



A Postdoc is not the only Career Option for new Psychology PhDs



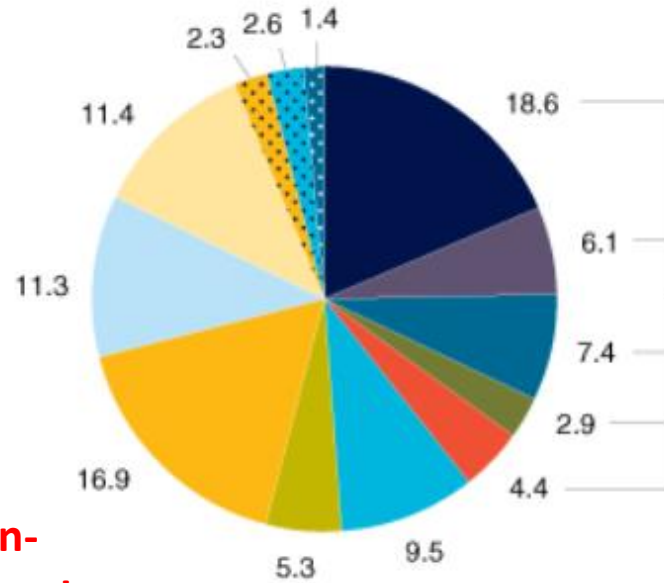
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Where are Canada's PhDs Employed?



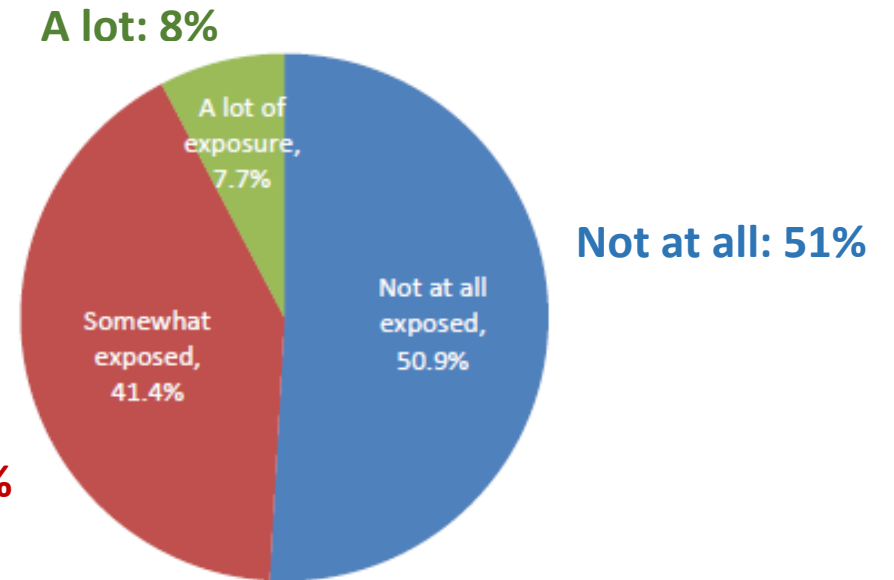
61% in Non-academic sectors:

Management, business, sciences, health, arts, recreation, sales, trades

39% in post-secondary academic employment

Source: National Household Survey (Stats Canada), 2011
<https://www.conferenceboard.ca/>

Are Canada's PhDs Prepared for Non-Academic Employment?



Somewhat: 41%

Did you have Non-academic Career Exposure during graduate school?

Source: Canadian Postdoc Survey, Mitchell et al (2015)

Common Non-Academic career paths for Science PhDs:

Research Analyst: Analyzes large datasets; identifies advantages among alternatives

Business Development manager: develops new opportunities, manages existing products, develops market strategies, and builds new collaborations

Technical Writer: develops and produces specialized documents

Information Technology specialist: identifies and solves problems in complex issues

Comparison of Work Goals: Academics and Industry

Academic demands:

- Keeping up with the literature
- Problem solving (piloting and adjusting experiments)
- Data analysis (hypothesis testing)
- Communicating results (publications, presentations)
- Sensitive to change (research directions)

Industry demands:

- Keeping up with the market
- Problem solving (managing priorities)
- Data analytics (market exploration)
- Management and communication skills (team)
- Sensitive to fast evolution (change)

Significant Overlap in Skill Sets!

Business Development manager: develops new opportunities, manages existing products, develops market strategies, and builds new collaborations

Why am I telling you about Non-Academic Careers?



Audio Engineer, Microsoft



Software Developer, Avenade



Director of Research, Netflix



Violin Builder, Korinthian Violins*



Research Scientist, Battelle



Research Analyst, Korn Ferry Management



Software Engineer, Oscilloscope*



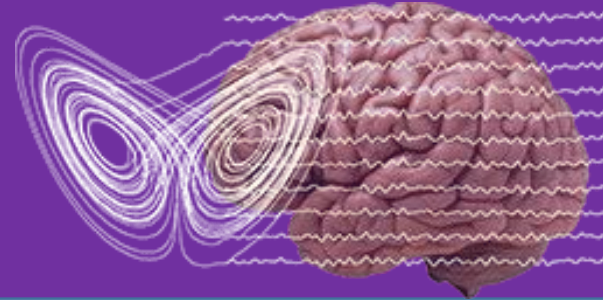
Business HR Manager, International Paper



Director, Technology, IRobot

Why am I telling you about Non-Academic Careers?

**NSERC-CREATE: Complex
Dynamics of Brain and Behaviour
Innovative research training
www.cd-create.org/**



We built a paid Internship program which pairs Graduate Students with Industry Partners

[Aerial](#): home sensor technologies

[BrainVision](#): **neurophysiological software/hardware solutions**

[Emotiv](#): wireless brain-computer interfaces

[InteraXon](#): brainwave-controlled computing technology

[Muvik Labs](#): interfaces for biosensor data

[Northern Digital](#): **3d motion tracking technologies**

[Oscilloscope](#): neural signal processing technologies

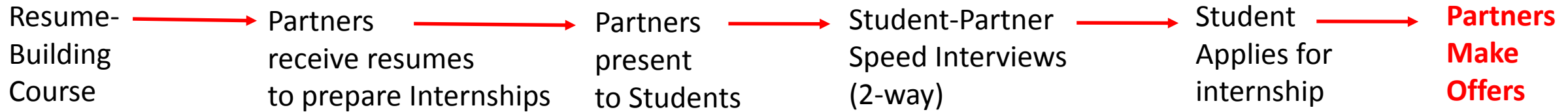
[Intheon](#): neurotechnology for biosignal processing

[SIG-NUM](#): contactless ECG data acquisition

[SR-Research](#): **eye tracking measurement**

[The Virtual Brain](#): full-brain network dynamics

One Path to a Non-Academic Internship



Comments from Industry Partners:

The internship with trainee Y was good. We will be happy to have another trainee just like Y.

Z was a real gem. Very good at testing and finding weaknesses in our product development.

Our experience with X was wonderful. I was skeptical at first, just because in my experience with internships, it takes a lot of work to come up with something that the intern can handle. However, X was the best... X really wanted to take part in what the company is doing, and X made many important contributions. I'd definitely hire X.

The Payoff:

16 Graduate Interns placed over past year

First recent Graduate was hired by Partner (full time position)

Interns build a professional network outside of academic circle

Steps you can take toward a Non-Academic Career:

- 1. Identify Your “Transferable” Skills**
- 2. Create a Resume with your Professional Skills**
- 3. Get some Non-Academic Experience during or after PhD**

1. Identify Your “Transferable” Skills



Transferable skills = broad (non-technical) skills developed in one context that are also used in other contexts

examples: communication, critical thinking, project management, teamwork

Translate your task descriptions using industry terminology:

Academic:

TA experience leading class discussions →

Conducting literature reviews →

Giving course lectures →

Industry:

Group Facilitator

Author of Best-practice Reviews

Presenter of Multimedia tutorials

Technical skills are transferable, too!

Matlab / R; statistics; Presentation software; coding

1. Identify Your “Transferable” Skills



Project skills:

Project management
Managing budgets (*participants, supplies*)
Team working (*supervision of undergrads*)
Organising meetings and events (*lab mtgs*)

Entrepreneurship:

Leadership
Innovation
Networking
International experience

Communication skills:

Writing (*term papers, publications, abstracts*)
Public speaking (teaching, research talks)
Languages (spoken/written/read)
Web, email, content creation and social media

Knowledge and information skills:

Teaching and training
Managing data and information
IT applications and programming languages
Writing reports

A Fantastic Portfolio!

2. Create a Resume with your Professional Skills



- **Your Graduate School** offers Professional Skills Training (usually no charge for students)
- **Career Planning Centre**
- **MITACS Courses** offered (no charge to enrolled graduate students/postdocs)
Certificates issued at end of course

Examples:

Building a Resume

Professionalism and Business Communication

Project Management and Leadership

Networking

A Resume is **not** a CV

Focus on Skills – not Publications

Professional Skills

Technical Skills

<https://edge-reg.mitacs.ca/>

<https://icc.ucdavis.edu/materials/resume/>

3. Get some non-academic experience during or after PhD

MITACS.ca: government-industry-academic partnership to train students for work innovation

Accelerate: paid 4-month internships @ \$15,000

Option 1: Student + Supervising Professor + Partner (industry, government, NGO)

Option 2: Student + Partner: Company advertises for interns

MITACS sample ads:

Detecting deception, disinformation, and crowd manipulation on social media through machine learning, natural language processing and artificial intelligence

Preferred Disciplines: Machine Learning, Natural Language Processing (Masters, PhD or Post-Doc)

Project length: 8-12 months

Location: Montreal, QC

Company: Nexalogy (analyze social media content)

Impactful Narratives and Storytelling: exploring essential audiences, narratives and channels for Social R&D communications

Preferred Disciplines: Social Sciences (Masters, PhD or Post-Doc)

Project Length: 4-6 months (1 unit)

Location: Ottawa, ON

Company: The McConnell Foundation

3. Additional routes to non-academic experience during or after PhD

A. For-Profit Research-Technology Internships (apply directly)



ALDO



Must be currently enrolled in university program (lists available at Career Placement Centre)

Internship Examples:

technical writing; market research; web development; policy development; data science

B. Non-Profit and Government Internships:

Aga Khan Foundation

<https://www.akfc.ca/get-involved/youth-fellows/>

Asia Pacific Foundation

<https://www.asiapacific.ca/grants>

National Research Council of Canada

<https://nrc.canada.ca/en/>

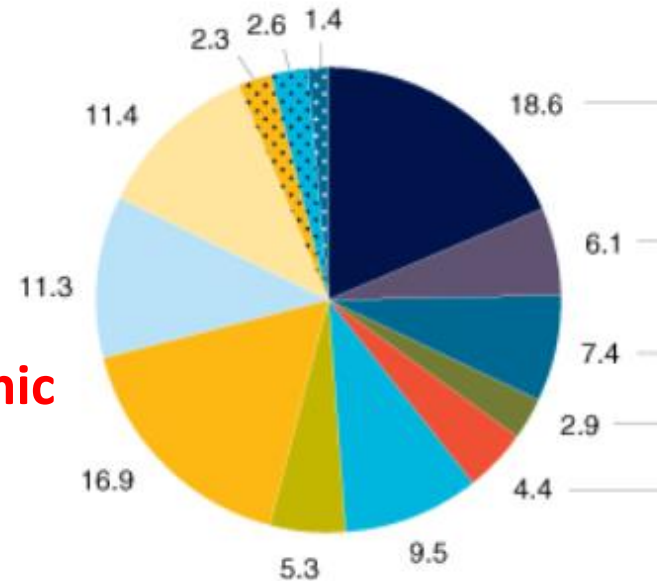
The Take-Home Message:

If you take these Steps:

1. Identify Your “Transferable” Professional Skills
2. Prepare and Share a Resume with those Skills
3. Get some non-academic experience during or after PhD

Then you will have more Options:

61%: Non-academic sectors



**39%:
Academic
sectors**

Thank You

caroline.palmer@mcgill.ca

CD-create.org/internships/

Further Resources:

Non-Academic Employment opportunities:

JobsinPsychology.com

Nature.com/careers

www.sciencemag.org/careers/

<https://www.chronicle.com/article/Where-to-Find-Information-on/45379/>

Tips for Preparing for Non-Academic Employment:

<http://www.phdcareerguide.com/>

<https://versatilephd.com/>

<http://myscizzle.com/category/career/>

Resume-Building:

<https://icc.ucdavis.edu/materials/resume/>

References:

- Edge, J. & Munro, D. (2015) *Inside and outside the academy: Valuing and preparing PHDs for Careers*. Ottawa: The Conference Board of Canada. <https://www.conferenceboard.ca/>
- Mitchell, J.S., Walker, V.E., Annan, R.B., Corkery, T.C., Goel, N., Harvey, L., Kent, D.G., Peters, J., Vilches, S.L. (2013). *The 2013 Canadian Postdoc Survey: Painting a Picture of Canadian Postdoctoral Scholars*. Canadian Association of Postdoctoral Scholars and Mitacs. <https://www.mitacs.ca/en/newsroom/publication/2013-canadian-postdoc-survey-painting-picture-canadian-postdoctoral-scholars>