ASA Early Career Researcher Mentoring Workshop – Session summary

Session Topic: Jobs Outside Astrophysics   **Discussion Leader:** Stephen Hardy & Carole Jackson

If you only remember three things from this talk, remember these…
1. Don't Lie on Your CV 2. Think Strategically: Plan Ahead About What You Want To Do, and Gain the Skills. 3. Understand what Employers Want and How To Sell Yourself and Your Skills

Session summary/notes

- Understand how industry and Academia are different.
    - Know how they similar, and how they differ.
    - Think of it as a Venn Diagram – what they want and what you have.
    - In terms of referees: in Academia, you're looking at one person who knows you very well and has worked on the same things as you, and one person who is far removed from your research (judge of influence). In Industry, it's crucial to have referees who have either worked directly above or directly below you.
- Figure out what you want to do.
    - Talk to people and network;
    - Understand where you are;
    - Figure out where you want to be in 5-10 years, and then structure the next 1-3 years to serve your future goals;
- Networking:
    - Crucial, a way of getting more information (the industry, skills, pay, how to sell yourself);
    - Will give you leverage – a contact in the industry who can advocate for you;
- Long Term Preparation:
    - If you suspect you have a technical career ahead of you, collect new skills;
    - Trade of between getting things done quickly and maximizing skill development;
- What Employers Want:
    - How long will it take you to be productive;
    - What is your long-term potential;
    - How you "fit" into the organisation;
    - Will you let go: will you regret leaving Academia.
- CVs
    - Concise summary of main skills and what you're after
    - It is most important to have a hook;
    - Concrete examples of specific skills – highlight fundamental strengths, give specific examples of what you did;
    - Don't LIE. Don't gild the lily;
    - Sometimes small details can matter to specific people, eg: whether you used Word or LaTeX
- Interviews:
    - Concrete examples of specific skills; address outcomes;

- - - Employers wants to see where your boundaries are, so they'll drill down to specifics;
    - There is a problem solving component in ICT interviews: they give you a problem and a whiteboard;
    - Example of interview process:
      - Describe your highest impact piece of research;
        - Keeps applicant comfortable, assess what they have done
      - Questions on the CV
        - Background and history, and their long-term plans;
        - Also allows employers to pick out embellishments on CV;
      - Soft Skills
        - Describe a difficult person you have worked with; What was the most stressful part of your career and your coping mechanism;
      - Questions from the candidate
        - Shows they are prepared, engaged, thinking ahead;
        - Crucial
- Specific Points for Data Science:
  - Intersection between computer science, stats and domain knowledge;
  - Requires a Jack of all Trades;
  - Learn R and/or Python;
  - Java and Scala;
  - SQL, Hadoop, Hive
  - Machine Learning – scikit, learn mahout, graphlab
- Boomerang back to Astrophysics
  - Stephen: No. Carole: Yes, but don't underestimate the challenges;
  - Once you leave academia, the metrics are different, and if you have a gap in your research profile, it is very difficult to get back into a University.

Interesting quotes from the discussion

Stephen: "A shortcut to a job is to have someone the employer trusts say positive things about you."

Stephen: [paraphrase] You need to work out how much they will pay for you, and how much you will pay for selling your soul. Apparently, the market for souls isn't that inflated.