



## **Know your audience: public perception of geology from anecdote to evidence**

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One of the basic strategies of science communication is to ‘know your audience’ (Nerlich et al, 2010), yet often scientists are communicating to a distant and diffuse audience that cannot be seen or directly engaged with. Both traditional written reports and emerging online media provide limited or no opportunity to engage audiences in dialogues with the communicator that can convey the public’s own levels of knowledge. In those circumstances it becomes almost impossible to know your audience.

For geoscientists, this decoupling from the intended audience is made more problematic when conveying new technical issues such as carbon capture and storage or deep geological disposal of radioactive waste, which are rooted in the unfamiliar subsurface (Sharma et al, 2007; Ashworth et al, 2009). Those geologists who have engaged with the public in these novel realms often have fashioned informal ways to overcome their audience’s geological unfamiliarity based on the trial-and-error of personal experience, but such anecdotal lessons are rarely applicable to wider communities of practice. In recent years, however, our ad hoc intuitive ideas about how to comprehend public perceptions of geology have gained rigour from evidence-based theory (Singleton et al, 2009). This presentation highlights one example of this, using an ongoing study into the public understanding of the geological subsurface in south west England. Results from a combination of interviews and questionnaires were assessed using the established psychological technique: ‘mental models’ (Morgan et al, 2002). The work demonstrates how a mixed method approach can move geoscience communication beyond casual assumptions and individual rules of thumb to a more robust scientific way of thinking.