Exploring mechanisms of academic reproduction and positioning within the field of postdoctoral research

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How are postdoctoral researchers and principal investigators in scientific disciplines experiencing researcher development, during the professional socialization of researchers?

15 years Post-Roberts

"Recommendation 5.3: A vision for postdoctoral researchers

*It is important for postdoctoral researchers to be able to develop **individual career paths, reflecting the different career destinations** – Industrial, Academic and Research Associate– open to them, and that funding arrangements reflect the development of these career paths. The Review believes that enabling the individual to establish a clear career path, and a development plan to take them along it, is critical to **improving the attractiveness of postdoctoral research**. The Review therefore recommends that HEIs take responsibility for ensuring that all their postdoctoral researchers have a clear career development plan and **have access to appropriate training opportunities** – for example, of at least two weeks per year. The Review further recommends that all relevant funding from HEFCE and the Research Councils be made conditional on HEIs implementing these recommendations." (Roberts, 2002, p. 154)*
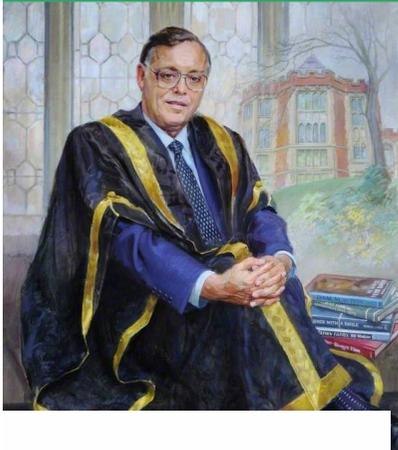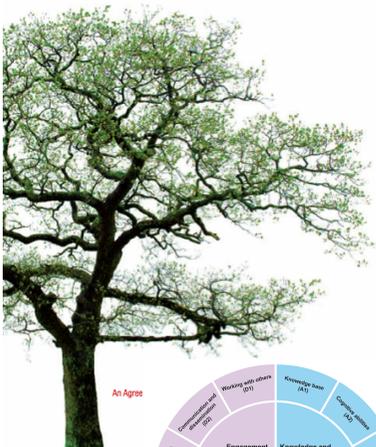
The Scholarly context: limited scholarly focus on postdocs

- Extensive literature on academic lives:
  - Examples: Clark, 1987; Cownie, 2004; Lucas, 2006; Trowler et al. 2012; Hermanowicz, 2009
  - Often mixed cohorts or poorly defined cohorts (e.g. Early career academics)

- Studies on Postdocs often based on surveys and mostly quantitative descriptions:
  - US Sigma Xi survey (Davis, 2005); Australia (Akerlind, 2009)

- Vast literature on doctoral supervision but **not on the role of the PI as research leader & *mentor* of postdocs**

- Scientists' lives explored through ethnographic approaches and Science & Technology studies (Traveek, 2009; Latour & Woolgar, 1979; Rabinow, 1996, 1999)

- Emergence of studies **exploring the specificities of Postdocs' lives**
  - Van der Weijden *et al*. 2015; McAlpine & collaborators, 2014; Wohrer, 2014; Felt, 2012; Cantwell, 2009

Research Methodology and Analysis
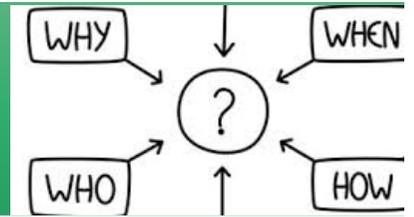
- **'At-home' ethnographic approach:**

"the researcher-author describes a cultural setting to which s/he has a natural access, is an active participant, more or less on equal terms with other participants…uses the experiences, knowledge and access to empirical material for research purpose" Alvesson (2003)

- Enriched by **semi- structured interviews** of postdoctoral researchers, research fellows and academics (n=21)

- Analysis using concepts from **Bourdieu's tool kit** (e.g. **field, capital and habitus)**

*"offers a particular way of **theorizing the rules, narratives and self-held truths** of social phenomena and of educational policy as a specific object of analysis."* (Thompson 2005)

Bourdieu's theoretical concepts for analysis

[(habitus) (capital) + field]= practice

Field

- B*ounded* social space in which agents interact and are positioned in relation with each other.

- Configuration of structured relations based on "hierarchies of power and status" creates the field.

- The position of agents within the field relates to possession and acquisition of capital

- Agents are engaged in an **on-going struggle** to better their positions within the field (Maton, 2005)

- Fields have their own *logic* (what types of capital are valued in the field)

Field of postdoctoral research

Fields of power

Government

European Commission

Research funders:
RCUK
Research charities
Industry

External national organisations:

Vitae
Athena Swan Charter
HR Excellence in research
HEFCE
Learned Societies
UK Research Staff Association

Principal investigators
Academics/ Fellows/ University teachers
Postdoctoral researchers
Research Staff
PhD students
Other researchers (Research assistant, Technicians)

Postdoctoral societies and Research staff associations

Institutional Actors:
Directors of Research and Innovation Services
Head of departments
Head of Faculties
Research and Innovation Services
Researcher Developers

Institutional committees:
Researcher Development Committees
(at faculty and institutional level)
Athena Swan/ Equality and Diversity commitees

Macro-level   Meso-level   Micro-level

Habitus

"a system of *dispositions*, that is of permanent manners of **being, seeing, acting and thinking**, or a system of *long-lasting* (rather than permanent) schemes or schemata or structures of perception, conception and action."

(Bourdieu in Hillier & Rooksby, 2005)

Construction of the research object

- ***Researcher development*** as an analysis of practices, which are produced through the interplay between the diverse *habitus* of postdoctoral researchers and academics in the field of postdoctoral research with its various forms of capital within the field, contributing to positioning/trajectory within the field.

- Understanding the conceptions of researcher development through the analysis of field, habitus and capital pertains to **reviewing the game at play in postdoctoral research**.

Sites of struggle in the *field* of Postdoctoral research
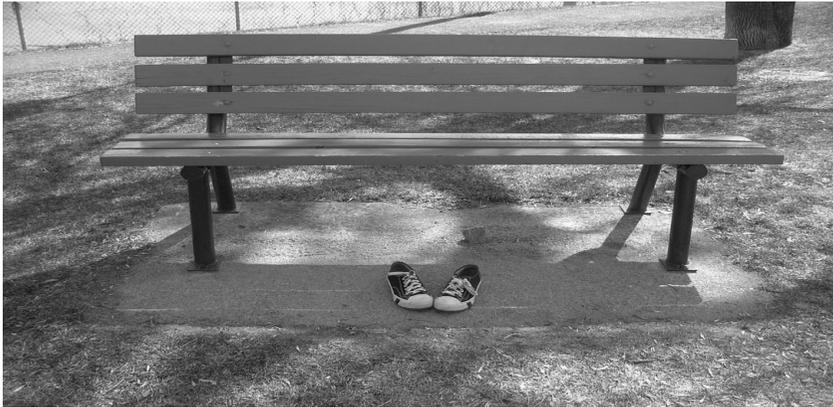
Positioning of Postdocs in the fabric of the institution:
- Multiple names for job titles
- Invisibility of researchers as full members of the academic enterprise

Postdoc time:

"Postdocs are employed to work full time on their PI's grants." [following advertisement of funding for undergraduate summer projects]

"It's not just **transferable skills** you know I think it is important that we say that it's not just about the generic skills…
"[discussion with male academic]

Organising the **fellowship** symposium:
'The faculty is not supportive of this initiative" [senior academic]

PIs' habitus:
ways of being, seeing, acting and thinking

Research socialisation

Own position in postdoctoral field

Ways of talking

Spaces of deficit

Being cut out for it

Getting them to work hard

Unearthing mechanisms of academic reproduction

*"And I know that the truth is that the vast majority of post-docs in X University will not go on to become academics…because I do feel like some of them **do live in cloud cuckoo land and do think they're going to become academics**."*

- Contrast between own experience and experience afforded to Postdocs
- Playfulness/ freedom charter/ physicality of *being in the lab*- critical socialisation process
- No doubts about *making it*
- Gendered frame: "have a hunger for it"
- Being 'deviant': fine balance between sharing research ideas and keeping them close
- Misrecognition of the contribution of capital:
  - Researchers should have gained " a sense of what it takes" or "where they see themselves"
  - "You can see quickly who has got it"
  - "raw talent", "being cut for it"

Researcher development stances from PIs

- **Researcher development practices are understood as position-takings or stances**

- **Stances link the academics' habitus and their position in the field**

"position taking... *the choices* made by agents [in the most diverse] domain of practice" (Bourdieu, 1996a, p. 10).

"Bourdieu thereby conceptualizes practices in higher education in terms of strategic 'position-takings' that depend for their form on the meeting of an agent's 'habitus' or dispositions with their relational position within the field." (Maton, 2005, p. 690)

Idea-ing and collaborating

Practical mastery

Assessing and advising
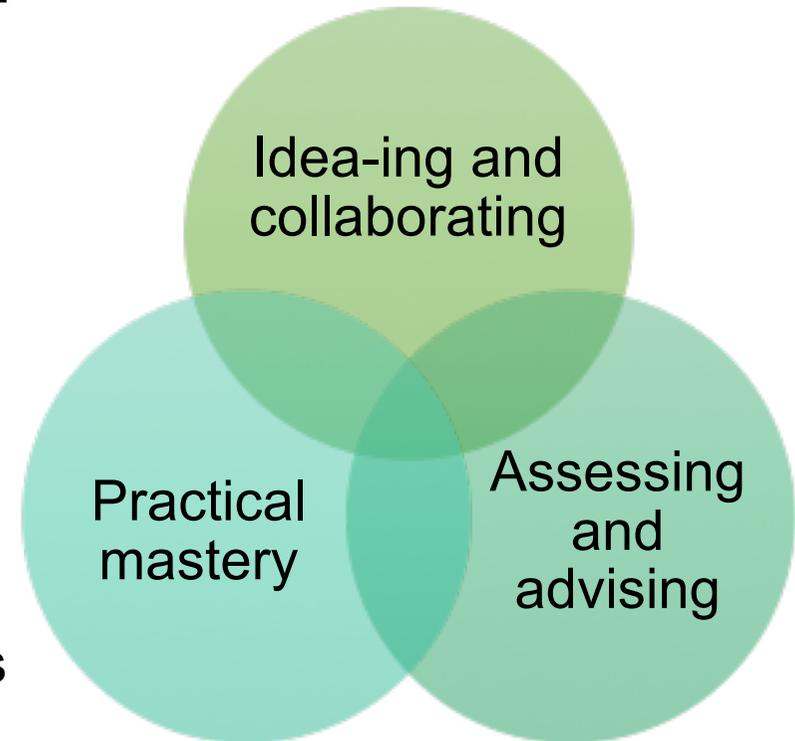
Postdocs habitus: *volumes and configurations of capital*

- Early research socialization: sites of UG/PG studies

- Approach to choosing PhD and postdoc position

- Research group size

- Research group dynamic (e.g. PI being *hands on or off, established versus new PI, own project being the PI' s main interest or not*)

- 'Side' projects: encouraged or hidden, asking permission or not

- Involvement in *other* activities (e.g. *Postdoc societies, outreach, teaching*)

- Transitions: disciplinary, topic, site

- Developing collaborations

- Access to small pots of funding
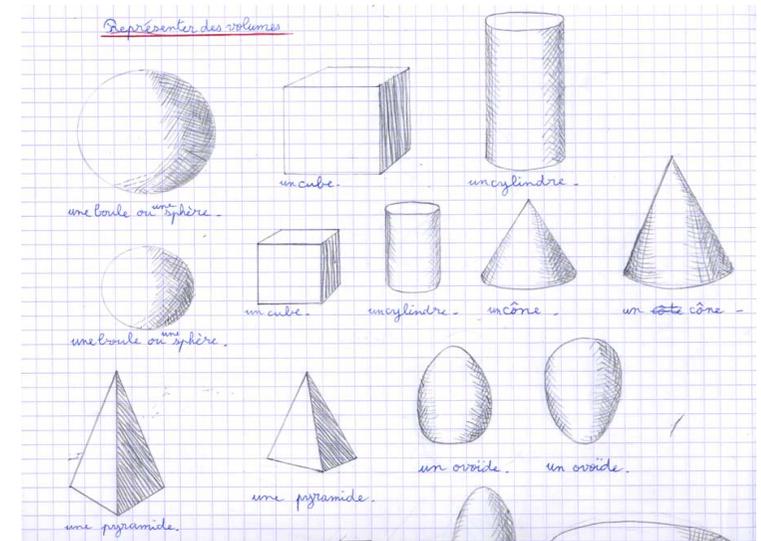
Practices mediating acquisition of capital in the field of postdoctoral research

Scientific capital
- Having published in high impact factor journals
- Continuing to engage in project after funding has run out
- Focusing on a research aspect that no one else is looking at.

Academic capital
- Supervision of UG/ Master students on project developed by Postdoc
- Reflecting on previous experiences and considering other options
- Organizing research conference, choosing topics, keynote speakers, introducing and chairing sessions.

Social capital
- Being known by others in the research field as having a specific expertise
- Working with known/renowned PI or PhD supervisor (pedigree)
- Experience of interactions with senior academics
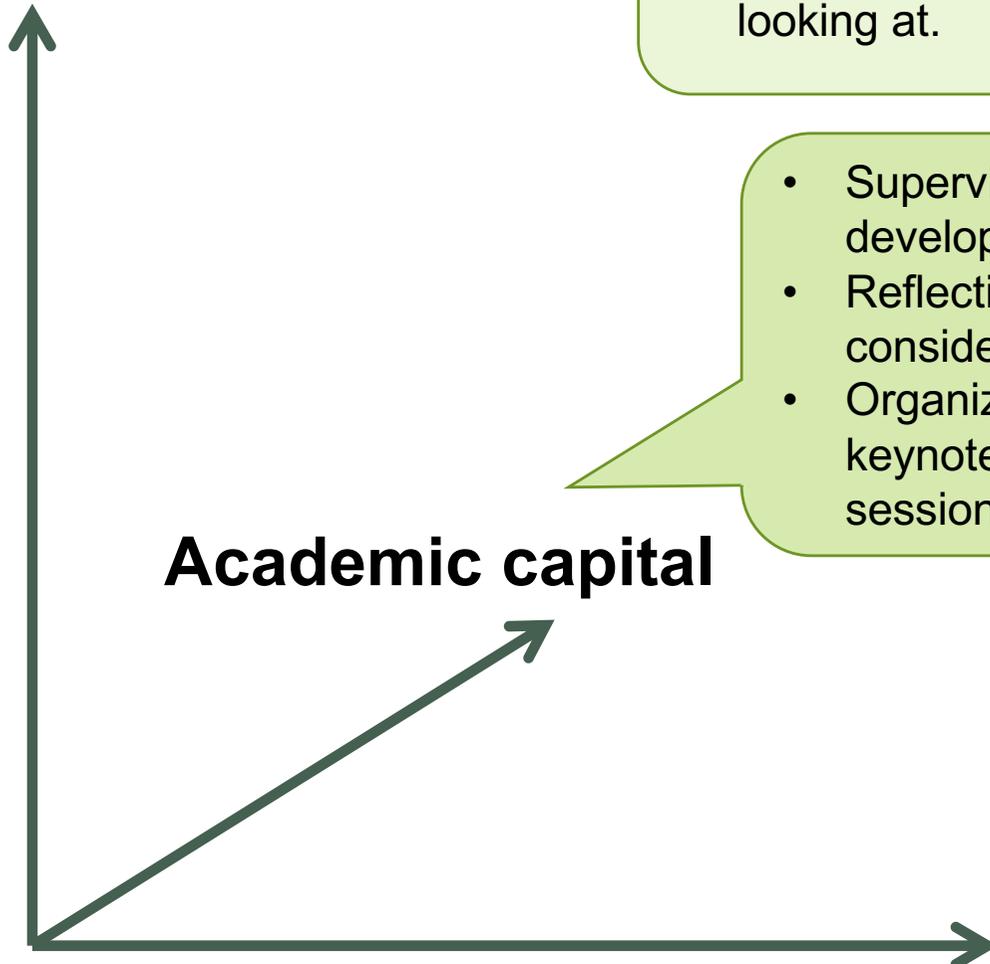
Positioning researchers in the field

Scientific capital

Projecting

Hopping

Grafting

Stepping

Resisting

Bobbling

Academic capital

Social capital

- Charlie
- Kendra
- Zoe
- Sadie
- Victor
- Isabel
- Elena
- Jed
- Neal
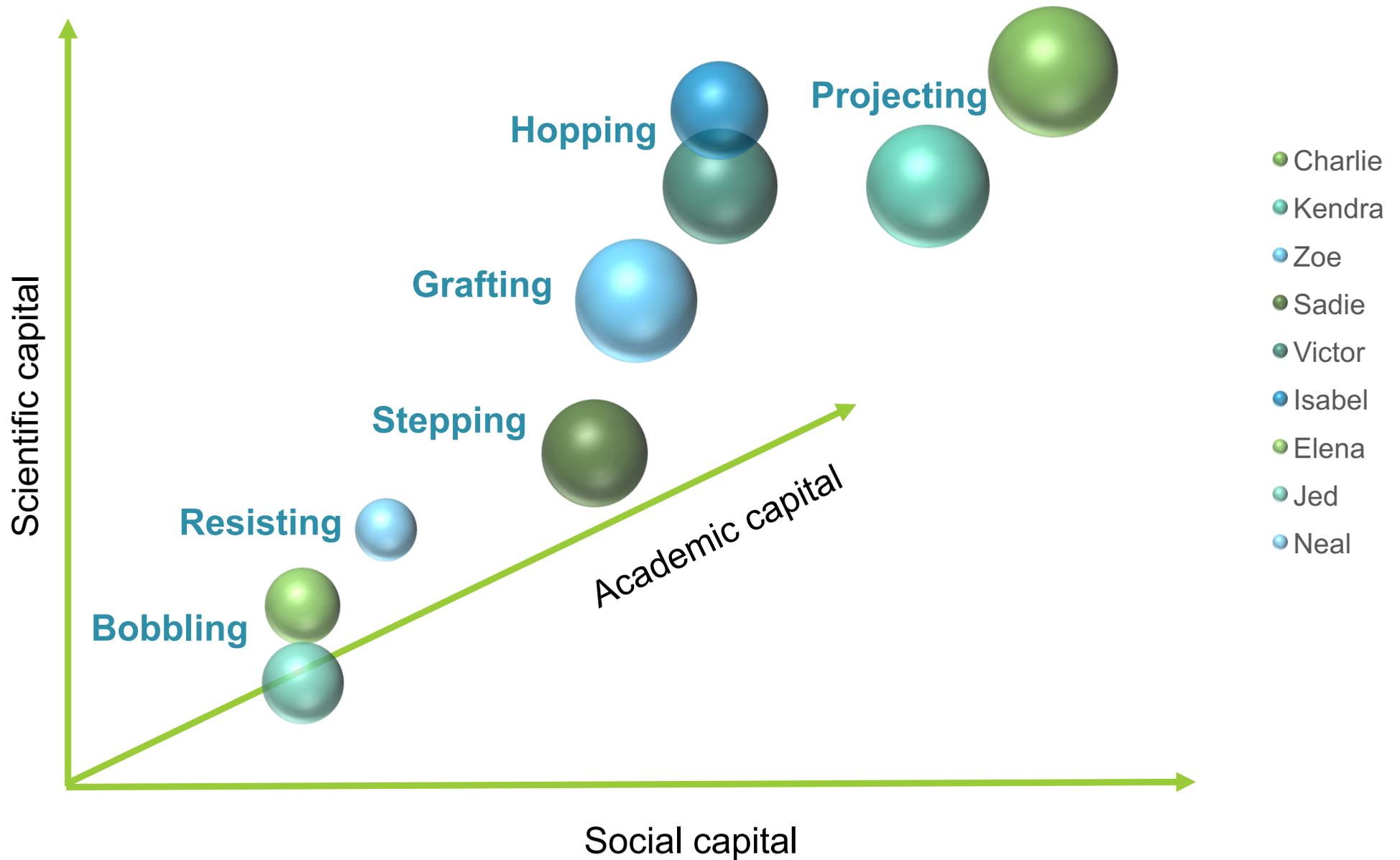
Postdoc habitus: *projecting*

- Balancing choices: risks, adventure, international dimension, future self

- Shock of contract research: loss of autonomy from PhD to Postdoc
  "And there was a set of experiments that I was told- these are what you need to do and this is what we're going to publish and when, and it was a lot more regimented I felt."

- Multiple inputs: hands-on and hands-off

- Applied as co-I for 2nd Postdoc

- Actively engaged in developing own collaborations

- Confidence built with publishing output and her expertise sought by others

- Shifting her connection away from lab work
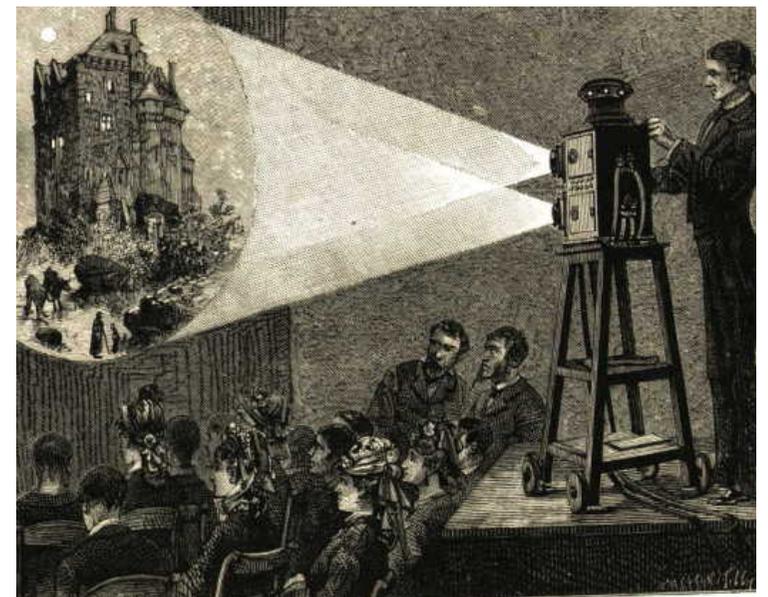
Postdoc habitus: *grafting*

" I think I'm not a branch but I am…what do you call it when you cut….so you have a tree and then the tree is doing such and such, and then you cut a branch from off the tree and you stick it and you make it grow…. a graft, **a graft on a tree**, because I think I can improve. I mean his work is amazing, it's flawless and he's one of the best chemists, one of the top chemists, **but I can bring a different aspect to his work**. So I feel I am a part of his team **but I'm a completely new part of it**, and he is a bit excited about it I think…"
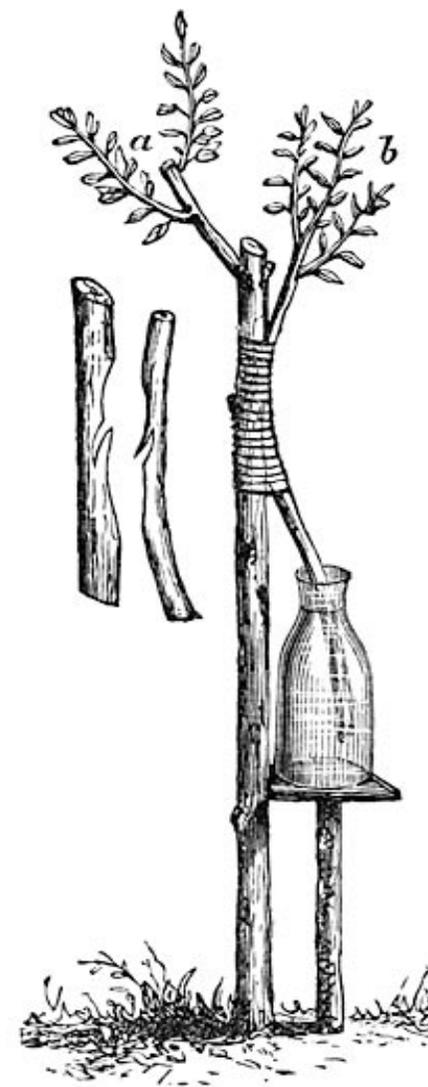
Fig. 5. — Greffe en approche.
oldbookillustrations.com

Capital imbalance and habitus *out-of-sync* with the field

- Felt she had developed her scientific capital too much compared to her understanding of the politics of research
- Mismatch between her *grafting* habitus and expectations of the field
- Struggles in accessing social capital

"But yet you need to <u>belong to a tree</u>. So if you look at the very successful scientists – because that's something, I say "what am I doing that is not correct", so who are the successful youngy's that are getting the positions then, you know, such and such. You can trace all of them to one tree, so it's just branches out from a tree, and then you go back and there's just the…whoever, you know, <u>it's like a family</u> of….In a way now, I think it makes sense and it's important that you <u>trust</u> people that you've <u>trained</u> and <u>they are going to help you</u> in research because times are hard. So I wish they would say that on the applications, and say you need to have <u>pedigree</u>, you need to come from a lab that will support you no matter what…"

Minimizing capital: symbolic violence

- **Having to let go** of 'your own' research when transiting towards research independence

- Supportive but up to a certain point

- Being threatened if choosing to continue on same topic

" So basically he said "**either you come with me or you will never work on this field ever again, I'll just make sure that…you're done, you can't work on this, this is mine**". And I remember some days he would be a bit upset and he would say it like that, and other days when he was a bit more relaxed he'd say "it's not good for you neither to work on this field, you must…" and I was just like "what do you mean, this is what I've trained for". So when I was writing….because I wanted….because he said "look, you are going to be left with nothing if I leave because I hold your contract, so if I leave I can actually take it and you would be left with nothing so you had better come with me". So I said "well I'm going to apply for things on my own and try…you know, trying to make it real easy doing that year and a half". And he was like "but what can you do, do you have to do something different".

Postdocs habitus: *resisting*

- Stayed with same supervisor/ PI
- Choosing to work on instrumentation
- Research topic not valued as *research*
- Research impact perceived as taking a project through- long term development
- High ideal about process of research and not convinced with "*on the back of an envelope approach*"
- Rejecting academic tasks (e.g. teaching) and not connecting to an academic self-image
- Aware of taking a risk regarding research future: his choices as "**bagages**"

Logics of the field

- Roberts policies have had limited impact in reconfiguring the **postdoctoral *field logic***.

- Shaping the logic of practice in HEIs entails **attending to both field structures and academic habitus**.

- **Conflicts** between the logic of employment and the logic of the postdoctoral field

- If the **two field logics** (knowledge production and production of knowledge workers) are to become intertwined new strategies of engagement will need to be deployed.
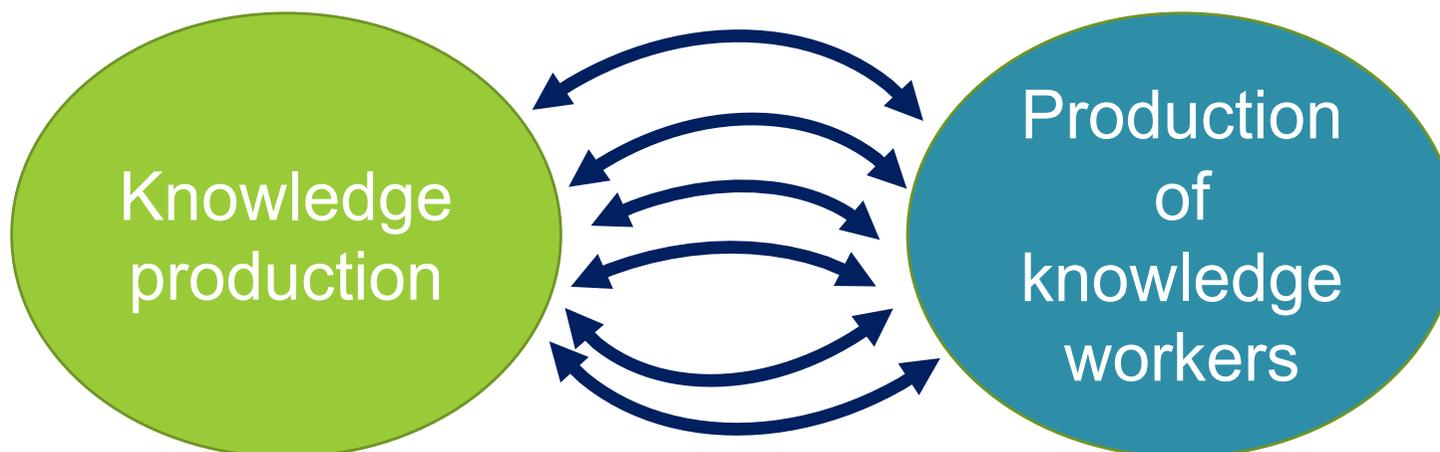
Conclusion

- A Bourdieusian analysis enables a broader sociological perspective of researcher development

- Offers us to think about researcher development as an issue about **acquiring capital and taking position within the field** instead of the restricted scope of skills developemnt

- Supports thinking about academics' modes of reproduction

- Helps practitioner consider shaping the rules of the game for researcher development

To know more, read my EdD thesis:
http://etheses.whiterose.ac.uk/18296/

Stephen Collins