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## **Mothers and Mobile Phone Mast Risks: Parental Negotiation of Post-Normal Risk Technologies**

### **1. Introduction**

This paper analyses the focus group discussions between young mothers concerning the potential risks they face in their everyday lives, with particular emphasis on the alleged risks from mobile phone handsets and base stations (colloquially known as ‘masts’). Beck’s ‘risk society’ theory, the notion of ‘post-normal’ risk, and Burgess’s arguments concerning the ‘irrationality’ of the precautionary principle are discussed in order to analyse the levels and characteristics of public anxieties around mobile phones.

### **2. Risk Society and Post-Normal Risk**

Beck’s Risk Society thesis suggests an emerging set of social relations whereby industrial society, organised around the production and distribution of goods, transforms into a society organised around the distribution of ‘bads’ – ‘manufactured’ risks and hazards generated by scientific industrialisation. The notion of risk becomes a central aspect of everyday life; due to their incalculability and unpredictability, modernization risks can no longer be managed or controlled through traditional systems of insurance and compensation. In this way then, risk-generating bureaucracies become “unmasked”, during risk conflicts, as “forms of organized irresponsibility”.<sup>1</sup> This unmasking leads to the potential for new forms of “sub-politicization”<sup>2</sup> in which expert perspectives on risk may be challenged.<sup>3</sup>

Funtowicz and Ravetz<sup>4</sup> argue that ‘normal’ science (which builds on established conceptual frameworks) is no longer appropriate for the emerging problems of industrial civilization in which “facts are uncertain, values in dispute, stakes high, and decisions urgent”<sup>5</sup>. “Post-normal science” emphasizes “high decision stakes” and “systems uncertainty” as the two key elements in its analysis of the production of scientific knowledge,<sup>6</sup> and asserts the need for risk analyses to accept “lay knowledges” and “social rationalities” as valid sources of information.<sup>7</sup> Ravetz discusses BSE (“mad cow disease”) and genetically modified foodstuffs as issues in which science in its social context confronts conflicting perspectives and different models of knowledge construction.<sup>8</sup> Stilgoe suggests that post normal science provides a framework for a more “holistic” understanding of risk, and argues that the potential health risks associated with mobile phone use can also be usefully understood from this perspective.<sup>9</sup> This paper analyses the extent to which public perceptions of any such health risks reflect a “post-normal” understanding, and how far they challenge expert perspectives.

### **3. Mobile Phone Risk**

The widespread use of mobile phones in the UK has been accompanied by public concerns surrounding potential or perceived health risks, and a number of scientific studies have attempted to investigate the evidence for these risks.<sup>10</sup> The Independent Expert Group on Mobile Phones (IEGMP) inquiry, under the Chairmanship of Sir William Stewart, was commissioned by the UK government to “assess the current state of research into possible health risks from mobile phones”,<sup>11</sup> and produced a number of recommendations. The Stewart report, as it became known, describes the scientific basis for the health concerns around mobile phones as being derived from

the radio frequency (RF) radiation which both handsets and base stations (colloquially known as “masts”) emit.

Even if susceptibility to negative health effects is limited to a very small proportion of the population, the pervasiveness of mobile phones (and perhaps more importantly in this context, base stations) in the UK means that many individuals could be affected; in this sense the potential risks might be understood as involving “high stakes”. The Stewart report’s acknowledgement of a relative lack of published research into the possible health effects may reflect the pace of growth in the use of mobile phones, in that there has been no opportunity for such effects to emerge. In terms of both the stakes involved and the levels of uncertainty surrounding the issue, the health concerns around mobile phones could then be characterised as a post-normal risk.

Burgess’s book analysing the mobile phone health debate is arguably the most comprehensive study of the topic, and it challenges the suggestion that such health concerns are valid. He criticises the precautionary principle which emerges from the Stewart report for its apparent rejection of scientific evidence in favour of a “value driven”<sup>12</sup> approach to risk. The precautionary principle has emerged in recent times as a key policy perspective for regulatory institutions;<sup>13</sup> for Burgess, however, it represents a capitulation by “defensive” governmental authorities<sup>14</sup> to a perceived public anxiety which is both irrational and reactionary. With regard to mobile phones (and particularly phone masts), he argues that the science of RF radiation is clear and unambiguous and that the Stewart report ignores evidence and capitulates to irrationality.

#### **4. Method**

The discussion below examines the extent to which the irrational anxieties which Burgess posits are evident in the focus group talk of members of the public. The research was explained to the focus group participants as being concerned with “peoples’ attitudes to the risks they face in their everyday lives.” This imprecise characterisation of the research was intended to omit the specific issues of parenting and mobile phone masts as part of a wider attempt to avoid directing participants expectations and responses in the early stages of the discussions. The school in which the interviews were conducted had previously (2002) been involved in an unsuccessful campaign against the construction of a mobile phone mast nearby. Four group interviews were arranged involving 19 female participants, ranging in age from 27 to 52, each with at least one child attending the school. The interviews took place in the parents’ room of the school, an environment which was chosen for convenience as well as for the relatively relaxed and familiar environment it provided. Prompt materials in the form of photocopied newspaper articles were presented to the groups half-way through the discussions; it is also worth noting that the discussion was not restricted to mobile phone risks, and therefore a number of other risk issues were raised and discussed by participants.

#### **5. Individualisation and the Risk Society**

A key theme emerging in the transcript data concerns the elements of responsibility which respondents feel they should accept regarding the potential risks of mobile phones and masts. Carol for instance argues that both the mobile phone industry, and its consumers, should share the blame for any possible risks:

If they didn't make [mobile phones], we wouldn't be doing it. But there again we've got that opportunity to say no, and none of us have, 'cause it's easy... (transcript 2, page 4-5).

Her ambivalence acknowledges the convenience the mobile phone provides, and she does not simply criticise the producers (or indeed the government). Similarly, she later comments on her own family's experience of hospital infection and she emphasises the need to strike a 'balance':

It all comes down to making that final decision what is the best thing for you at that particular time, and you've got to make that decision. (transcript 2, page 11)

Balancing the risks and benefits of mobile phones is also referred to elsewhere. After being shown the prompt material, respondents in one group consider the "benefits" of mobile phones:

There are advantages and disadvantages of the phone. I mean because the way society is these days it is good to have one for your safety and whether they are right or not, so it's about risk and benefits isn't it. (Nadia, transcript 1, page 14)

A similar point is made in another group when a participant discusses “the convenience thing”:

If I’ve got a phone and I breakdown, I’m going to be safe, you know, children; it’s not as risky, so with a mobile phone you are not in as much risk from breakdown... (Ruth, transcript 3, page 2)

In these instances the benefits of the phone are balanced against other risks.

Nevertheless, these kinds of responses to risk issues reflect a form of individualization in which criticisms of the state and/or corporate interests in allowing or imposing risk on society are relatively muted, and the risks become a matter of personal choice.

Beck argues that in the emergent risk society, reflexive modernization “dissolves” traditional forms of social bond in a “social surge of individualization”.<sup>15</sup> In this way, individuals take on “greater personal responsibility for the outcomes of their choices, that is, for evaluating and managing the risks”.<sup>16</sup> This process has emerged alongside the drawing back of welfare provision in the second half of the 20th century and the transfer of responsibility to the citizen as part of a “new contract” with the state.<sup>17</sup>

The responses of the participants in this study are by no means uniform, but they do at least suggest that there is no clear demand for (or indeed expectation of) a protective or precautionary response from the state. While Burgess suggests that the precautionary principle (as it was applied in the Stewart report to mobile phones) is a needless concession to an irrational and anxious public, the respondents’ comments suggest a rather more ambivalent perspective. It could therefore be suggested that this

ambivalence to mobile phone risks reflect an element of self regulation in which individuals take on the responsibility for their own choices and attempt to find a ‘provident’ solution<sup>18</sup>.

## **6. Handsets and Masts**

This perspective also raises a further issue which is arguably unique to this particular risk topic – the distinction between mobile phone handsets and the masts which connect them with the wider network. While the interview discussions emphasise the personal choice of owning and using a handset, the effective imposition on individuals of the masts generates relatively less attention.

When asked about their understanding of any risks involved, one group raised the idea that holding the handset too close to your head was a factor, particularly for children who were “more sensitive” (Sherry, transcript 4, page 8). Similarly, Carol explained how her understanding of the risks was influenced by (her father’s description of) a news report which suggested texting might be less harmful:

...that’s why I give them [her children] text packs so they don’t phone, they text me, and because you don’t hold the phone, I mean again I’m not sure if it is true whether it is better for you to text than it is to actually ring, I don’t know if you get the same amount of radiation or what, but it’s just something you’ve heard... (Carol, transcript 2, p8)

One further illustration of concern around handsets suggested that the risk may be cumulative, and that those who use a phone constantly “have something to worry about” whereas those who only use their phone “now and again” are not at risk (Louise, transcript 3, p5). Nevertheless, participants acknowledged that they could exercise personal choice by not using a handset.

Masts were discussed briefly by participants mainly with regard to the campaign against a mast near the school a few years previously (Janet, transcript 1, p17). There was however, little evidence that the participants felt that the risk from masts was being imposed on them, without any possibility of making an individual personal choice to change behaviour in order to avoid or minimise the potential risk involved.

The scientific evidence suggests that any harmful effects are more likely to derive from handsets rather than masts; nevertheless, any risks from masts are inherently collective, and as such could be challenged on that basis. The evidence from the data suggests however, that concerns around mobile phone risks tend to be individualised as a personal choice, and not perceived as a collective imposition.

## **7. Parenting, Paranoia and Mobile Phones**

It is unsurprising given the location of the discussions in a primary school (as well as the fact that a number of children were present during the interviews) that participants explicitly, and without prompting, contextualised their comments through their roles as mothers<sup>19</sup> and often highlighted risks to their children.



With regard to mobile phones, some respondents talked about changing their own behaviour and that of their children whilst also acknowledging the lack of any clear evidence (see above). The “post-normal” nature of the mobile phone risk issue can be compared with other risks discussed by respondents such as the MMR vaccine. This issue is largely acknowledged by participants as “settled” in that the concerns around the vaccine were considered to have been “misrepresented” and “over hyped” (Ruth, transcript 3, p11; Dawn, transcript 4, p12), such that uncertainty has largely been eliminated. Such comments include explicit and implicit criticisms of the media coverage, but also contrast with the uncertainty surrounding mobile phone risks. One potential response to the uncertainties of mobile phone risks would be to demand the kind of precautionary reaction which Burgess suggests is evident in the Stewart report. Certainly, such a response could rely on a discourse of “childhood” which emphasises the unique vulnerability of children to many kinds of risk. Jackson and Scott argue that the processes of de-traditionalization and individualization which Beck and others describe “coalesce around the figure of the child”<sup>20</sup>, leading to the social construction of children as “vulnerable innocents”<sup>21</sup>.

Such discourses of anxiety can be seen in the examples above illustrating parents concerns about mobile phone handsets; they are also evident in discussions about other risks such as those around the MMR vaccine. One mother listed the various injections her young daughter had received, suggesting that these may themselves cause a negative reaction:

Now, next one, her third injection she has got to have three injections to cover six different things and I'm thinking why put her through the pain of that and, like, does she need them all at the same time? You are putting too much junk into a normal, a pure thing. (Cheryl transcript 1, p18).

The construction of childhood as “pure” and uncontaminated is here contrasted with the “junk” of vaccines and injections imposed on new mothers and their children.

The social construction of childhood as inherently risky and dangerous is however mitigated by an acknowledgement by some mothers that children can be “over-protected”. The initial question asking for examples of risks faced by the respondents led quickly to a discussion in group three of risks which children should be, but sometimes are not, allowed to take:

I was thinking about, sometimes children aren't allowed to take risks because parents are fearful what might happen if they do, and then that doesn't teach them how to keep themselves safe (Judith, transcript 3, p2)

This comment, greeted favourably by other participants, raises the notion of what has been characterised as “paranoid parenting”, in which anxious parents produce “battery children”, cocooned and unable to judge risks for themselves<sup>22</sup>. Another participant

made a similar point with regard to children failing to learn road safety because they were “not allowed out” (Melina, transcript 4, p21).

This discourse of cosseted children provides a way for parents to limit their own fears and anxieties and reassure themselves that some risks can have positive consequences. Similarly, others make comparisons with other risks to effectively contextualise mobile phone risks. One of these comparisons is between the possible health risk of mobile phone technology and the more prosaic risk of theft:

You are more at risk if you get mugged or attacked for it (Ruth, transcript 3, p3)

You know, you hear so much in the newspapers a child has been mugged because they have got a mobile on them. I haven't read so far about a person dying of cancer because of a mobile phone... (Nadia, transcript 1, p16)

In these kinds of discursive strategies the need for concern over the radiation effects of mobile phones is thereby reduced via comparison with a more everyday risk issue.

Because of their technological, post-normal character, mobile phone risks cannot easily be considered as providing a potential learning experience for children in the way that, for instance, road safety issues might. Nevertheless, the acknowledgement of the paranoid parenting argument within the parental discourses presented here

suggests that, for these mothers, parental anxieties around such risks need to be contextualised and relativised, not least via comparison to other risks.

## **8. Conclusion**

The emergent risk society, in which risk becomes a central part of social life, is arguably evident in the range of concerns and anxieties found in the parental talk discussed here. In particular, the post normal character of potential risks such as those surrounding mobile phones means that the uncertainty involved makes them particularly susceptible to discursive construction,<sup>23</sup> and the media therefore play a key role in this; however, there is no clear evidence of a predominant, direct media influence in the discursive constructions presented here. Perceptions of mobile phone risks are filtered through a complex perspective which acknowledges the uncertainties involved while also rejecting a thoroughgoing precautionary perspective by recognising the potential hazards of “paranoid parenting”. Indeed, there is some evidence that the “individualization” posited in risk society theory leads to an emphasis on personal choice which also limits the extent to which parents are able to criticise the imposition of “collective” risks which mobile phone masts in particular can be argued to represent.

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<sup>1</sup> Scott Lash and Brian Wynne, "Introduction" in *Risk Society: Towards a new Modernity*, Ulrich Beck (London: Sage 1992), 1-8, 3; Ulrich Beck "Politics of Risk Society" in *The Politics of Risk Society*, ed. Jane Franklin (Cambridge: Polity, 1998), 9-22, 15; Gabe Mythen, *Ulrich Beck: A Critical Introduction to the Risk Society*, (London: Pluto 2004), 1.

<sup>2</sup> Barbara Adam and Joost van Loon, "Introduction: Repositioning Risk; the Challenge for Social Theory" in *The Risk Society and Beyond: Critical Issues for Social Theory*, ed. Barbara Adam, Ulrich Beck and Joost van Loon (London: Sage, 2000), 1-31, 4.

<sup>3</sup> Beck, *Politics of Risk Society*, 21.

<sup>4</sup> Silvio O Funtowicz and Jerome R Ravetz "Three Types of Risk Assessment and the Emergence of Post-Normal Science" in *Social Theories of Risk*, ed. Sheldon Krimsky and Dominic Golding (Westport CT: Praeger, 1992), 251-276.

<sup>5</sup> *Ibid.*, 253-4.

<sup>6</sup> Jerome R Ravetz, "What is Post-Normal Science", *Futures* 31(7) (1999): 647-53, 647.

<sup>7</sup> Brian Wynne, "May the Sheep Safely Graze? A Reflexive View of the Expert-Lay Knowledge Divide" in *Risk, Environment and Modernity: Towards a New Ecology*, eds. Scott Lash, Bronislaw Szerszynski and Brian Wynne (London: Sage, 1996), 44-83.

<sup>8</sup> Ravetz, *What is Post-Normal Science*, 647.

<sup>9</sup> Jack Stilgoe, "The media and the construction of post-normal risk: the health effects of mobile phones", *PREST Discussion paper series 01-06*, (2001)

(<http://www.mbs.ac.uk/research/engineering-policy/publications/documents/PRESTDP01-06.pdf>)

(accessed 9 February 2007).

<sup>10</sup> *Ibid.*, 6.

<sup>11</sup> Independent Expert Group on Mobile Phones (IEGMP) – Terms of reference,

<http://www.iegmp.org.uk/terms/index.htm>

(accessed 30 March 2008)

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<sup>12</sup> Adam Burgess, *Cellular Phones, Public Fears and a Culture of Precaution* (Cambridge: Cambridge University Press, 2004), 165.

<sup>13</sup> Jens Zinn and Peter Taylor-Gooby, “The Challenge of (Managing) New Risks” in *Risk in Social Science*, eds. Peter Taylor-Gooby, and Jens Zinn (Oxford: OUP, 2006), 54-75, 56.

<sup>14</sup> Burgess, *Cellular Phones, Public Fears and a Culture of Precaution*, 249.

<sup>15</sup> Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage, 1992), 87.

<sup>16</sup> Jane Lewis and Sophie Sarre, “Risk and Intimate Relationships”, in *Risk in Social Science*, eds. Peter Taylor-Gooby and Jens Zinn (Oxford: OUP, 2006), 140-159, 144.

<sup>17</sup> David Abbott, Anwen Jones and Deborah Quilgars, “Social Inequality and Risk”, in *Risk in Social Science*, eds. Peter Taylor-Gooby and Jens Zinn (Oxford: OUP, 2006), 228-249, 229.

<sup>18</sup> Daniel Defert, “ ‘Popular Life’ and Insurance Technology”, in *The Foucault effect : studies in governmentality*, eds. Graham Burchell, Colin Gordon and Peter Miller (London: Harvester Wheatsheaf, 1991) 211-233, 212.

<sup>19</sup> Jacquie Reilly, “ ‘Just another food scare?’ Public understanding of the BSE crisis” in *Message Received*, ed. Greg Philo (Harlow: Addison Wesley Longman, 1999), 128-146, 141.

<sup>20</sup> Stevi Jackson and Sue Scott, “Risk anxiety and the social construction of childhood” in *Risk and Sociocultural Theory: New Directions and Perspectives*, ed. Deborah Lupton (Cambridge: Cambridge University Press 1999), 86-107, 90.

<sup>21</sup> *Ibid.*, 90; Kevin D Haggerty, “From Risk to Precaution: The rationalities of Personal Crime Prevention”, in *Risk and Morality*, ed. Richard V Ericson and Aaron Doyle (Toronto: University of Toronto Press, 2003), 193-214, 205; John Tulloch and Deborah Lupton, *Risk and Everyday Life* (London: Sage, 2003), 21.

<sup>22</sup> Frank Furedi, *Paranoid Parenting*, (London: Penguin, 2001).

<sup>23</sup> Beck, *Risk Society: Towards a New Modernity*, 23.