

**Feelings in Research:
from Joy to Jealousy,
from Anger to Depression (and More!)**

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Researchers live strange and fragile lives inside a complicated high-dimensional non-Euclidean non-Riemannian and very human space

1. Research and creativity
2. (researcher, problem) $\implies$ (solution, papers) ...?
3. A researcher's life [different from everything else?]
4. Aspects & dimensions:
 - «liv og forvitring» [Y. Løchen, 1985]
 - joy, jealousy
 - anger, depression
 - alone vs. community

1. Research and creativity

“But is this really the poet?” I asked. “There are two brothers, I know; and both have attained reputation in letters. The Minister I believe has written learnedly on the Differential Calculus. He is a mathematician, and no poet.”

“You are mistaken; I know him well; he is both. As poet and mathematician, he would reason well; as mere mathematician, he could not have reasoned at all, and thus would have been at the mercy of the Prefect.”

– Edgar Allan Poe: *The Purloined Letter* (1845)

So ... we need **something else**: creativity, inspiration, je-ne-sais-quoi, sudden new combinations of existing thoughts, Freudian slips, attacks of ‘musicophilia’ [O. Sacks, 2007] or ‘**statisticophilia**’.



What conditions decrease (or increase) $\Pr\{\text{Hermesian moments}\}$?

2. $\phi:(\text{researcher, problem}) \implies (\text{solution, papers}) \dots?$

This is an ill-defined function.

Regression analysis:

$$y(\text{solution, papers}) = f(\text{researcher, problem}) \\ + H\left(\sum_{j=1}^p \beta_j x_j + \sum_{k=1}^q \gamma_k z_k\right) + \varepsilon,$$

with y outcomes e.g. $(1, 1), (1, 0), (0, 1), (0, 0)$.

Covariates: cleverness, preparedness, willingness, stubbornness, experience, self-confidence, courage – amenability, convenience, software, prestige, importance, luck, time windows.

Not enough: $\exists$ ‘environmental factors’ and interaction terms: colleagues, department, the other PhD students, expectation culture, etc.

Success: who has high x values, which projects have high z values, which interaction terms are advantageous?

3. A researcher's life [version for statisticians]

In communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow: to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have a mind, without ever becoming hunter, fisherman, herdsman or critic.

– Karl Marx: *Die deutsche Ideologie* (1845)

In *statistics society*, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow: *to prove theorems in the morning, run MCMC programmes in the afternoon, derive probability models in the evening, criticise after dinner*, just as I have a mind, without ever becoming mathematician, R programmer, probabilist or referee.

Marx's 'one thing today and another tomorrow':

not a faithful description of a researcher's life. The crucial covariates include stubbornness, tenacity, courage, luck, etc. – sadly, it is not sufficient just to be clever.

4. Aspects & dimensions:

♠ Liv og forvitring:

'An anthropologist visits the university departments':

Extremely clever people [i.e. those who have been so, until 1st day of job] meet *extreme freedom*.

Sometimes there's 'too much freedom' – and many sad lives [in upper right corner of copula space].

[But university 2009 is not quite the university of Løchen's 1985?
Fewer $E = mc^2$ cases, but steady productive mainstream research?]

♠ Joy, jealousy:

Joy of understanding new things (both old things explained by others, and genuinely new ideas of your own):

glorious, a positive power in one's life.

∃ many dimensions: culmination of long-lasting efforts; fresh insights; sharing with others; joy of 'practicality' and joy of 'theory'.

Jealousy: a competitor gets there before you (publishing a paper, getting a professorship, gets invited to give a talk, South Pole).

Of course (?): this Heat of Heart may push in both positive and negative directions.

Bela Bartók (old, frail, sensitive) disliked the enormous world-popularity of Shostakovich's *Seventh* (1942, 1st mvmt), and in 'severe irritation' worked a 'silly' version of its main theme into his *Concerto for Orchestra* (1944, 4th mvmt).

'Severe irritation' [even irrational?]: A does not like B, and writes a paper just to disagree ... Cf. Dag Solstad's *Roman* 1987.

♠ **Anger, depression:**

∃ many sad cases [in spite of ‘freedom’].

Sociologists compare ‘university departments’ (freedom = 3) with ‘research groups’ (freedom = 2) and ‘firms’ (freedom = 1).

Simple finding (?): with more freedom: fewer open conflicts, but sometimes more ‘inner anger’ and depression.

Anger: paper rejected, negative reactions at seminar, ...

Depression: projects not completed, losing ‘the force’, ...

Anger passes – depressions may not («liv og forvitring»).

♠ **Alone vs. community:**

People are different – as are researchers.

Are statisticians more intro- than extrovert?

Most of us need alone-ness (part of the time).

Conclusions?

‘Life [and statistics] is complicated, though not uninteresting’

[J. Neyman].

Be aware of the complexities, use them (?).

‘Get obsessed and stay obsessed’ [Iowa Bob, in a John Irving novel].

‘Rene tem, verba sequentur’ [Cato the Elder].

May the force be with you.