Experts' eye view

A field guide to experts

Andrew D Oxman, Iain Chalmers, Alessandro Liberati on behalf of the World Artifexology Group

Experts are common but not well understood. This guide introduces novice expert spotters to the essentials of artifexology—the study of experts

Informed Choice Research Department, Norwegian Health Services Research Centre, PO Box 0130, Oslo, Norway Andrew D Oxman researcher

James Lind Library, Oxford Iain Chalmers editor

University of Modena and Reggio Emilia and Agenzia Sanitaria Regionale, Bologna, Italy Alessandro Liberati

Alessandro Liberati researcher

Correspondence to: A D Oxman oxman@online.no

BMJ 2004;329:1460-3

A field guide to experts

An expert is a man who has stopped thinking—he knows!

Frank Lloyd Wright

Experts are a little understood family within the phylum Chordata. Many people mistakenly believe them to have well developed egos, winged words, and dull plumage. In fact, they typically have immature egos (which explains their incessant self flattery), rudimentary wings (which is why they fly first class), and exotic plumage (to detract from their vulnerability). Despite their deficiencies, experts can be dangerous. Our brief field guide to artifexology (the study of experts) should help people to protect themselves from the insidious influence of experts.

Apologia

An expert is one who knows more and more about less and less

Nicholas Murray Butler

Who are we to write a field guide to experts? By its very nature, artifexology is a non-expert field of study. As soon as one becomes an expert in artifexology one becomes the subject of one's own studies, thus arriving at a sticky end up one's own cloaca. Unsurprisingly, we insist that this guide has been written by amateurs for amateurs.



Deeply tanned experts top the pecking order

Characteristic vocalisations

Always listen to experts. They'll tell you what can't be done and why. Then do it.

Robert Heinlein

Experts can usually be easily recognised by their self proclamatory call. Characteristically, they ensure that they are introduced to an audience by a fawning chairperson who refers to the many hundreds of papers and book chapters they have had published. Once installed on the declamatory perch, experts enjoy listening to their own exotic calls to the exclusion of those deemed less worthy of attention. They commonly offer firm advice, with no reference to reason or evidence.

An expert's call usually begins with a shrill "In my experience," which develops into elaborate song about obscure theories supporting his assertions. Experts inevitably refer selectively to research that supports their opinions and mercilessly trash research that does not support those opinions. They rarely, if ever, admit uncertainty, even when they have no idea what they are talking about. Displays of humility are unknown.

Although experts can be found in flocks, they prefer to sing to their audiences without competition. When experts are invited to multidisciplinary meetings or other forums where their dominance is threatened, they respond with the recognisable call of "I have important commitments abroad."

Habitats

An expert is somebody who is more than 50 miles from home, has no responsibility for implementing the advice he gives, and shows slides.

Edwin Meese III

Experts can be reliably found in their preferred habitat of conferences in luxurious settings. They are extremely territorial. While vehemently protecting their own narrow areas of expertise, they are never too shy to sing about life, the universe, and everything. Experts never have conflicts of interest, and if asked about these, their feathers become ruffled.

Guano as a guide to identification

You can always find some expert who will say something hopelessly hopeless about anything.

Peter McWilliams

Experts can easily be detected from their droppings, which are so abundant in the guidelines promulgated by professional societies, the reports of "expert" committees, and editorials in medical journals. Two recent ecological changes have raised the detection rate of expert guano. Firstly, guano has become so highly prized by the pharmaceutical industry that experts are paid huge sums for its production. Secondly, the editorial policies of some journals have started to require experts to disclose who is paying for the production of guano.

Endangered species

An expert is a man who has made all the mistakes which can be made in a very narrow field.

Niels Bohr

Although it comes as no surprise that experts are confident of their survival, there are reasons to think that they may be endangered. Firstly, because of their fierce territorial nature they constantly try to expel each other from their nests. Secondly, most experts are males. Thirdly, many experts have CVs that weigh so much that safe take off and landing is threatened. Fourthly, experts have no mature forms. Finally, when experts reproduce they often devour their young. Because of their incessant displays of overconfidence they are generally assumed to have large egos, whereas their egos are unusually small. This explains their need to constantly puff up their feathers.

Experts are dangerous

I am an expert of electricity. My father occupied the chair of applied electricity at the state prison.

W C Field:

Given the diminutive size of their egos it might be thought that beneath their puffed up displays of arrogance experts are cuddly, essentially harmless creatures. But be warned, they are dangerous. Examples of devastation and waste caused by well meaning but arrogant experts include bleeding patients to death (the first president of the United States, for example), placing leeches on a patient's anus after stroke, injecting malaria into patients with neurosyphilis, prescribing hormone replacement therapy to millions of women on the mistaken basis that this would reduce the risk of heart disease, spending billions of dollars on direct observation of people taking pills for tuberculosis without knowing whether this would do more good than harm, killing tens of thousands of patients with myocardial infarctions by giving them anti-arrhythmic drugs, and failing to draw attention to the benefits of effective treatments, such as aspirin, β blockers, and fibrinolytics.

Experts are not directly responsible for these and similar disasters; they are caused by the misuse of experts. Expert opinions need to be handled with cau-

tion. The reasons for this are manifold. Firstly, experts commonly disagree with each other, so there is always a risk of listening to the wrong expert, which can be harmful, if not deadly. Secondly, experts' behaviour differs importantly from that of non-experts. Experts develop strong opinions without looking at evidence. Even if they do look at it, they do so less systematically than others before arriving confidently at their conclusions. Thirdly, experts are often not up to date. Their recommendations sometimes lag 10 years or more behind available research evidence. Fourthly, experts are more aggressive than non-experts. Their values (which are rarely made explicit) commonly differ from those of the people on whose behalf they make decisions. They sometimes refer to "patients' values." When they use this term, caution is needed in asking how they got the values, as embarrassed experts can be vicious. This behaviour is most pronounced when they are confronted with scepticism about their values-for example, values related to screening, invasive procedures, or expensive treatments. Finally, most experts have competing financial and other interests and typically show strong preferences for the newest and most expensive technologies. When challenged, they single out individual critics, claiming that they are enemies of progress.

Safe observation

An expert is a person who avoids small error as he sweeps on to the grand fallacy.

Benjamin Stolberg

Experts can be safely observed in several ways. One way is to ask an expert "Where's the evidence?" This can have the same effects as a scarecrow. If you would like to avoid frightening experts away, a less drastic, although less safe, method is to distinguish between opinions and facts. As Charlie Brown said when impersonating an expert, "I am always certain about matters of opinion." By allowing experts to be certain about their opinions, you may be able to observe them for longer, but be careful that you do not confuse their opinions with facts as this can be dangerous.

The most entertaining but riskiest way safely to observe experts is by forming an expert committee, thus putting together a group of experts. We strongly advise that this is done in a room with one-way windows because unless observers can mimic the arrogant and obnoxious behaviour of the committee members, they are at high risk of being mistaken for a field mouse and being eaten alive.

Checklist

Where facts are few, experts are many.

Donald R Gannon

Artifexologists usually keep a "life list."

The World Artifexology Group (WAG), an exclusive organisation with only nine members, has decided on the following vernacular names for experts: Crow, Cuckoo, Dodo, Loon, Peacock, Pigeon, Turkey, Vulture.

Species of experts

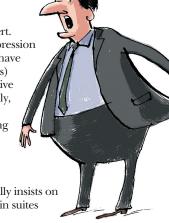
Crow

Type: Large and noisy expert.
Often wrong, hence the expression
"eat crow" (although crows have
never been known to do this)
Plumage: Boring, conservative
ties. Chunky around the belly,
glossy hair

Voice: Boasting and bragging
Habitat: Everywhere
Mating habits: Multiple
encounters (whenever

possible) at conferences

Migration patterns: Generally insists on flying first class and staying in suites



Cuckoo

Type: Slim expert. Noted for their brood parasitism

Plumage: Bow ties

Voice: Monotonous. Often says things that are silly or foolish in a ponderous way

Habitat: Laboratories

Mating habits: Young trophy mates

Migration patterns: Frequently invited to large conferences—rarely invited back



Type: Large, flightless expert about the size of a turkey. Now nearly extinct. First reported in 1598 by Dutch colonists, who characterised them as sluggish and unafraid of making fools of themselves. Undeveloped speaking skills, including the telling of tasteless, sexist jokes to large, non-receptive audiences



Loon

Type: Large, duck-like expert

Plumage: Bow ties

Voice: Says crazy, simple minded things, in black and white terms, often about topics well outside their narrow areas of

expertise

Habitat: Large, expensive homes in colder regions of the northern hemisphere, paid for out of

exorbitant consultant fees

Mating habits: Usually has third or fourth mate

mate

Migration patterns: Travels often, attending conferences and meetings but having nothing worth while to contribute



Peacock

Type: Large gallinaceous expert

Plumage: Wildly colourful ties. Also distinguished by their long, erectile, iridescent tail feathers, which they spread at every opportunity

Voice: Vain, often screeching, and self conscious

Habitat: Prominently sit in the front row of any meetings at which they are not keynote speakers

Mating habits: Mates who seem dull (but usually are not); their main purpose is not to get in the way of the male's spreading feathers

Migration patterns: Spend enormous amounts of time at grand rounds and local meetings that offer the expert feather-spreading opportunities.



Pigeon

Type: Plump, small headed expert Plumage: Boring, conservative ties Voice: Cooing; tries to lull audience into a sense of security, but easily fooled or cheated by other experts Habitat: May give the mistaken impression of sitting on the fence

Mating habits: Indiscrete

Migration patterns: Only found at conferences in large urban areas Feeding habits: Feeds on the waste of researchers

Droppings: Craps over everything

Turkey

Type: Large, bald headed, North American gallinaceous expert now

domesticated and kept in many parts of the world by large pharmaceutical companies **Plumage:** Embarrassing ties. Brownish,

iridescent feathers

Voice: Gobbling. Naive. Frequently a flop **Habitat:** Expensive condominiums in the city and large country estates

Mating habits: Well kept mate and chicks Migration patterns: Always first class, paid for by the company

Droppings: Good for guano. Fertilises stocks and shares



Vulture

Type: A large, bald headed expert of prey **Plumage:** Nondescript. All types of regular ties

Voice: Grunting

Habitat: Academic institutions

Mating habits: Takes advantage of students

Migration patterns: Soars at high altitudes, seeking

Feeding habits: Feeds on junior colleagues, unsuspecting associates, honorariums, and stock options

Any resemblance to persons, living or dead, is purely coincidental

Distinguishing experts

There are as many opinions as there are experts.

Franklin D Roosevelt

Experienced artifexologists know how to distinguish experts. Experts are classified into four main plumage types: bow ties, regular ties, cowboy bootlace ties, and no ties. Bow ties almost always wear glasses, which they frequently take off and use as an affectation for intelligence. An irony of bow ties is experts' belief that they are being original by wearing a bow tie. Regular ties are more varied and include embarrassing ties (normally hidden under waistcoats and flashed at inopportune moments), wildly colourful ties, and boring, conservative ties. Cowboy bootlace ties are rare, normally found only on the east coast of the United States. No ties are found in most regions, but are not as common as bow ties and regular ties.

Within each of the main visual categories, experts can be divided into three subgroups: deeply tanned feathers, slightly tanned feathers, and untanned feathers. These categories closely reflect the pecking order, with deeply tanned experts at the top. An unusual feature of deeply tanned experts is the failure of their tans to fade in the winter months—the tans are in fact sometimes deeper owing to frequent migrations to "continuing medical education" events in tropical settings.

The pecking order can be complex. A component measure of status has been developed on the basis of the number of publications listed in the experts curriculum vitae plus the average distance they travel to give talks plus the cost of tuition at the schools they attended plus the numbers of honorary degrees and PhD students they have plus the total US\$ value of their current grant support. Like most component measures, this measure has not been validated.

After experts have been slotted into these main categories, several factors can be used to aid identification:

- Size of the curriculum vitae
- Shape of the belly
- Behaviour
- Flight (first class or economy)
- Vocalisations (screeching, twittering, warbling or early morning calls).

Endangered experts need your help!

The greatest enemy of knowledge is not ignorance, it is the illusion of knowledge.

Stephen Hawking

Despite everything we have written, it is important to realise that experts are an endangered species that deserves protection, so that future generations can experience their presence and prescience. This guide, as with other field guides, is not written for experts or the many critics of experts. It is written and dedicated to the many artifexophiles (lovers of experts) worldwide, including clinicians, policy makers, journalists, and the general public. Although it brings us great joy to occasionally abuse experts, PLEASE DO NOT MISUSE THEM! Doing so can be dangerous for everyone.

We dedicate this guide to Richard Smith, a veteran spotter of experts and an inspiration.

Summary points

Experts abound worldwide

They are poorly understood

They generate gobs of guano

If the world should blow itself up, the last audible voice would be that of an expert saying it can't be done.

Peter Ustinov

Contributors: ADO, IC, and AL conceived the guide over several pints of beer, plagiarised most of it from field guides to other birds, and made up the rest. David Sackett contributed to the fun and drank his share of beer, but rendered himself ineligible for coauthorship by confessing that he was an expert in tree felling and chainsaw safety. None of us are willing to be guarantors. Martin Eccles was duped into painting several pictures for the guide, but the *BMJ* was too cheap to publish more than one of them, preferring to obtain additional material from another expert illustrator (Malcolm Willett).

Funding: We received no financial support for preparing this guide, but hope that it becomes a bestseller so that we can fight over the royalties.

Competing interests: As mere wannabe experts, we are jealous that we are not enjoying the prestige and lifestyles of real experts.

Ethical approval: Denied by an expert committee.

A sign of the times



Seen on the door of a newly refurbished ward at a London hospital.

Riccardo Di Cuffa senior house officer in otolaryngology, Simon Lloyd specialist registrar in otolaryngology (skwlloyd@blueyonder.co.uk),

Susan Sarangapani *specialist registrar in ophthalmology*, department of otolaryngology, Northwick Park Hospital, Harrow HA1 3UJ