SPECIAL FOCUS

The DCAL Education Debate

Narrowing the gap between deaf and hearing children’s educational attainment: research, policy and practice

On May 10 2011, DCAL hosted an important, timely and stimulating debate regarding education for deaf children. The impetus for holding the event was the significant gap that exists between deaf and hearing children’s educational achievement. Currently available data indicates that deaf children in England are 42% less likely to get 5 GCSE at grades A to C than their hearing peers.¹

The evening debate took place in University College London’s Robert’s Building, Torrington Place, London and was well attended by key stakeholders in the field of deaf education. Members of the panel and audience included users of BSL (British Sign Language) and English. Individuals who attended included teachers of the deaf, speech and language therapists, students and researchers (both deaf and hearing), parents of deaf children, and others. To ensure everyone could participate equally DCAL provided two BSL interpreters and speech to text transcription.

The aims of the debate were to stimulate discussion around future initiatives that might help narrow the gap between hearing and deaf pupils, to share best practice and to arrive at some consensus about how research can provide an evidence base for future policy decisions.

A central thread in discussions was the role of sign language in education - especially pertinent with 2011 designated the National Year of Communication. As much as actual educational attainment, the panellists and audience felt it important to discuss deaf children’s experience of education, issues around children’s social and emotional development and language.

1. See NDCS website and their Must Do Better campaign report http://www.ndcs.org.uk/about_us/campaign_with_us/england/campaigns_archive/close_the_gap/#contentblock2
their mental health. The debate was framed within the context of on-going spending cuts as well as the impending government green paper: “Support and Aspiration: A New Approach to Special Education Needs and Disability”. The green paper is presently within its consultation period (running until the end of June 2011). The final paper will be key in shaping education for deaf children in the future.

Television broadcaster Rachel Burden, currently presenter for 5 Live’s Breakfast Show, chaired the evening, inviting each of the 5 panellists to open with their take on the issues and then receive questions from the floor. The panellists were: the international equality trainer, consultant and teacher Richard Rieser, currently Managing Director of World of Inclusion Ltd; Professor Gary Morgan, who is Professor of Psychology at the Department of Language and Communication Science at City University and also Deputy Director of DCAL; social scientist and political commentator Dr Floyd D Millen, Director of Yes Minister; Brian Gale, Director of Policy and Campaigns at NDCS (National Deaf Children’s Society); and national expert on deaf children’s education and Head of Deaf Support in the large comprehensive, Lister Community School in east London, Derek Rodger. The evening was filmed by the BBC’s See Hear team for broadcast as part of a special series on education later this summer.

Reflecting on the evening, DCAL’s Director, Professor Bencie Woll said: “The debate was a great success and I believe it comes at a critical time. Of course we could only begin to tease out some of the vital questions and issues around deaf education in this one evening, but even in so short a time a range of views and opinions were shared. I hope that everyone gained from the event. I believe that it will have helped stimulate new approaches, challenged our thinking and sharpened our resolve to work for, and campaign for, excellence in deaf education. If I had to come away with one strong take-home message it would be unanimity that recognition of the problem needs to be translated into action.”

Richard Rieser
Panellist

**Cutting the budget for deaf education**

Panellist Richard Rieser believes the UK government is failing down on its international responsibilities as enshrined in Article 24 of the 2008 UN Convention on the Rights of Persons with Disability, the article which deals with education. He is concerned at the government cuts affecting Teachers of the Deaf, even though there is a promise to protect education despite the hard economic times.

**Bilingual learning**

Richard advocates for a policy of inclusion whereby hearing and deaf children learn sign language in a bilingual learning environment. He rejects the polar policies of integration or segregation, saying they both fail deaf children.

**Culture and heritage**

Richard also raised his concern that advances in cochlear implants risk obliterating Deaf culture which has its own language in BSL (British Sign Language) and through which deaf people can feel a pride in their identity. “It’s important to educate doctors that, yes, deaf children can communicate thanks to cochlear implants, but these children are still part of a deaf group. It should be made “cool” to sign in school, so that children do not have to give up their heritage.”

**BSL for all**

Richard, not deaf himself but disabled and a wheelchair user, believes all hard of hearing people should have the opportunity to learn sign language.

“If I had to come away with one strong take-home message it would be unanimity that recognition of the problem needs to be translated into action”

Professor Bencie Woll
DCAL
The debate certainly provided an important opportunity to reflect on the considerable body of new research into deaf children’s language and cognitive development as well as the significant social and political changes in the UK that have taken place since the Warnock report was published 30 years ago. It is this report which has provided a framework for UK special education policy to date. There have been many improvements in perceptions and in policy regarding deaf education in the last decade, but the statistics alone show there is a long way to go. Now there’s a new challenge as we work to influence the education policies of the next 30 years positively.

JOIN THE DEBATE!
There were too many varied issues raised and views shared to present them in detail here, but the boxes below provide a snapshot. If readers are interested to give their perspective on these particular points, or raise others of their own around the issue of deaf education, please write to DCAL at: dcal@ucl.ac.uk. We will publish a cross-section of responses on the DCAL website and in the next newsletter. Write to this address too if you would like to request an emailed copy of the full debate transcript. If you prefer to watch the debate in film format then you can see the highlights on the BBC’s See Hear programme focusing on Education. This programme was first broadcast on 8 June, but is...
A lottery and a lack of choice

Panellist Brian Gale questions the equality and fairness in education for deaf children in the UK. A “post-code lottery” means that there is not the same opportunity for children across the country. He feels that parents are not getting enough information and not getting sufficient choice as regards schooling.

Putting the child at the centre of policy and practice

Brian sees “mainstreaming” in education but believes that this does not always provide inclusion. This lack can especially be seen in deaf children’s social and emotional well-being. Overall he believes that people are still not deaf aware. He states that the child needs to be put more firmly at the centre of policy and practice.

Language is the key

Derek Rodger’s concern is that deaf children are not being taught sufficient communication skills. He feels language is key to a sense of belonging and to the development of cognitive abilities. For this reason he sees a role for specialist deaf schools. For many deaf children this is the way they can best learn, in an environment that can focus on their specific communication needs. For others a mainstream school may be more appropriate – but for these to work then teachers in these schools need far better training.

Questioning cochlear implants

As regards cochlear implants, Derek questions their contribution to helping close the attainment gap in deaf education. After 15 years of implants he asks how well children are really able to hear at school. He would like to see a thorough breakdown of data on the impact of cochlear implants on different deaf children before he is convinced of their successful contribution.
This June 2011 DCAL is launching a new research project named Changing Languages and Identities (CLI) Project. The project will investigate the changes British Sign Language (BSL) is presently undergoing. These changes appear to be happening very fast, as a result of the different educational experiences and technological interventions young people are going through compared with deaf people born 20 or more years ago.

Today a high number of deaf children are receiving cochlear implants, around 80% of deaf children are attending mainstream schools, and a higher proportion of deaf people are now accessing higher education. These new trends may have an effect on the languages and identities of the British Deaf Community.

Research methodology
This study will look into three groups of deaf young people aged 16-19. It will collect linguistic data from signers with varying fluency in BSL and English using semi-structured interviews and structured linguistic tasks. One group will be those who attend a mainstream school and use a Communication Support Worker (CSW) or Interpreter to access the curriculum. One group will be those who attend an oral deaf school and another group will be those who attend a signing deaf school. The language and identity of each group will be looked into.

Various tests will be used with the participants to assess both their English and their BSL. They will also be asked to complete a questionnaire about identity. This questionnaire will see if participants are deaf acculturated, hearing acculturated, marginalised or bicultural. Finally participants will be asked to complete a questionnaire on self esteem to see if there is any link between how participants identity themselves and their self esteem.

In addition to working with the young deaf people the researchers aim to look at the use of CSWs and Interpreters in Education to see whether or not this new trend is successful. This will involve semi-structured interviews with CSWs/Interpreters to ask their views – whether they find particular advantages, challenges or difficulties with their role. These participants will also be assessed with linguistic tasks in both English and BSL. Lastly the interaction between the CSWs/Interpreters and the pupils will be filmed in the classroom and the content translated during this time will be analysed. Pupils will also be asked about their views on the educational trend of working with CSWs/Interpreters.

DCAL will update readers on the project outcomes in later newsletters. Meanwhile if you would like to discuss the project or ask for more detailed information, please contact researcher Kate Rowley at kate.rowley@ucl.ac.uk

About BSL
British Sign Language provides Deaf people with a way of fully communicating, receiving information and participating in all aspects of life. About 60,000 people use BSL as their preferred language, although the British Deaf community is also bilingual in English. BSL is not a set of gestures or a visual way to represent English. It is an independent language, developed in the Deaf community centuries ago, that is unrelated to English.

There is a strong community of Deaf people united by a common language and way of life – this is usually called Deaf culture. More than 90% of Deaf people choose another Deaf person as their life partner. BSL was recognised as an official minority language in the UK only as recently as March 2003.
On March 16 2011, DCAL sponsored a special event as part of Brain Awareness Week (BAW). BAW is a global campaign to increase public awareness about the progress and benefits of brain research. Every March BAW unites the efforts of organisations worldwide in a week-long celebration of the brain.

The DCAL event was held at Friends Meeting House, Euston, London and involved a two-part presentation by DCAL Co-Director Dr Mairead MacSweeney and DCAL Director Professor Bencie Woll. The event focused on “The Deaf and Signing Brain.”

Dr MacSweeney's presentation focused on studies she and colleagues are carrying out looking at the way in which the brains of deaf people and of hearing people process language. Professor Woll then talked in more detail about a project working with deaf signers who have suffered from stroke.

The DCAL event was an additional meeting for Healthy Deaf Minds (HDM) London, especially organised to coincide with Brain Awareness Week.

Healthy Deaf Minds (HDM)
HDM London is an organisation run by a committee of four deaf volunteers, one of whom is Robert Adam, a DCAL researcher (http://www.deafinfo.org.uk/wellbeing/hdm.html). The aims of the HDM Forum are (1) to inform the Deaf/BSL (British Sign Language) Community about mental health issues; (2) to empower the community to express its views; and (3) to inform service providers about the views of Deaf/BSL people. There are HDM organisations in different parts of the country.

Deaf people form the majority of those attending HDM events. Some of the deaf participants are health professionals themselves; however the vast majority are members of the Deaf community with a general interest in well-being. Hearing people with an interest in deafness also often attend.

DCAL newsletter readers who live in London or who can reach London easily may like to get involved with HDM. The London HDM committee arrange events once every two months. Participants normally pay £5 per person to cover the room hire and refreshments. On March 16th DCAL covered the room hire to enable a free presentation and around 160 people turned up for the event. To find out more about HDM London or look for a HDM more local to where you live, contact the committee on hdmlondon@hotmail.co.uk.

PRESENTATION: RESEARCHING HEALTHY DEAF BRAINS

Dr MacSweeney’s presentation to HDM London started off with a tour of brain structure and some basic information about brain development. She highlighted that, although genetics plays an important role in brain development, experience plays a very important role in shaping the brain. This means we can learn a lot about brain development from looking at the brains of people who have had different experience to the ‘norm’. For example by looking at deaf signers we can learn about the impact of different sensory experience and different language experience. Another way to find out about how the brain works is to look at the behaviour of people who have suffered damage to the brain, such as stroke.

continued on page 7 ☞
Thanks to new techniques such as Magnetic Resonance Imaging (MRI) it is now possible to explore human brain function whilst we are still alive. We no longer have to wait until autopsy to investigate where damage has occurred to the brain and then link this to behaviour, or indeed to find out more about healthy brain function.

Dr MacSweeney moved on to discuss the research she and colleagues are carrying out with deaf people who sign. She explained that most of what we know about language development comes from studying spoken language. However, by looking at sign language we can ask whether particular brain areas respond to language no matter how it is communicated, or if the activation depends on whether words are spoken or signed. In this case the research team is using functional Magnetic Resonance Imaging (fMRI) to investigate which parts of the brain are activated as people process language.

**Similarities and differences**

She stated that from these studies we know that the brains of deaf and hearing people process language in broadly similar ways. For example, Dr MacSweeney and colleagues have shown that deaf native signers (people who learned sign language from deaf parents) recruit the main language centres in the brain, Broca’s area and Wernicke’s area, when they are watching sign language, as hearing people do when they watch and listen to someone speaking.

But there are some differences comparing the brain activation between deaf and hearing people too. There’s a lot more movement in sign language than in watching someone speak, so the parts of the brain sensitive to movement are more active when you’re watching someone sign than when you’re watching someone speak.

**Responding to the environment**

Studies of profoundly deaf people can also shed light on plasticity – that is the ability of the brain to reorganise its function under changed circumstances. Dr MacSweeney’s team are presently investigating what happens to the auditory cortex (the part of the brain that processes sounds) if it doesn’t receive auditory inputs early in life. They have shown that, in people born profoundly deaf, some parts of the secondary auditory cortex are used to process visual input, including sign language.

This research provides unique information about the extent to which the brain can respond to the environment. However there are still many unanswered questions. For example, it is still not known whether this “plasticity” also occurs if someone becomes deaf later in life, at around 7 or 8 years old for example. Also unknown is whether areas of the brain that typically process sound in hearing people can respond to senses other than vision in people who are deaf – for example, touch or smell. Future research will address these issues.

**About Brain Awareness Week**

During the annual March Brain Awareness Week campaign partners organise activities to educate and excite people of all ages about the brain and brain research. Events are limited only by the organisers’ imaginations. Examples include open days at neuroscience laboratories; museum exhibitions about the brain; lectures on brain-related topics; displays at shopping centres, libraries, and community centres; and classroom workshops. To find out more go to: [http://www.dana.org/brainweek/](http://www.dana.org/brainweek/)
Professor Bencie Woll focused her presentation to HDM London on a DCAL research project she is leading concerning deaf signers who suffer a stroke. The context for the research was the recognition that there is a serious gap in understanding and in health provision for deaf people suffering from neurological or neuropsychiatric disorders. The project is aiming to redress this through its research and then appropriate advocacy work.

As well as a disability group, deaf people constitute a cultural minority with a shared language (British Sign Language – BSL) and a strong, but socially excluded community. Amongst the varied challenges deafness can bring, the research project highlights a series of difficult health realities that can affect people who are deaf. She stated that the 60,000 deaf adults who use BSL as their primary language are ill-served by current NHS neurology provision, quoting from a series of reports that have shown the difficulties deaf people have in receiving healthcare, despite the NHS priority to reduce healthcare inequalities. The report *Towards Equity and Access* (Department of Health – DOH, 2005) stated that 35% of deaf people had problems communicating with their GP; 30% of BSL users avoided going to their GP and 70% of those admitted to hospital Accident & Emergency were not provided with a BSL interpreter. It was found that following hospitalisation, deaf people’s access to treatment and rehabilitation is inferior. Marshall et al (2002) identified a serious under-referral of deaf stroke patients for assessment and therapy (only 20% of the estimated number of cases) with a lack of skills for identifying communication problems such as aphasia. As a result, misdiagnosis, under-diagnosis and late diagnosis are common, with serious implications for equal access to treatment.

**The DCAL project**

Professor Woll outlined the project aims as follows: (1) to develop appropriate assessment and diagnosis methods for deaf neurological patients; (2) to validate the need in the NHS context; (3) to roll out assessment and intervention strategies; (4) to disseminate positive health measures.

The research project was brought alive to the HDM meeting with Professor Woll giving examples of case studies that the research group has been working with. Just two of these documented here show the urgent need for DCAL’s research work. The first of these shows the severity of the situation for a deaf man and his family. The second is taken from a letter received by DCAL from a social worker.

**Case study 1:** A Deaf BSL user in his 50’s suffered a severe head injury in a road accident. He was also left with restricted mobility and walks with a stick. He was made redundant shortly after his accident. He has ongoing memory and concentration problems and has developed poor rage control and has attempted to strangle both his wife (also Deaf) and son on occasions. His wife is very burnt out as a carer. It became apparent that he had received some limited physiotherapy after his accident but no other input. Neither he nor his wife were given any information about his head injury, its impact on him or local resources they might access. They have no local support.

**Case study 2:** “I am a Social Worker with Deaf people working within a sensory team. I have got a Deaf client who suffers from stroke. She is in hospital at the moment. There the occupational therapist and language therapist are unable to support her with her communication. I wonder if you have any advice or information that I can use with them. Or even better, if you have contact with someone who might be able to come up and talk to them with me, to help provide my client with the best way forward to meet her needs.”

Readers who would like to follow the progress of this research project can find out more by visiting the research pages on the DCAL website: [www.dcal.ucl.ac.uk](http://www.dcal.ucl.ac.uk).
DCAL has been involved in a film that can offer much-needed support and encouragement to D/deaf people who are affected by Parkinson’s Disease. It could also be a useful resource for associated health and social care professionals, given the severe lack of information on the disease in British Sign Language (BSL). Collaborating with BSLBT (British Sign Language Broadcasting Trust) and Remark, the 30 minute Snapshot documentary can be watched on the BSLBT website. Other organisations involved in making the film are the Parkinson’s Disease Trust, and East Sussex NHS Trust.

It is estimated that one in every 500 people will develop Parkinson’s Disease. Living with the disease is challenging for every individual, as well as for their families and friends, but for people who are D/deaf there can be additional difficulties.

With Parkinson’s Disease, brain cells involved in movement start to die. This affects people in numerous ways - with their walking, their dexterity, their language and so on. It affects their hand and facial movements making communication for people who sign much more difficult. The limited support and information available for D/deaf people around the still-incurable and progressive disease can increase feelings of isolation and fear.

It is hoped Snapshot: Living with Parkinson’s is an inspiring and helpful film to watch. Thanks to the way in which the Snapshot crew have chosen to film, it is accessible to everyone (with spoken language, sub-titles and signing) and, importantly, has a warm and positive approach. The film follows the real-life stories of two families in which the husbands – Cliff and John, both of them Deaf men in their early 60’s - have been diagnosed with Parkinson’s within the last 5 years. The film includes conversations with the men and with their family members. It follows Cliff and John variously on visits to hospital for ongoing assessments, to the gym, on a bike ride, and woodworking. At the end of the film the two families get together and have the chance to discuss their situation. This meeting was arranged by Snapshot and highlights the way in which there are so few opportunities for D/deaf people living with Parkinson’s to share their common situations and the way in which this can build confidence and be a support.

The way Parkinson’s affects signing
DCAL’s input in the film concentrates on providing explanations as to the way in which the disease can affect the brain and therefore signing ability.

Throughout the film the two men highlight the different physical symptoms they struggle with. These symptoms can affect their coordination, sleep patterns, make them extremely tired, and make their hands shake.
The most difficult thing for them however relates to communication. They and their families find that their signing ability is severely reduced.

In the film Professor Bencie Woll, Director of DCAL, explains: “Parkinson’s is one of several illnesses linked to problems with brain function. There’s an area in the centre of the lower part of the brain that controls how to plan the expression of movement. In Parkinson’s and other similar illnesses the chemical that helps the brain send electrical signals starts to disappear. The brain plans movement but it can’t be expressed. It’s sometimes difficult to understand a person with Parkinson’s disease when they are signing. Because they develop problems with signing space their sign movements start to become smaller so their grammar becomes unclear. They find it difficult to use placement if they can only sign in one location.”

The film also addresses medication, how it can help a great deal but also cause different problems. Professor Woll explains: “You can stop the trembling but often after some time of taking the drugs you start to get movements you don’t want. You can get twisting movements that you can’t control.”

Cliff and John and their families talk about having a “stutter” when signing, worrying people will find their slowness boring, or that they can feel left out in groups when people are signing fast together. There is also the so-called Parkinson’s “mask” that develops which can make it difficult to smile. This naturally reduces the ability to make strong facial expressions in signing.

Taking these issues together the film shows the way Parkinson’s can have a devastating social impact on sign language users.

**Empowerment and advocacy**

*Living with Parkinson’s* deals with a difficult subject but leaves the viewer feeling empowered. Cliff and John are determined not to be beaten by their condition and their families demonstrate love and support at every point. Beyond the personal stories the film acts as an advocacy tool. It shows the vital importance of increased interpretation services in health and social welfare settings, of providing information in the appropriate language format – in this case BSL – and of enabling deaf people living with the disease to get together and support each other in a way that can be the most communicative and comfortable for them.

Professor Woll states: “Movement problems and expression problems are just hiding the person who was there before. That person is still there behind the surface. It is important not to look at the surface, but to look through to the person inside.”

Scientists hope that Parkinson’s Disease will be curable in the next ten years.

To view a copy of *Snapshot: Living with Parkinson’s* go to: [http://www.bslbifetime.org.uk/programmes/snapshot-parkinsons/](http://www.bslbifetime.org.uk/programmes/snapshot-parkinsons/)

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**Linguistics conference grant won by DCAL postgraduate students**

Postgraduate researchers from DCAL are pleased to announce that they have been awarded a grant to host a conference for postgraduate students in the field of sign linguistics, deafness and cognition.

The conference, entitled *Postgraduate Conference on Current Issues in Sign Linguistics, Deafness and Cognition (CISLDC 2011)*, will be held on September 16th 2011 at UCL’s Chandler House in central London. Joining students at the conference will be two keynote speakers from within the field: Dr Pamela Perniss, a postdoctoral researcher at the Max Planck Institute, Nijmegen and Patrick Matthews, Lecturer in Deaf Studies, and Irish Sign Language Coordinator at the Centre for Deaf Studies in Dublin.

Postgraduate students and researchers are invited to register their attendance by 30 July, 2011. Attendance is open to all. Please see the conference website for more details: [https://www.ucl.ac.uk/psychlangsci/cislcdc2011](https://www.ucl.ac.uk/psychlangsci/cislcdc2011)
A small pilot study is being carried out by colleagues at DCAL and City University, London to investigate how deaf viewers find British Sign Language (BSL) translated versions of television programmes that have a great deal of information in them. Examples of these “high information load” programmes are news and discussion programmes. It is hoped the findings from this research will provide insights into ways in which the very different needs of deaf viewers can be met, particularly in the context of the increased possibilities offered by digital television.

The study is being led by Dr Wolfgang Mann of DCAL and the Department of Language & Communication Science, City University, London and Christine Kretschmer from the Centre for Creative Writing, Translation and Publishing (City University, London) in collaboration with Dr Robin Thompson at DCAL.

The pilot study will focus on how much information deaf viewers obtain from these BSL versions when presented at different speeds, and how these versions are viewed.

With this pilot the team is hoping to validate their methodology with native signers, and then use the methodology in a follow-up study on a large sample of signers with varying levels of signing skills.

The research complements previous studies (e.g., Romero-Fresco) which have looked primarily at hearing/deaf audiences’ ability to successfully perceive information through subtitled programming. By contrast the DCAL-City study will focus on other means of providing information, i.e., through sign language.

The importance of this type of research is to gain a better understanding of the needs of the heterogeneous deaf audience - that is, an audience with varying degrees of hearing; where some but not all viewers will be BSL-users, and amongst these, varying degrees of sign fluency.

For more information on this study contact Wolfgang Mann: Wolfgang.Mann.1@city.ac.uk

DCAL hopes their study will help increase understanding of deaf audiences and their television viewing needs

Keeping up with the news
DCAL is pleased to announce that their colleagues, Dr Mairead MacSweeney, DCAL Co-Director, and DCAL researcher Mr Dafydd Waters, were awarded one of four runner-up positions in University College London (UCL)’s Institute of Cognitive Neuroscience recent ‘Brains on Film’ competition.

Dr MacSweeney’s film What is sign language? tackles what sign language is, what it is not, and how it is processed in the brain.

The innovative event gave neuroscientists the chance to make a short film about their research. Films were to be pitched at a general audience, and aimed to inspire the public’s interest in neuroscience research.

Dr MacSweeney said of her entry: “We made this film very quickly from video material we already had available. It seemed like a great opportunity to let people know that research with people who are deaf or use sign language can provide unique insights into brain function that we cannot gain from looking at spoken language alone. The fact that this has now been viewed by a couple of hundred people who probably knew nothing about sign language before watching it will inspire us to come up with something even more creative for the competition next year.”

Overall winner was Alistair Jennings with his film, Love Story, which addresses the notion of reward and desire. The other runner-up films were Beatboxing on the Brain, looking at the brain of a beatboxer and the sounds he can make; Science in Sand – the filmmaker and friends build a brain on a Thames sandbank; and Somatosensation, a film that addresses the neuroscience of body representations, and also dance and art.

To watch Dr MacSweeney’s What is sign language? go to: [http://www.youtube.com/watch?v=sZv6YzdPvYw&feature=mfu_in_order&list=UL](http://www.youtube.com/watch?v=sZv6YzdPvYw&feature=mfu_in_order&list=UL)

You can watch some of the other Brains on Film entries on the Guardian blog: [http://www.guardian.co.uk/science/punctuated-equilibrium/2011/may/04/1](http://www.guardian.co.uk/science/punctuated-equilibrium/2011/may/04/1)