Barmy army

Most countries have abolished compulsory military service, figuring that conscription is a poor means of training an effective defence force. Most of the exceptions to this rule are countries that either remain in a state of war or face a serious threat thereof—if only because of the misguided policies of their own governments. Finland, however, stands out as one of the countries which, despite living only with the memory of unprovoked aggression, have chosen to maintain the traditional state of military preparedness of the whole population, ‘just in case’.

You—at least those of you who count amongst my fellow residents of Finland—may be relieved to hear that I am too old to be called up for such service and would anyway not be required to do so, having retained my British citizenship, despite being a permanent resident of Finland. Nevertheless, the Finnish military service system provides me with some useful opportunities. Despite being universal and compulsory, it allows some young men to avoid marching through the forest all night burdened with a 35 kg backpack at -30°C , by instead working in my lab for a year. They have only to prove a fervent belief in the evils of all things military. In cases of physical or mental disability that would make them a danger to their fellow soldiers if left in charge of a firearm, they are totally exempt from service. Probably just as well, given the hazards that undoubtedly lurk in my laboratory.

They are thus routed into an alternative form of national service, which consists mainly of doing all the horrible jobs that ordinary adults wouldn’t do even if paid handsomely. Mostly these tasks are significantly less pleasant than frigid nocturnal marches through the forest and some are of equally questionable service to society. In principle, however, civilian service is a wonderful invention. It enables young people to become involved in activities that

are outside their life experience to date, can help them identify a suitable career niche and build a perspective of how the world operates that cannot be imparted by classroom teaching alone.

Civilian servants who come to my lab are mainly of two kinds, some are school-leavers taking the opportunity to work in a research lab during what in other countries would be called their ‘gap year’, often whilst preparing for the entrance exam for university or medical school. Others are university students in biology or biochemistry who have deferred their military service until the time of graduation, and who can profit from a year at the bench to beef up their skills and credentials for subsequent postgraduate research. In either case, the best trainees are self-selecting, although naturally we get the final say in whom we take.

What I get them to do varies according to their level of experience and education, but mainly they are doing ‘low-grade’ technical work for the lab, which is great fun for a year, but would be excruciatingly boring as a long-term career. Since most of my lab is currently dedicated to *Drosophila*, the civilian servants are invaluable for preparing fly food, passing stocks and, once suitably trained, scoring the progeny classes from experimental crosses set up by graduate students or postdocs. The more senior ones tend to become directly involved in research projects, handling anything from mapping transgene insertion sites to *in situ* expression assays, and even the black art of two-dimensional agarose-gel analysis of DNA replication intermediates. Whether they enjoy it or get anything of human or educational value out of it is not really for me to say, but my intention is to provide them with some idea of what real biological research is all about, allow them access to the informational resources of the lab and institute, and expose them to a vibrant

international environment, including the opportunity of meeting foreign girls. At the very least, it builds some measure of understanding and goodwill towards science among young people who may never come back to it, but who will carry the experience with them for life.

For the privilege of working in my lab, I must pay them but a pittance. In fact, I am not allowed to pay more than the rough equivalent of military rations and, if they are far from home, a little help with finding a place to live, which the state subsidizes anyway. Yet, in the main they work very hard, with real motivation and zest to learn, far more so than many career technicians I have seen in other institutes. Often they are to be found working unofficially after hours, and not only because the foreign girls tend to stay late too.

Can this model be transplanted out of Finland or the world of fruit-flies? With a little tweaking I believe it could. It would be more civilized to be able to pay them a decent wage, and I see no reason why this should be compulsory for males yet disallowed for females. A gap-year of service in science should be an option open to anyone, and if it had a truly international dimension, so much the better. Perhaps the way it could work best is if a group of labs simply formed an *ad hoc* network to offer such placements. Some funding from international organizations could assist in providing mobility across continents.

Although molecular biology certainly needs highly skilled technical experts and operational managers, it also needs the enthusiasm of youth: in fact, it needs it even more than the army does. Unlike the military, which often crushes the spirit of young conscripts, science is uplifting. Let’s beat a few more swords into pipettes.

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