience:

Where?	Supervisor	Ass. Supervisor
Lund 1995-2007	9.0	0.5
Stockholm 2007-2020	4.5	1.0
Karolinska 2007-2014	0	2.0
Total	13.5	3.5

## 1b) Topics of PhD projects as (assistant) supervisor

- ▶ Statistics with engineering applications (1)
- ▶ Nonparametrics (3.5)
- ▶ Statistical genetics and medical epidemiology (4)
- ▶ Spatial statistics (2)
- ▶ Biostatistics and sampling theory (2)
- ▶ Insurance mathematics (2)
- ▶ Population genetics (1)
- ▶ Stochastic processes and decision theory (1.5)

## 2a) How PhD studies changed over 35 years

### ▶ Late 80s and early 90s:

1. No financing requirement
2. No Individual Study Plans
3. No Director of PhD studies (annual meetings of supervisors)
4. Very few doktorandtjänster (utbildningsbidrag instead)
5. Course study first year, project defined after a year
6. Less active supervisors

### ▶ Present

1. Financing requirement
2. Individual Study Plans (including didactics, ethics, ...)
3. Director of PhD studies (two annual meetings of supervisors)
4. Only doktorandtjänster
5. Project defined/initiated at start, in parallell with course study
6. More active supervisors

## 2b) Have PhD studies changed for good or for worse?

- ▶ PhD studies today are much more regulated.
- ▶ Benefit: More diverse education and higher throughput.
- ▶ Drawback: Have we lost some academic freedom?

## 3a) The role of the supervisor: Two styles

### 1. Do it yourself-style

- ▶ Supervisor only guides/gives feedback
- ▶ Suggests problems at best
- ▶ Leads to lower throughput
- ▶ Students that finish have learnt independence (the hard way)

### 2. Research cooperation-style

- ▶ Supervisor takes active part
- ▶ Suggests problems
- ▶ Leads to higher throughput
- ▶ Students that finish on average somewhat less independent

Ideal combination: Start with 2, but end with 1.

## 3b) The role of the PhD student

- ▶ Quite a unique period in life: Free to plan work for four years (less so with ISPs)
- ▶ Don't look for alibies
  - ▶ Have the courage to dive into the deep stuff
- ▶ Important having long term plans
  - ▶ Keep the big picture (don't get stuck in the deep stuff)
- ▶ Start with manageable problems (supervisor important)
- ▶ Be flexible: If  $A$  is not solvable, try with  $A'$
- ▶ Work with at most two projects in parallel
- ▶ Good to cooperate with others, but be a little selfish (there is plenty of time for cooperation after PhD exam)



## 4a) My own takehome as a supervisor

- ▶ Great experience!
- ▶ I've learnt a lot, both professionally and in other ways.
- ▶ Cooperating with young people keeps your brain fresh.
- ▶ Very rewarding to see young students mature into independent researchers

## 4b) Final conclusions and recommendations

- ▶ The PhD exam gives you excellent skills in:
  - ▶ Acquiring in depth knowledge of at least one area
  - ▶ Problem solving and analytical skills
  - ▶ Finding information yourself
  - ▶ Structuring work over a long period
  - ▶ Acquiring academic skills of reasoning and questioning
- ▶ Use these skills after the PhD
  - ▶ Life does not end with your PhD.
  - ▶ Continue to learn throughout life!
  - ▶ Use your acquired knowledge for serving society.
  - ▶ Examine authoritative knowledge by looking into facts.
  - ▶ Be humble: Don't exaggerate importance of a PhD (there are other ways of learning in life)!

THANKS FOR THE ATTENTION!