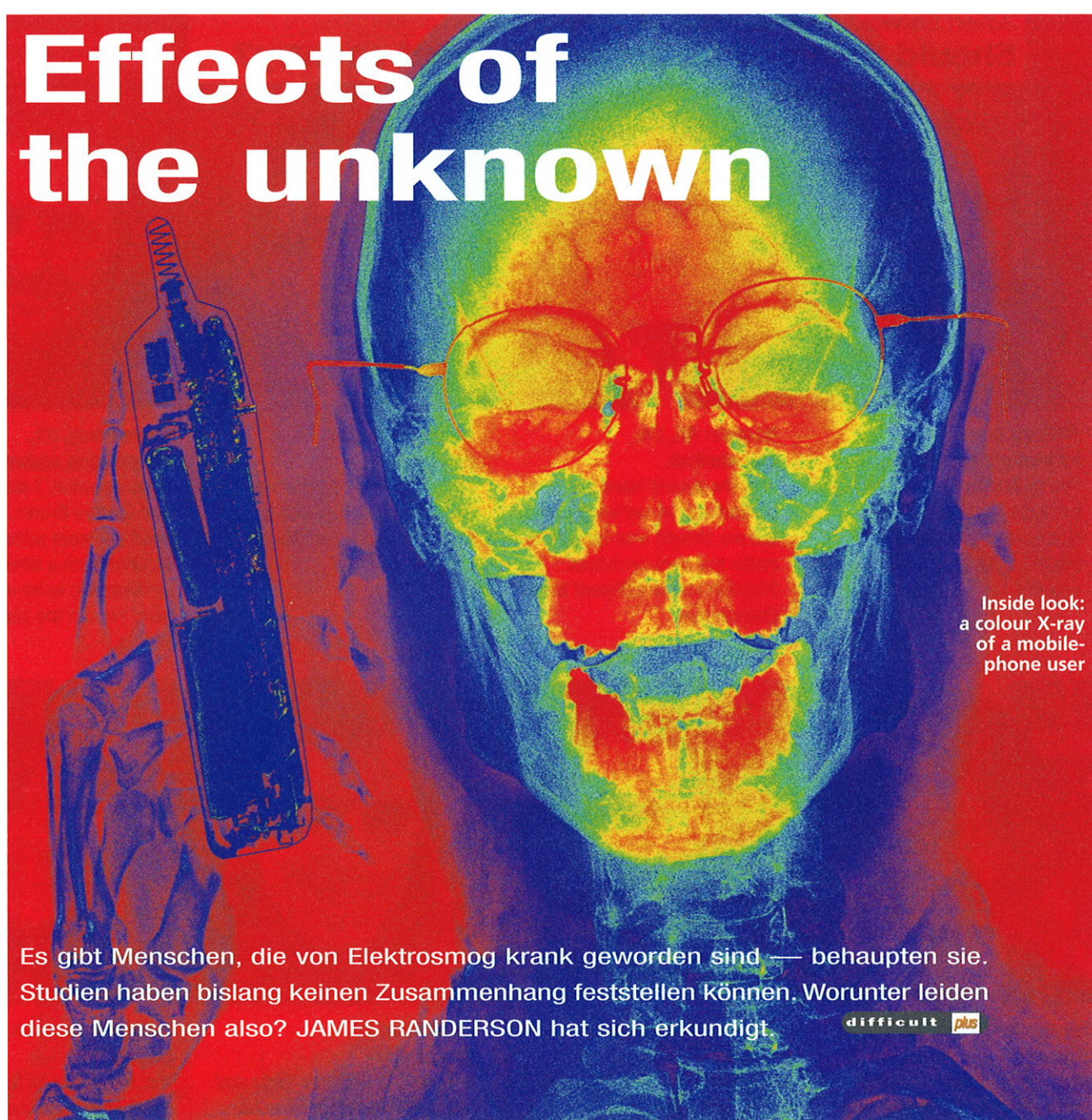


Effects of the unknown



Inside look:
a colour X-ray
of a mobile-
phone user

Es gibt Menschen, die von Elektromog krank geworden sind — behaupten sie. Studien haben bislang keinen Zusammenhang feststellen können. Worunter leiden diese Menschen also? JAMES RANDERSON hat sich erkundigt.

difficult **plus**

the guardian

“**F**our years ago, I was fab, fit and in my 40s with a dynamic marketing and media business, an exciting social life and an active sporting schedule.” But strange symptoms forced Sarah Dacre, now 50, to change her life radically. She rarely leaves her house in north London, which she has protected from electromagnetic radiation with foil-lined wallpaper and NASA-designed silvered cloth over the windows. She limits her computer use and makes telephone calls only on a landline. “If we go out for a quick meal, we have to be out at seven and leave by eight, because that’s when everyone arrives with all their phones and their BlackBerrys,” she adds.

After experiencing hair loss, severe headaches, memory loss, sleeplessness, dizziness, heart palpitations, tinnitus and digestive problems, she saw three doctors, who failed to di-

agnose and treat her illness. She then made her own diagnosis with the help of the internet. She believes she has developed electrosensitivity (ES). Her symptoms, she says, are caused by electromagnetic fields (EMFs) from computers, mobile phones, cordless telephones and phone masts.

Not many estimates exist about the number of people who suffer from ES, but they range from 3.2 per cent in California and 4 per cent in Britain to 8 per cent in Germany. “There are a lot of [ES sufferers] around,” said Denis Henshaw, a physics professor who is head of the human radiation effects group at Bristol University. “They are otherwise sane and sensible people. They are not all nutcases.”

Yet the scientific argument for ES is almost non-existent. “I think the picture is getting more conclusive that EMFs are not causing symptoms,” says Dr James Rubin, a

researcher at the Institute of Psychiatry in London. He has reviewed 31 studies into ES. None showed ES to be a statistically significant cause of symptoms. "That still leaves open questions about what the problem is in that case. These people are certainly ill and experience real symptoms."

The World Health Organization agrees with his view. A statement written in December 2005 says: "There is no scientific basis to link ES symptoms to EMF exposure. Further, ES is not a medical diagnosis, nor is it clear that it represents a single medical problem."

The clearest data come from **provocation studies**. People who claim, for example, that mobile phones make them ill are placed in a room with one that is either on or off. They then tell a researcher how they feel. Neither the patient nor the researcher knows when the phone is on. This double-blind condition eliminates the possibility that a sufferer might feel ill because of a psychological association with the phone's status. The researchers later compare, for example, when the worst headaches were felt to see if they match the times when the phone was on. The message from **dozens** of provocation studies is clear: EMFs, or "electro-smog" to the **campaigners**, do not cause the symptoms.

Dr Rubin's group published one such study in the *British Medical Journal* (<http://tinyurl.com/yekoxp>). It found no difference in reported effects, whether the phone was off or on. Dr Rubin suggests that patients are experiencing an extreme "nocebo" effect: expecting something to make you unwell

can bring on real symptoms. This diagnosis is not very satisfying for sufferers. Rod Read, who runs a campaign group called **Electrosensitivity.org**, says: "I find it really **obnoxious** to suggest that all of my 300 people are **deluded**. We reassure them that what they are experiencing is real."

Magda Havas of Trent University in Canada says that scientists are demanding impossibly high standards of studies. "The medical community and the scientific establishment are very conservative," she says. "People doing **novel** research that begins to question the status quo have a very difficult time getting it published. Initially, when you are working in a totally novel field, you can't get money for that sort of research."

Others say that studies on the chronic effects of EMFs — for example, research suggesting that living under **power lines** might double the risk of **leukaemia** in children (<http://tinyurl.com/y9unnu>)

— mean that scientists should keep an open mind. "An enormous number of studies show various forms of effects," says Olle Johansson at the Karolinska Institute in Stockholm. "It is, of course, of **paramount** importance to know exactly what is causing these problems."

Some scientists believe that certain organizations may actually be making things worse by encouraging sufferers to do specific things to avoid EMF exposure. These include moving beds to **line up with** magnetic north, changing from a **metal-spring** mattress to a **foam** one, and using expensive **devices** to identify EMFs. Rubin and his colleagues noted: "A danger exists that [these adjustments] will **reinforce** a patient's view of himself or herself as being sensitive to electromagnetic fields and put him or her at risk of developing symptoms in association with other electrical **stimuli**."

Stacey Eltiti, who belongs to a team doing a provocation study at Essex University, says: "I think in some ways [self-help groups] can be helpful and in some ways harmful. ... If sufferers are being given false information all the time or information that has been **spun** to make them more fearful and perhaps not showing them all the facts, that can put them into a worse state."

Everyone agrees that more research into relief of symptoms needs to be done. Dr Rubin has reviewed nine studies into how to treat the condition. Four used cognitive behavioural therapy, two used computer screen filters, one looked at a **shielding** device, and one studied acupuncture.

He and his colleagues concluded that although the quality of all the studies was limited, only cognitive behavioural therapy helped patients. They are **cautious**, though, because in none of the four studies did the researchers have a true control treatment. The patients may have appeared to experience **beneficial** effects simply because they spent large amounts of time with a **sympathetic** therapist.

The ES sufferers just want answers. "We are not unscientific or anti-scientific. We fully agree that there is not a scientific consensus," says Read. "We think the important question is how and why these people are suffering." ●

The symptoms are real, but are not caused by phones

beneficial [ˌbenɪˈfɪʃəl]	positiv
campaigner [kæmˈpeɪnə]	Aktivist(in), Gegner(in)
cautious [ˈkɔːʃəs]	vorsichtig
cloth [kloʊθ]	Stoff
conclusive [kənˈkluːsɪv]	eindeutig, schlüssig
cordless [ˈkɔːdləs]	schnurlos
deluded: be ~ [dɪˈluːdɪd]	sich etw. einbilden
device [dɪˈvaɪs]	Gerät
digestive [daɪˈdʒestɪv]	Verdauungs-
dizziness [ˈdɪzɪnəs]	Schwindel
dozen [ˈdʌzən]	Dutzend
exposure [ɪkˈspəʊʒə]	Ausgesetztsein
fab = fabulous [ˈfæbjʊləs] <i>ifml.</i>	toll; hier: gesund
foam [fəʊm]	Schaum(stoff)
foil-lined [ˈfɔɪl ˌlaɪnd]	folienbeschichtet
heart palpitations [ˈhɑːt ˌpælpiˈteɪʃnz]	Herzklopfen
landline [ˈlændlaɪn]	Festnetzanschluss
leukaemia [luːˈkiːmiə]	Leukämie
line up with sth. [ˌlaɪn ˈʌp wɪð]	an etw. ausgerichtet sein
metal-spring [ˌmetəl ˈsprɪŋ]	Federkern-
novel [ˈnɒvəl]	neu, bahnbrechend
nutcase [ˈnʌtkeɪs] <i>ifml.</i>	Spinner(in)
obnoxious [əbˈnɒksɪəs]	widerwärtig
paramount [ˈpærəmaʊnt]	höchst, äußerst
power line [ˈpaʊə ˌlaɪn]	(Stark)Stromleitung
reinforce sth. [ˌriːnˈfɔːs]	etw. verstärken
sane [seɪn]	normal, vernünftig
severe [sɪˈvɪə]	stark
shielding [ˈʃiːldɪŋ]	Abschirmungs-
spin sth. [spɪn]	etw. ins rechte Licht rücken, manipulieren
stimulus (pl. stimuli) [ˈstɪmjʊləs, ˈstɪmjʊləɪ]	Reiz
sympathetic [ˌsɪmpəˈθetɪk]	mitfühlend; hier: verständnisvoll

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