



So Being Poor Saps Mental Abilities?

An article in the journal *Science* links poverty and cognitive function

Jane Carter, September 2013

An article recently published in the prestigious weekly journal *Science*, titled “Poverty Impedes Cognitive Function” (1), has attracted considerable media attention (2) (3). The argument in the paper is not that poor people are inherently stupid, but that the multiple worries engendered by poverty – here considered primarily in economic terms – drain cognitive capacities. Indeed, in times of financial hardship the same person has a poorer cognitive function than in times of relative affluence. One review discusses this in terms of mental “bandwidth”; “*We only have so much cognitive capacity to spread around. It’s a scarce resource*” (4). Living in poverty takes up a lot of this “bandwidth”.

The research method

The four researchers, a diverse team of economists and psychologists based at the Universities of Warwick (UK), Harvard, Princeton (USA) and British Columbia (Canada), begin their argument with the observation that poverty quite commonly results in counterproductive behaviour. They give examples that include failure to use preventative health care, poor attendance at appointments, and bad financial management. Although such behaviours can be, and often are, explained by “environmental conditions” – for example, ineffective distribution systems, poor transport facilities, and the non-availability of credit at affordable interest rates to poor people – the researchers sought to determine whether poverty itself influences human mental processes. They did this through two separate pieces of research, one in the USA, and one in India.

In the study in the USA (New Jersey), the researchers confronted paid volunteers with a specific problem (getting their car repaired) and then asked them, whilst thinking about it, to perform various tests typically used to measure cognitive function. In the first case, the problem was relatively minor: the car repair would only cost US \$150. In the second case, it was more serious: the repair would cost US \$1,500 – a scenario designed to trigger thoughts about that person’s own financial situation. The “rich” and “poor” individuals (as defined by household income) performed the tasks equally well when faced with the minor problem, thus indicating essentially similar cognitive abilities. However, the “poor” individuals performed significantly less well than the “rich” whilst pondering the major problem. Further similar tests showed similar findings.

In India (Tamil Nadu), the researchers examined the cognitive behaviour of small sugar cane farmers who are heavily reliant on this one crop for their annual income, and thus experience huge fluctuations in cash flow through the year. They were asked to perform standard cognitive tests (using a version appropriate for individuals with limited literacy) both prior to the harvest, when living under severe financial constraints, and after the harvest, when these constraints were relaxed. The same farmers showed significantly better performance after the harvest, compared against the period before it. Seasonal differences were ruled out because the planting and harvesting period varied between the farms.

Explanation of the findings

Various reasons were considered by the research team for the differences in performance between people living in poverty, and those who are not. They ruled out physical exertion, nutritional status and also biological stress (as measured by heart rate and blood pressure). The most plausible explanation, they argue, is “attentional capture” – that is, people experiencing poverty are so busy thinking about all their problems that they are distracted from problem-solving. By comparing data collected by sleep researchers, they make the claim that, “*Put simply, evoking financial concerns has a cognitive impact comparable with losing a full night of sleep*” or roughly equivalent to 13 points in IQ tests (1). There is of course a risk that this finding can be turned around and used as an argument that people with low IQs end up living in poverty. One of the researchers, Eldar Shafir, is quoted as responding to this as follows, “*All the data suggests it is not the person, it’s the context they’re inhabiting.*” (4)

Policy implications

The policy implications of this research are potentially very significant, as “freeing up the mental bandwidth” of a person living in poverty could make all the difference to their ability to make constructive decisions. The paper makes two important policy suggestions, as follows.

- Care should be taken to avoid imposing “cognitive taxes” on people living in poverty – such as filling out long forms, deciphering new rules, or responding to complex incentives. Instead, effort should be made to recognise and reduce such “taxes”, such as through simplified forms or personal visits by social workers/field facilitators.
- Predictable variation in the cognitive capacity of the same individuals should be factored into programmes that demand their thoughtful participation. In a development context, this is one more argument to plan training and awareness-raising campaigns shortly after the harvest season, and not when people are facing major financial hardship – and sometimes real hunger - just before the harvest.

References

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