promoting and expanding cooperation between farmers and the same corporations that Ziegler wishes to send to the gal-lows. Partly because of improvements in agricultural production, Ethiopia's economy has registered an average growth of 8% per year in the past decade.

Rights cannot be wished into existence. They need institutions to become realities. In 2010, Ethiopia created the Agricultural Transformation Agency (ATA), mirroring elements of Brazil's Agricultural Research Corporation (Embrapa), which has helped to bring technical support and credit to farmers. The ATA focuses on empowering farmers to become more entrepreneurial by helping them to improve productivity and participate in local and global markets. Ethiopia is also now a member of the Grow Africa consortium, which includes private enterprises, the African Union and the World Economic Forum, and has pledged to invest more than US\$3.5 billion in African agriculture. China, India and Brazil, among other countries, are also actively tackling hunger with more inclusive approaches, accommodating all major players including private corporations.

Ziegler rightly emphasizes the role of farmers, but fails to note how technical training can strengthen their political influence. Innovations such as the US land-grant university model, formalized 150 years ago to bring agricultural research, teaching and extension under one roof, played a key part in educating US farmers. The Green Revolution that helped countries such as India and Mexico to avert major famines relied heavily on scientific research, participation of the private sector and the upgrading of farmers' skills.

The right to food will continue to be a major global challenge as pressure on natural resources increases. But solutions will not come from traditional appeals for popular uprisings. They will come from increased inclusivity in partnerships, involving rather than punishing private corporations. To feed the hungry, the world needs new approaches that expand the practical use of human creativity, not more pleas for hollow revolutions. ■

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SCIENCE AND RELIGION

Godless chronicles

Glenn Branch goes for a dip in the antitheologic.

When the producers of the 2008 creationist film *Expelled* asked to interview PZ Myers, they misrepresented the nature of their project and the purpose of the interview. By the time the film screened, Myers knew that his brief clip would portray the scientific establishment as dogmatically suppressing dissent from evolution. Ironically, when he arrived at the cinema, he was excluded — unlike a colleague who was also interviewed for the film. Myers repaired to a nearby computer store to post a hilarious account of his expulsion on his widely read blog, Pharyngula. *Expelled* was quickly show-ered with unwelcome publicity as a result.

Myers is a developmental biologist, who named his blog after the pharyngula stage of embryonic development — both, he jokes, are notable for the appearance of brain and jaw. Pharyngula is a freewheeling mix of explanations of developmental biology, denunciations of creationism, commentary on politics, feuds with critics and rivals, and the sort of in-jokes and recurrent features that typify the blogosphere, enlivened by a raucous chorus of commenters. Its slogan is: “Evolution, development, and random biological ejaculations from a god-less liberal”.

A major theme of Pharyngula, and Myers's first book, *The Happy Atheist*, is what he views as the incompatibility of science and religion. In addition to excoriating various absurdities and atrocities that he associates with faith, such as the bad science deployed by anti-abortion zealots, Myers repeatedly asserts that science and religion are necessarily in conflict: “One is a method of analysis and experiment; the other is pretense and lies.” He is fierce with regard to the proponents of old-fashioned creation science (“trying to get their Old Testament superhero to adhere to the rules of physics, chemistry, biology, and ordinary common sense”) and the adherents of newfangled intelligent design (who “hide the bearded old sky god from the public eye”). He also castigates scientists who accept evolution while retaining their faith.

Whatever Myers's target, his weapons are taken from the arsenal of ridicule. He is in good company — writers such as Jonathan Swift and George Orwell spring to mind. Myers's prose, although serviceable, isn't quite in the same class, but sometimes reaches lyrical heights. Explaining his decision to bury, rather than burn, unwanted books of scripture sent for his spiritual

The Happy Atheist
PZ MYERS
Pantheon: 2013.

instruction, he exults “as nematodes writhe over the surfaces, etching the words with slime and replacing the follies of dead men with the wisdom of worms”. Myers's favourite weapon is the extended metaphor, deployed to expose his targets as arbitrary and absurd. He wields

it adroitly, comparing religious diversity to hat variety and theologians to courtiers fawning over the Emperor's new clothes. These conceits are often amusing and occasionally instructive, but the tactic is cheap.

Whether infuriating or invigorating, ridicule is no substitute for a considered critique, and Myers often fails to do justice to his targets. For example, his analysis of the idea that God guides evolution by acting undetectably at the quantum level, if amusing, is a popular rather than a scholarly treatment, and incorporates value judgements that are unsupportable by science. Myers might respond that his targets are too ridiculous to warrant anything more serious, but such a response presupposes, rather than compels, agreement.

The chief problem with *The Happy Atheist*, however, is that it seems to break no new ground. By my count, Pharyngula posts provide the basis for at least 26 of the 38 essays and 5 more are adapted from a talk he gave in 2010.

Admirers and detractors alike will be disappointed by the book as a missed opportunity for Myers to refine, systematize and extend his thoughts on science and religion. It is not comparable with Jason Rosenhouse's *Among the Creationists* (Oxford University Press, 2012), Steve Stewart-Williams's *Darwin, God and the Meaning of Life* (Cambridge University Press, 2010), or that ‘summa antitheologica’ of our day, *The God Delusion* (Houghton Mifflin Harcourt, 2006) by Richard Dawkins. It was Dawkins, by the way, who was admitted to the screening of *Expelled* when Myers was excluded. Was Voltaire's prayer, “O Lord, make our enemies ridiculous,” ever better answered? ■

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