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

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1To cite this document:
Where are Canada’s PhDs Employed?

39% in post-secondary academic employment

61% in Non-academic sectors:
Management, business, sciences, health, arts, recreation, sales, trades

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

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

Not at all: 51%
Somewhat: 41%
A lot: 8%

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

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

Source: https://www.infoentrepreneurs.org/
Why am I telling you about Non-Academic Careers?

Audio Engineer, Microsoft

Director of Research, Netflix

Research Analyst, Korn Ferry Management

Business HR Manager, International Paper

Research Scientist, Battelle

Software Developer, Avenade

Violin Builder, Korinthian Violins*

Software Engineer, Oscilloscope*

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 network dynamics
One Path to a Non-Academic Internship

Resume-Building Course

Partners receive resumes
to prepare Internships

Partners present

to Students

Student-Partner Speed Interviews (2-way)

Student Applies for internship

Partners Make Offers

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)

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
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

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CD-create.org/internships/
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:
