

## **Parallel session 4: Cultural Identity Implications in Genomics Research and Communication**

### **“EGOS AND GENOMES”: AN ANALYSIS OF BRITISH MEDIA COVERAGE OF THE HUMAN GENOME PROJECT**

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#### **Abstract**

The announcement of the human genome project ‘first draft’ on the 26th June 2000, appeared to conform to traditional notions of a ‘scientific breakthrough’ news event involving elite sources and attracting worldwide media attention. This paper demonstrates how the ethical, legal and social implications of scientific research which are rarely reported were now given prominence. It draws on systematic content analysis of all British media coverage of human genetic research in the year 2000 and interviews with key players (e.g. scientists, journalists, source organisations) to reveal how this science story was heavily orchestrated for wider media and the lay public.

**Key words:** media, genetics

#### **Introduction**

On the 26 June 2000 the teams involved in mapping the human genome announced to the global media that they had completed the ‘first draft’. Widespread coverage of this ‘landmark’ in human genetic research was characterised by the discourses of hope and fear: on the one hand the media presented an optimistic future of post-genomic medicine and, on the other hand, they highlighted a pessimistic vision of post-genomic society.

The Human Genome Project [HGP] announcement was a heavily orchestrated event involving highly prestigious source activity. The dawning of the post-genomic era was heralded in simultaneous, satellite-linked press conferences in Washington and London, involving Prime Minister Tony Blair, President Bill Clinton and a host of leading public and private sector scientists.

The timing of the announcement was determined not by the trajectory of the scientific research however but by close liaison between the key players. This was partially in response to the efforts of American company, Celera Genomics, headed by Craig Venter to position themselves as ‘ahead’ in the ‘race’ with the UK based Sanger Institute, headed by Sir John Sulston. The research teams had become embroiled in an acrimonious public struggle and an announcement was designed to bring this to a close. Indeed this context clearly influenced the emphasis of information to be circulated to journalists. As one press officer explained “because of (Celera) one of our key messages was that the information was free and publicly accessible so scientists all over the world can use this for the greater good” (Wellcome press officer).

Science journalists were acutely aware that this was not a simple 'science' story. As one reporter commented: '(The HGP) wasn't finished. It was an arbitrary date for publication. I mean the whole thing was hype. But we were much more interested in what was leading up to that and the battle of the patenting and whether it was going to make money" (TV news reporter). Another science editor stated openly that "The [June 26<sup>th</sup> announcement] was orchestrated for political and commercial reasons' (Broadsheet Science Editor).

### **British Media Coverage: Key Results**

Coverage of the Human Genome Project announcement represented a peak in British media reporting of human genetics for the year 2000 (see Graphs 1 and 2). The prominence of the 'first draft' in the UK media was demonstrated by its coverage in all national UK newspapers from Monday 19 June to Sunday 2 July 2000 (7 front page stories, 10 editorials; 8 special features) and as the headline news story for the television evening news. This reporting typically represented the 'first draft' as a 'watershed' in history. The human genome was presented through metaphors (a map, blueprint, key, recipe, code, book); the 'breakthrough' in mapping was compared to the greatest moments of social, artistic and scientific 'progress' (e.g. the invention of the wheel). The historical associations, the use of language and the range of metaphors all implied an optimistic view of scientific progress (Nerlich et al, 2002).

Cancer cures and longevity were foregrounded as the medical promises of the post-genomic era (e.g. The biggest medical breakthrough for a generation could cure dozens of diseases' (BBC 2100, 26 June 2000). Journalists emphasised that they were careful to avoid 'over hyping' the findings however there were tensions between this and news values which required that the science should be made relevant to people's everyday lives (Henderson and Kitzinger, 1999).

Media coverage also raised implicit concerns (e.g. 'Barcoded at birth. Would anyone have let Beethoven do music if they'd known he'd go deaf?' (Channel 5, 26<sup>th</sup> June 2000). Numerous newspaper articles (55%) focused on the ethical, legal and social implications of new human genetic research and this was pattern was mirrored within the television news sample (6 out of the 8 news bulletins focused on ELSIs).

Indeed it was striking that the Human Genome Project announcement served as a platform for journalists to address issues which are often absent in media reporting (e.g. genetic determinism). Twenty five percent of articles about the HGP announcement critically addressed the question of 'geneticisation' (compared to 10% of articles over the year as a whole). The issue became the main focus of several articles (e.g. 'We are bigger than our genes - thank God' (Sunday Times, 2 July 2000). This is particularly interesting in light of accusations against the media that they traditionally promote the 'geneticisation' of life and it would seem that the hyperbole surrounding the HGP announcement facilitated more critical or reflective reporting around the implications of genetic testing and the promise of expanded life spans. In contrast to previous findings (e.g. Nelkin & Lindee 1995; Conrad 1997, 1999a) some press reporting did question the social value of genetic science.

## **Egos and genomes: framing the story**

Framing the story as a 'battle' between Venter and Sulston was a common strategy which helped to dramatise some of the issues about information access; control and commercialisation. Typical headlines included: 'Locked in battle for key to life' (Mirror, 21 June 2000); 'Scientists at War :Two projects, two views of science' (The Times, 23 June 2000). Journalists utilised the personalities of Venter and Sulston to characterise and personalise the conflict. Nine articles profiled or interviewed these men; Venter's image appeared fifteen times, Sulston's appeared on fourteen occasions. Their beliefs were consistently portrayed as being diametrically opposed: 'John Sulston: altruist or moralist? Craig Venter: maverick or monopolist?' (Guardian 26 June 2000); 'war veteran fights ex-hippie over 'Book of Life'' (Daily Telegraph, 27 June 2000).

Journalists saw the opposition between these two key players as a significant opportunity in media and news value terms. As one TV science editor explained: "You had two fantastic characters. ... (John Sulston) is a natural and ... a brilliant scientist.... Craig Venter himself is very media savvy but comes across as a very different personality to an English audience. It was certainly very easy to set one against the other in cinema terms and word terms. I think in that case it was fair to do it because there were very different philosophies at work and Craig and John personified those two philosophies' (TV Science editor). Another journalist commented: 'Because of the characters and the race and Venter in particular, it meant that the coverage was more extensive than it would have been. People find science quite hard I think so if there are personalities to identify with it makes it easier for the readers definitely'"(Broadsheet Science Editor).

This reduction of the issues to personal antagonism was influenced by the operation of news values that rate conflict and 'real' people as more interesting than consensus and 'impersonal' organisations. On the one hand it opened up the discussion to questions of funding, ownership and commercialisation that placed the science into its economic and political context. On the other hand, it was presented very much within science's own terms. As disability activist, Professor Tom Shakespeare commented: 'The debate was presented as the 'good guys' versus the 'bad guys. The scientists say 'Yes there are ethical concerns but not with us - Celera, they are the people to be anxious about. The old distancing effect.'

The social, political and economic context of genetic research and its implications were highlighted in coverage of the HGP announcement to an extent, and in ways, which it had seldom been before (e.g. concerns about commercialisation of genetic science appeared in 41% of newspaper articles compared with 15% of press coverage for the year). Debates about access and control over genetic information appeared in 36% of newspaper articles about the announcement (compared with 15% of press coverage over the year).

## **Conclusions**

Despite the increased discussion of ethical, legal and social issues there were some specific areas which remained marginalized including civil liberties, surveillance and the complications that human genetics poses to the legal and

medical professions. The potential for genetic science to become the basis for weapons technology was entirely absent and there was little discussion of the 'therapeutic gap' between genetic diagnosis and medical interventions. Reporting emphasised medical benefits and few reports discussed medical risks. Elite sources continued to dominate coverage and the vast majority of sources were research scientists, funding bodies and policy makers. The human genome project announcement does provide a valuable case study for exploring the ways in which 'science reporting' is firmly embedded within broader socio-economic issues. It demonstrates how ethical, legal and social implications may under certain circumstances move to the foreground of media reporting. This reflects the high profile given to these issues by those working in the field and shows how the announcement offered an opportunity to address public anxiety. However the impetus behind the announcement was intrinsically tied in with concerns over access to such information and how this may operate in practice. This raises the possibility that scientific and political sources involved in the project might emphasise the aspects of social concern that suit their needs at the time and that can be addressed by legal and regulatory frameworks rather than raising more fundamental challenges.

### **Notes**

This paper is based on research conducted for the study *Media coverage of the ethical and social implications of human genetic research* The Wellcome Trust Award no: GR058105MA.

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## Figures and tables

**Figure 1.** Graph showing the number of British newspaper reports on Human Genetic Research for each week during 2000

120  
100  
80  
60  
40  
20  
0

**Figure 2.** Graph showing the number of British main television evening news bulletin reports on Human Genetic Research for each week during 2000.

9  
8  
7  
6  
5  
4  
3  
2  
1  
0

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