

NEWS SCIENCE SPACE The pseudoscience of creating beautiful (or ugly) water Thu, Feb 17, 2011, 00:00 A Japanese 'doctor of alternative medicine' claims to be able to think good or bad thoughts when looking at a glass of water and form appealing or ugly ice crystals, writes WILLIAM REVILLE SEVERAL PEOPLE recently asked me what I think of the work of Masaru Emoto. File photograph: Getty Mandatory vaccination not going to happen in the Republic Most Read in News 1 New suspect in Ashling Murphy murder inquiry presented to hospital with injuries 2 Ashling Murphy murder: Gardai identify new person of interest 3 Multiple sclerosis: Common virus may play role in neurological illness 4 His life is 'ruined', says solicitor of man released in Ashling Murphy inquiry 5 'Dear Ashling, our hearts are broken': Tullamore unites to mourn loss of murdered teacher Real news has value SUBSCRIBE Science Columns The mind of the mathematician The mind of the mathematician The stereotype is a dishevelled scatterbrain but in reality we come in all shapes and sizes Our meritocratic educational system serves us well Our meritocratic educational system serves us well Meritocracy has flaws but critics have yet to come up with a superior system That's Maths: Jakob Bernoulli and the law of large numbers That's Maths: Jakob Bernoulli and the law of large numbers Swiss's theorem was first attempt to apply probability outside realm of games of chance Latest Ireland New suspect in Ashling Murphy murder inquiry presented to hospital with injuries 37 minutes ago Public service pay bill reached record high of EUR23.5bn last year 47 minutes ago Man found dead in unexplained circumstances in Co Donegal 54 minutes ago Hybrid Leaving Cert 'not ruled out by Government', says Taoiseach 1 hour ago Government's new housing strategy for people with disabilities welcomed 2 hours ago Features & Opinion Can autonomous vehicles help shape the carbon emissions fight? Apparently, the main "scientific" paper published to date to demonstrate the phenomenon is a photo-essay written by Emoto himself and published in a journal of "alternative" science. This cuts little ice (pun intended) in mainline science. I have no reason to doubt Emoto's sincerity but his work bears many hallmarks of a pseudoscience – the phenomenon is based on claims made by a charismatic leader and is described by an amalgam of science and mumbo-jumbo, there is no credible hypothesis as to causation, no development of the idea, no fruitfulness in the concept, and, above all, no clear scientific demonstration. There is always an audience for this kind of thing. Some people just want to believe in strange phenomena. Emoto's followers are also likely to be into New Age phenomena like Chakras, out of body experiences and past lives. If Emoto is right, you certainly don't want people thinking badly of you! However, I think we can relax. In my opinion, Emoto has the traditional two chances of being right – slim and none. William Reville is professor of biochemistry and public awareness of science officer at UCC – [understandingscience.ucc.ie](http://understandingscience.ucc.ie) MORE FROM THE IRISH TIMES Crime & Law Floral tributes and messages outside Scoil Naomh Colmcille, Durrow, the school where Ashling Murphy taught. Photograph: Colin Keegan, Collins Dublin 3:57 New suspect in Ashling Murphy murder inquiry presented to hospital with injuries Opinion Flowers and messages left near the location in Tullamore, Co Offaly, where Ashling Murphy was killed on Wednesday after she was attacked while jogging. Photograph: Dominic McGrath/PA Wire Femicide is not due to bad men 'acting alone' English Soccer Pep Guardiola: with City the defining note is extreme, unfettered competence. How sensible to simply bolt on the Catalan model of how to win. Photograph: Martin Rickett/PA Wire Meticulous City put clear blue sky

between themselves and the rest Innovation innovation Irish Times Innovation Awards: Six companies on the shortlist MORE IN SPONSORED Many businesses are only now scratching the surface of digital transformation and how they can use data and tools to connect with customers or engage employees. Photograph: Getty Images 'Digitalisation makes things simpler and changes the way you do business' Andrew Brownlee, chief executive of Solas: The inclusion of apprenticeships and further education options on the CAO is a "game changer". Photograph: Imagno/Getty Images Roast beef and 'woke warriors': Hogarth exhibition re-examines Britain's past 'Officials are already concerned about the short duration of protection provided by booster shots against Omicron, which could be as low as five weeks.' Photograph: Getty Images How language research is changing lives in Northern Ireland ESB's solar PV offering addresses the difficulties which many organisations experience in achieving payback on such projects. Opposite electrical charges attract each other and, consequently, in the liquid state, water molecules cluster together weakly, constantly making and breaking attachments with neighbouring ?molecules in the flickering cluster. Can autonomous vehicles help shape the carbon emissions fight