

# Can we remove the ban on mobiles in planes without killing each other?

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**P**olice in Warwick, Rhode Island, earlier this year reported that a driver, fed up with being stuck behind another driver who was chatting away on his mobile phone, got out of his car, called the other driver a punk, and promptly punched him in the face.

It's now undeniably a cliché to proclaim that you can't stand people using their mobile phones on public transport, or, for that matter, in any public place previously reserved for awkward silence. Mobile phones have inherited the same social baggage that smoking once held—perfectly legal and many people do it, but accompanied with disapproving looks from passers-by. As with smoking, it is greeted with the heavy-handed social regulation and legislation which is increasingly definitive of our relationships with government and each other. Bans on mobile phone use in cars are the most obvious example—the assumption being that making a phone call while driving is more dangerous than Mr Bean getting dressed on the way to work.

## IS COMMUNICATION ANTI-SOCIAL?

This is how most people approach the vexed question of mobile phone use on aircraft. It is easy to bristle at the possibility of having to sit through a nine-hour flight listening to a one-sided conversation in what seems to be Portuguese. For that matter, any

electronic device can be potentially maddening—in the rare moments I take my iPod buds out of my ears, I'm sometimes shocked at how loudly I was listening to the music, and wonder how audible it was to people around me.

But there is a clear demand to use these devices. The flight between Melbourne and Sydney would be a decidedly different experience if the regular commuters were permitted to continue their business, rather than having that 51-minute quiet time. And as flying entails the diminution of a number of personal freedoms—food, sleep, even bathroom breaks are regulated—being able to communicate with family, friends or colleagues would be a reassertion of personal liberty.

And why shouldn't they be allowed to?

Just as there are more dangerous activities to do while driving, there are more annoying things on airplane travel than a fellow traveller phoning home. If you don't believe this, then you can't remember John Candy in *Trains, Planes and Automobiles*, or Brad Pitt explaining to a bemused Edward Norton how to turn soap into explosives in *Fight Club*. But the quickest way to put the lie to the argument that mobile phones cause 'air-rage' (road-rage for the jet-lagged class), and should therefore be banned, is the mere existence of the expensive, back-of-seat telephones.

A recent survey of 702 air travellers showed that 63 per cent of flyers wanted to keep existing mobile phone restrictions on aircraft; only 23 per cent wanted to lift the ban. But as economist Bryan Caplan notes,

current opinion probably suffers from a large status quo bias. It wouldn't take long before people started to enjoy the freedom to use their phones, and quit fretting so much about other people using theirs.

## WOULD PLANES FALL OUT OF THE SKY?

Contrary to the impression created by the regular and hyperbolic instructions to turn off anything more powerful than a clockwork Happy Meal toy, it is not clear that electronic devices and mobile phones *do* interfere with aircraft electronics.

The history of regulation of personal electronic devices (PEDs) on aircraft, whether 2-way ('intentional transmitters') such as mobile phones, pagers and radios, or 'non-intentional' such as iPods, laptops and Game-Boys, has been one of apprehension. The initial ban on electronic devices on aircraft came after a 1963 study by the American Radio Technical Commission for Aeronautics (RTCA), which looked at reports that PEDs had possibly interfered with aircrafts' onboard electronic equipment. Further studies by the RTCA, one in the mid-1980s, and another ten years later, found that such a risk was extremely low, but was highest at critical phases during the flight, particularly take-off and landing. In addition to these three studies, the British Civil Aviation Authority (CAA) looked specifically at mobile phone devices which showed that, theoretically, they could interfere with avionics, in particular with systems which had been certified to pre-1984 standards. Following these findings,

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the CAA recommended that the ban be upheld.

NASA keeps a record of nearly 70,000 anonymously reported aviation incidents and flight problems. But in only 52 of these—in other words, 0.08 per cent—did the crew suspect that the interference was caused by any personal electronic device. (As a side-note, 23 cases of ‘air rage’ were listed as caused by the use of PEDs.)



Looking at a number of examples contained in the NASA Aviation Safety Reporting Systems database is instructive.

- In May of 1995, the electric compass indicators of the first officer of a Boeing 737 gave erratic readings. After a sweep of the cabin was made for portable electronic devices, which resulted in flight attendants asking a passenger to turn off a compact disc player, the first officer's instruments returned to normal working order.
- In March of 1997, a Cessna 340/A pilot experienced erroneous readings when attempting to determine his location because of a passenger using a cellular phone. After the passenger turned off the phone, the pilot was able to locate his position and continue on with no problems.

But, as a 2000 US Congressional Hearing made clear, ‘neither the RTCA nor the CAA were able to duplicate under controlled conditions the interference from a PED that their studies indicate[d] could theoretically occur’.

As shown above, the only examples of interference have been anecdotal—no firm link has been established between PED use and disruption to avionic systems. No incident has been able to be replicated. In one case, Boeing, struggling with the PED question, purchased a passenger's laptop that a pilot claimed had triggered an autopilot error. Flying the same route, with the same laptop in the same seat, Bo-

eing was unable to duplicate the incident.

In the absence of any corroborating examples, it is highly possible that in many of the 52 cases in the NASA database, the existence of a PED onboard was used as a convenient explanation for an otherwise undiagnosed incident. And how likely is it that only 52 illicit PEDs have been used on aircraft since the NASA reporting system began?

Regardless of the uncertain effects of PEDs on avionics, aviation regulators around the world have resolutely banned mobile telephones on aircraft, and placed heavy restrictions on non-intentional transmitters. These regulations are backed up by airline-specific rules about what can be used when.

But as well as being illustrative of the natural timidity of government regulators on safety issues, these regulations help airlines restrict any onboard communications to the expensive back-of-seat phones. If the regulation were lifted—the lack of replicable evidence suggests it could be—airlines may well err on the side

of caution and retain their restrictions. But if one airline then decided that the safety regulations had been historically over-cautious, it could offer its customers the comfort of their own personal communications devices.

The decision about what PEDs to allow in the cabin could be firmly left in the care of the markets—there is no firm reason to require extra government regulation.

Airlines have recognized that communication can be a selling point. Late last year, progress was made by the FCC towards allocating spectrum for wireless broadband in aircraft. Lufthansa has already started offering unlimited Internet access on international flights for just under US\$30. All that is needed is a laptop with a standard wireless card common to newly purchased machines.

Debate over the validity of regulations restricting PED use in aircraft have to face these developments. There is a growing demand for communications in the air, and with the upsurge in voice-over-IP services (even Google is getting into the market) wireless broadband will allow passengers to make calls online.

Not only this, but it is also likely that within the next twelve to eighteen months combination mobile phones, which use both the traditional GSM or CDMA network and the wi-fi 802.11 standard will come on the market. Will a wi-fi enabled mobile phone be used on aircraft while the regulations stand (assuming that the GSM or CDMA connection can be disabled)?

If wi-fi voice communication is allowed, be it on a laptop or off a standalone phone, the argument that mobile phones cause unnecessary ‘air-rage’ will be irrelevant. As is the norm in the communications and technology field, innovation threatens the already fragile justification for government regulation of personal electronic devices.