

The Need for Community Standards for Astronomy Employment

Stuart F. Taylor
Unemployed
astrostuart@gmail.com

ABSTRACT

While astronomy is considered to be a difficult job market, the academic culture that astronomers generally work in contains a considerable number of expected employment practices that are intended to provide for astronomers to have happy and successful lives, both professionally and personally. Recognition and discussion of the considerable sacrifices required by careers in astronomy is essential for the successful career and personal lives of astronomers. Many institutions have codified the rights of their researchers, but for the research community as a whole, these expected practices have not been written down in a form that can generally be referred to. Astronomers necessarily trust that their employers will follow these standard practices, and with their trust make themselves vulnerable should supervisors or administrators act without regard to community norms. As employment becomes more temporary, following these standards becomes essential for the astronomer seeking long term or permanent employment. Unreliable employment can disrupt an astronomer's efforts to have family and children. Practices such as reliable terms of employment need to be written up and encouraged. Because not following these practices can do considerable harm to the professional and personal lives of all scientists, I call for the scientific community to write up the employment standards that researchers in areas like astronomy can expect.

INTRODUCTION

The shift toward astronomers having to take temporary employment has been well documented (such as Metcalfe 2008) as has the general difficulty in astronomy employment (Thronson 1991), but the consequences on astronomers' careers and family lives has not been well studied. It is essential to ask how much has this shift resulted in problems impacting the lives of astronomers, and what can be done to reduce the impact.

The goal of each temporary job can be said to get the next job. This means having enough scientific success on which to base a successful job search. Besides listing skills and experiences in a C.V., the two important things an astronomer needs to show to the next employer are papers and a talk. The astronomer will first be judged by the number and quality of publications resulting from the current job. The success of a research position can largely be judged by how good of a talk results from the research and papers produced during the current job.

It is also important that scientist be able to change fields, and that the profession be accommodating to someone willing to step down in rank in order to change fields. It can take considerable courage to start something different. Perhaps provisions need to be made for the scientists who make this change, as this helps the whole profession be more flexible.

THE NEED FOR COMMUNITY STANDARDS

Even in the best of times, astronomy is not a field in which an employee can unexpectedly lose his job and then expect to quickly recover with a new job elsewhere. For all the difficulties astronomers face, employment in an “academic” field such as astronomy has the advantage that reputable astronomy employers follow an informal set of standards such that these sorts of irregular employment practices appear to rarely happen. But because victims of abnormal actions are pressured to remain silent, these sorts of actions do occur with the victims usually silently disappearing from the field. In a nation such as the U.S. where employers outside astronomy consider “at will employment to be the norm, the only answer is to have community wide standards not tied to any institution that give employees some community recourse for such actions.

Standards must exist for how well employers are expected to provide opportunities to do the research and get the data necessary to publish papers and prepare talks. Periodic evaluations must go both ways, with the employee giving feedback as to how well he has had the opportunity to complete research. A common failure mode is for the astronomer to be caught having done only preparatory work, without having the chance to reap the gains of the resulting research support. Standards must exist to allow the employee to switch from preparation to actually taking data in time to prepare for a job search. These standards must obligate a responsible employer to insulate employees from unexpected early ends to their employment, without fulfilling obligations of giving enough time to complete research. Early terminations should be done in only in the most dire financial cases, or only for the most serious misconduct. All such cases must be reviewed by a human resources department empowered to overturn cases that do not meet community standards. U.S.-style “at will” employment should be an anathema to respectable scientific employment practices.

The disruptive nature of how a difficult employment search must be addressed. An unprepared job search is a full time job that in the end does no benefit to the field, but is toxic towards being able to concentrate on the skills that are actually needed to get the next job. Even if inopportune job searches cannot be avoided, institutions must be expected to offer their full support for former employees to continue in collaborations to at least have a chance at making up for missed publications. Reputable institutions follow these standards as a matter of informal professional practice, but unless such standards are endorsed by the wider community, administrators of institutions can and will intervene to prevent their institutions resources from being “wasted” on a “former” member of the institution.

Temporary employment creates the following challenges:

1. Astronomers are subject to a “continual job search” characterized by the need to start preparing for the next job search from the beginning of each job. Failure to do so can lead to loss of career and/or extended unemployment.
2. Each new temporary job typically requires the astronomer to move. It has been noted that the impact can be greatest on an astronomer's family, especially on a spouse having to change jobs. It is less often noted that unpartnered astronomers can also have their family plans disrupted when the nomadic lifestyle of a moving astronomer becomes an obstacle to developing relationships that lead to marriage. The effect of having to move on the family situations of all astronomers needs study.

Standard employment practices within astronomy do much to allow astronomers to minimize the harm done by the nomadic lifestyle. These include:

1. Advance knowledge of employment end dates, to aid the astronomer to work to arrange his next job with no period of unemployment.
2. Availability of institutional administrative and procedural support for career progress.

3. Culture where mutual support is encouraged, characterized by free association of scientists without regard for their employment status.
4. Researchers who are first expected to do support work not of interest to future employers can expect to be able to participate in the experience and publication credit for having first “paid his dues.”
5. Unexpected changes in employment would only be done “for cause,” as evidenced by the common statement that finishing the term of appointment is only subject to continued funding and satisfactory performance. The use of either exclusion is rare and generally requires significant documentation. Because “at will” employment is nearly unheard of, astronomers have the advantage that they rarely have to worry that they might lose their job the next morning.

I call these and similar standards “academic standards” because of how employers in academia originally developed a culture of expectations for scientific employees, and how many employers of researchers outside of academia have still adopted an “academic” employment model. Astronomy is generally considered to be an “academic” discipline in how institutions doing astronomy have generally adopted these standards for their employment practices, because not doing so would put their employee's at a severe disadvantage in the job market. It is almost taken as an assumption that any astronomical institution will follow these principles. Unfortunately, following these standards is up to each institution, and there is not even a written description of the standards that a reputable institution is expected to follow in employing researchers in astronomy. That these standards exist is shown by the near universal compliance with these standards, and also by how most highly regarded academic institutions do in fact codify commitments they make to their researchers. While it is commendable how many institutions follow these practices without an

The shift towards temporary employment has not been followed by the creation of a set of rules governing the obligations between employer and employee regarding the employee's next job.

Much attention is given to the difficult job market in astronomy, but attention is not allowed to be given to the human difficulties caused by career disruptions. Astronomers can be made to be expected to silently accept inappropriate actions under threat that disclosure will harm their careers.

The old paradigm of encouraging every scientist to stay in the field has given way to a new paradigm that since not everyone will make it, there is a responsibility to encourage those who “are not making it” to leave. This coupled with the expectation of not complaining sets up a situation where astronomers can be used for the purposes of a project and then made to go early without the project fulfilling promises to give the experience crucial for career advancement. On occasion an administrator will claim to be doing the junior scientist and everyone else a favor by sending the scientist away into a “happier” career. They claim that everyone who has left science is happy about the decision, ignoring the selection effect that the nondisparagement principle creates. I find no studies of the satisfaction of those leaving research, especially those who feel forced to leave, but my anecdotal evidence is that many feel cheated and deeply miss science. Even worse are the experiences of those who left, sometimes under pressure, for supposed “historic opportunities” in “booming” fields such as technology and finance, only to experience that these “booms” were in fact bubbles. It was remarkable how many junior scientists resisted being coerced out of science because these bubbles were plainly foreseen by those with scientific minds, yet administrators who were also scientists would tout the “historic opportunities” with language all too similar to those whom we now blame for these financial crises.

EXAMPLES OF TYPICAL EMPLOYMENT STANDARDS

I list several commonly followed standards, and a discussion of why these are necessary. These standards are listed as an example of the expectations of scientists but is not meant to be comprehensive. Most standards are assumed, and it often takes an unusual situation where these are violated to bring awareness that these standards may not be guaranteed.

I list the following basic principles that scientist researchers expect of their employers:

1. One-year notice of potential termination dates.

A look at the AAS jobs register shows that research appointments are universally made to have a set number of years. Scientists expect this because they must plan their career moves according to their possible termination dates, which are generally known at least a year in advance. Nearly all career moves require relocation to another city. Someone who is surprised with an unexpected early termination is potentially severely disadvantaged, particularly if he is unprepared with publications to show to his potential employers, who will often expect a talk. In the difficult science job market, this is a potentially career-ending event.

Those who may need to get a new research job are advised to start job-hunting at least a year in advance because the preparation and search requires a year's activity and preparation. The search may involve writing one or more grant proposal for funding agencies in collaboration with others with an annual funding cycle. Many positions are tied to an academic cycle, with job ads and interviews for a particular job proceeding over many months before the start of an academic term. Offers are usually made for the candidate to begin the position several months or even a year into the future, so the candidate must start searching early to avoid a lapse in employment.

Prior to starting a job hunt, the candidate must have published papers and be able to give a talk on his/her research. Taking a research project from start to completion and having papers accepted to journals including the refereeing process requires at least one or two years, especially if the project is in a subject area somewhat different from that of the researcher's former positions.

For a significantly new effort that requires substantial improvement in instrumental capabilities, a time budget of two years for research followed by a third year for the simultaneous promotion of the results with a job search would have a reasonable chance of success.

There are exceptions, of course, when the employee is fired for misconduct, but reputable science institutions maintain a human resources department to enforce a reasonable amount of due process for such extreme cases. No one person would have the power to single handedly terminate for misconduct without the employee having the right to appeal.

Employers also seek to transfer rather than terminate employees should an assignment abruptly end. For example, the national laboratories have performance improvement programs to help an employee improve quality of work, and also a 'workforce mobility' program to help researchers find a position in another part of the laboratory in the cases of funding shortfalls or skill mismatches. There is concern that the best new hires will not be attracted to join an employer with less predictable policies.

2. Scientists expect that employment manuals will be followed without fallback to an 'at-will' disclaimer.

If an employment manual contains an "at-will" disclaimer, scientists would interpret this to be largely a legal protection in case the institution did not perfectly follow every step in the manual, but astronomers expect scientific institutions will make good faith efforts to follow their published procedures. Dismissals in disregard of the manual based on an at-will disclaimer should damage the reputation of the institution, and institutions should not depend on nondisparagement demands to hide these actions.

3. Institutions should provide due process.

Scientists value predictability and insist on having proper procedures available. We also expect the involvement of Human Resource personnel who are sufficiently empowered to insure proper due process.

4. Communication and documentation are essential.

Administrative actions are normally taken in communication with the affected party and documented. Decisions made without communication would be considered impulsive and arbitrary.

5. Proper boundaries between work and personal life.

Supervisors must keep a professional distance between an employee's work and personal lives. It would be considered unprofessional for employers to referee complaints from unaffiliated parties for minor actions completely unrelated to work. Personal and religious values should not be imposed on employee's personal lives. This may seem to be such an obvious standard that some might question the need to include it as a rule but unusual yet harmful cases require that supposedly obvious standards need to be documented.

6. Avoidance of surprise or arbitrary long distance moves.

Astronomers are often made to move long distances for their assignments. Employers should be expected to recognize the personal sacrifices astronomers make in disrupting unexpected long distance moves, and should have some say in planning such moves. Moves should not be initiated by unsubstantiated allegations.

7. Maintaining professional collaborations, friends, and completing research.

Human relations are said to be the most important ingredient to happiness. Having professional friend is among the most valued assets a scientist has. The community must endorse standards that it is not proper to disallow professional communication and collaboration.

8. Avenues to report violations of community standards.

It goes against the basic scientific principle of free exchange of information that institutions silence scientists to not report these actions to any other person in the name of "nondisparagement." A proper outlet should exist. Avenues for reporting institutional unethical behavior must be established.

It is important that there not be astronomers caught in a ruinous cycle of desperate job searching that itself becomes a full time job, a job that benefits no one but only further impedes skill development and professional progress.

Being sent home alone without regular contact with other scientists impedes staying current and is toxic to morale. It becomes impossible to maintain necessary connections when one must support meeting attendance out of the same dwindling savings used for living. It can bring depression when one has worked all one's life to be in science and yet is forced to stay in poverty housing and not attend announcements such as the first discoveries of super earths.

The most tragic consequence is when the astronomer is coerced to choose between giving up science versus having a family before one is too old to have children.

Institutions should be encouraged to support community values internally, but there must be outside avenues of appeal, even if the only consequence that can be issued is disapproval.

VALUES

Astronomy is done because we believe it has value beyond its practical benefit. It is hard to see how astronomers can promote the value of astronomy to society at large if the astronomy community accepts employment practices which do not value astronomers ability to have fair opportunity to continue careers, to have families, and to be allowed to maintain their professional friendships.

CONCLUSIONS

An astronomy career requires considerable sacrifices but also has many accepted employment practices that facilitate an astronomer planning a long term career. These practices give some predictability to the disruptions that the shift towards temporary employment creates. While many better employers have well written standards to commit themselves to these standards, for those that do not there is no community-wide set of accepted written standards. There are many standards that it is often assumed that all astronomy will follow, but because of either weak standards or even “at will” employment, employers are not committed to following community standards. Due to the long lead time required for obtaining a new job, astronomers are extremely vulnerable should employers or supervisors not follow professional practices expected in science. Because of expectations of disparagement and the psychological effects on an employee whose employer does not follow usual practice, it is unknown how often astronomers are forced to leave the field or have their lives harmfully disrupted by what most astronomers would consider unprofessional employment practices. The current literature has not sufficiently examined the effect of disruptive employment on the families of astronomers, or on the ability of astronomers to have families. The effects of these circumstances on the general health, mental and emotional health, and general happiness of scientists has not been studied. In a time when employers throughout society are weakening their commitments to their employee's welfare, it is essential to have open discussion to formulate minimum standards expected of employers and supervisors of astronomers.

ACKNOWLEDGMENTS

Several anonymous astronomers contributed to the discussion on typical standards. More astronomers than can be named made helpful suggestions regarding the need for community standards.

REFERENCES

Metcalfé, T.S., “The Production Rate and Employment of Ph.D. Astronomers” 2008, PASP, 120, 229
Thronson, H. A., Jr., “The Production of Astronomers: A Model for Future Surpluses?” 1991, PASP, 103, 90