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To Vaccinate Or Not to Vaccinate? My Research on The Question.

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Alex Smith considers the decisions that she made for her children over two decades ago, and she's still undecided.

My youngest child is twenty two and a half years old, and I am still undecided about whether or not he should be vaccinated. Vaccination is considered to be *the* wonderful advance in modern medicine. Like the Emperor's new clothes, it is spun from pure gold; appreciated unquestioningly by anyone of any standing and intelligence. Such is the prevailing hegemony, accepting vaccination is simply common sense [1]. We are reassured that vaccination is safe and effective. Those who express concern are generally dismissed as irresponsible, misinformed or subversive...effectively silencing anyone who wishes to retain personal or professional credibility. As a mother, I resent the assumption that I have not looked beyond the newspaper headlines; as an educator, it is this sense of being silenced that I find most disturbing. It is not my role to maintain the status quo nor is it to act as an agent for the state. My role as an educator is to enable critical thinking in individuals so that they can decide...or remain undecided...for themselves. This paper traces my personal journey from conditional acceptance to thoughtful indecision, as a vehicle for raising legitimate questions about vaccination.

"By hegemony, Gramsci meant the permeation throughout society of an entire system of values, attitudes, beliefs and morality that has the effect of supporting the status quo in power relations. Hegemony in this sense might be defined as an 'organising principle' that is diffused by the process of socialisation into every area of daily life. To the extent that this prevailing consciousness is internalised by the population it becomes part of what is generally called 'common sense' so that the philosophy, culture and morality of the ruling elite comes to appear as the natural order of things." [Boggs 1976 p39]

When I had my first baby in 1975, I chose not to have her immunised against whooping cough or measles. My reasoning at the time was that in the healthy child these two diseases generally ran their course, whereas diphtheria, tetanus and polio were harder to nurse. My philosophy was that if harm were to befall my child I would rather it was by an act of nature than by one of my own hand. Rumours rife at the time about the safety of the whooping cough vaccine later proved true when GlaxoSmithKline admitted in 2002 that thousands of babies in Ireland and the UK were inoculated with a batch of toxic whooping cough vaccines in the 1970s[2]. Putting profit motives and corruption aside, the good intention of the vaccination programme was no safeguard against human error.

The immunisation programme started much later than it does today…for reasons which I will return to later. During this time, I heard stories about vaccine damage, and vaccine damage denial. I was pointed towards a child who had been a beautiful, bright and happy baby until he received the measles vaccine…and told how the doctor had said that the worrying changes were simply co-incidental. I learned that the parent's perception was not to be trusted, that it was only anecdotal. Even at the age of twenty, I understood that while one story may not constitute evidence, the denial of many stories was disturbing. I attended a talk by a consultant paediatrician who explained that deaths from the childhood diseases were declining at the same rate before the introduction of vaccination as they continued to afterwards[3]. As with Marjorie Tew's later analysis of declining perinatal mortality[4], the central factor in these declines was improved living conditions. This stirred my sense of political wariness, a wariness reinforced a few years later when I met a man who had worked in the pharmaceutical industry manufacturing vaccines. This man explained that he was very against having his child vaccinated because he knew what went into the vaccines. In his time at least, money had sometimes come before safety. I stored these insights without judgement…and my next three babies received the tailored, reduced menu of vaccinations decided for my first…combined diphtheria and tetanus, and polio drops on a sugar lump…Done.

Then in 1995 I had my fifth baby and was very surprised to find that the women in the antenatal course I was running towards the end of my pregnancy were all anti-vaccine. "How interesting", I said. "Why?" This is what they explained…told in a way that I could understand.

The immune system is like a store cupboard. When infection enters the body through the usual way there is an incubation period during which messages are sent through a chain of immunoglobulins, from IgA in the mucus membranes through to IgG in the 'store cupboard'. This gives IgG time to replicate itself, not only increasing in number but also shape-shifting a little to create antibodies that are perfectly suited to the specific visiting pathogen. When a vaccine is injected into the body, this chain is bypassed. It is like having unexpected visitors. Antibodies are produced from 'the cupboard' but there has been no time for replication or specification. The immune system becomes depleted and the antibody response is inferior and not as long lasting. For a fuller explanation of this read the papers below[5,6]. This vaccine induced immune response has (at least) three implications:

- Immunity from vaccination wears off after a while resulting in outbreaks of disease in adults when it can be more serious.
- The differently shaped antibodies are less able to cross the placenta or are not there to cross the placenta, so that newborns may not protected by the same degree of passive immunity as they once were; hence the bringing forward of the immunisation programme and the untested vaccination of pregnant women.
- And the depleted store cupboard may leave the body vulnerable to other infections and be associated with the steep rise in autoimmune diseases like asthma and type 1 diabetes…both of which contribute to morbidity and mortality in the UK.

In summary, vaccination may be making new born babies more vulnerable and replacing the childhood

illnesses with serious chronic diseases for which there are no cures. Vaccination was introduced as a widespread well-intentioned measure at a time when we knew even less than we do now about the way that the immune system works and the impact that vaccination has on it[7].

Vaccine Safety

Better informed but still undecided I read a book that one of the mothers on my course had passed to me. Conscious that the author was not impartial, I was nevertheless moved by accounts from parents whose children had become ill or had died following vaccination. In many instances, science cannot prove that morbidity or mortality following vaccination is caused by vaccination, but the UK government absolutely recognises that vaccination can do harm. In philosophy and ethics there is the doctrine of double effect where harm to some is accepted as a side effect of promoting the good end. People who have been very disabled by vaccination can make a claim for a one off government payment of £120,000 and apply for additional compensation[8]. Between 1979 and 2014 the fund paid out 73 million pounds to 931 people, following 6026 claims, however, the government is unable to attribute causation to particular vaccines as so many vaccines are combined[9].

Vaccines are tested for safety both individually and to some extent in combination. For many reasons it is not possible to use the prospective randomly controlled trial with a saline placebo control group…the gold standard of testing. It is considered to be unethical to leave a control group of children 'unprotected', so many trials test one vaccine against another[10] and combined vaccines against a cohort being given non-combined rather than against a true placebo. Vaccines routinely given to pregnant women are untested on pregnant women for the same reason[11]. A new vaccine is considered safe if the harm from it is no greater than from the 'placebo' vaccine…or if no excessive harms are seen in real use. Trials controlling with a true placebo, looking for long-term harms, or comparing with non-vaccinated people are very rare…or rarely published.

One recent example of specific vaccine harm concerns the Pandemrix flu vaccine used in the 2009/10 swine flu outbreak. This is recognised as having caused narcolepsy in over 100 people in the UK[12]. The government appealed against the court's award of compensation to one of the children seriously disabled by the vaccine, but this was overturned in February this year…and in June, the European Court of Justice[13] decided in a case of a man who had developed multiple sclerosis following vaccination and later died, that:

"If the development of a disease is timely to the person's receiving a vaccine, if the person was previously healthy with a lack of history of the disease in their family and if a significant number of disease cases are reported among people receiving a certain vaccine, this may serve as enough proof".

Clearly, the answer to the question 'is vaccination safe?' is 'not always', and hopefully those damaged by vaccination will find it easier to claim compensation in the future.

Reporting Bias

A recent review of data from the Vaccine Adverse Event Reporting System (VAERS) showed a dose-dependent association between the number of vaccines administered simultaneously and the likelihood of hospitalization or death from an adverse reaction; the association increasing with younger age at the time of the adverse reaction[14]. Wondering at the lack of media coverage about these findings, the author draws our attention to the degree of advertising revenue that comes from drug companies. Bias is a factor at every level of the vaccine enquiry. Indeed, a Cochrane review[15] found widespread bias in the publishing of studies related to influenza vaccination:

"...industry-funded studies were published in more prestigious journals and cited more than other studies, independent of methodological quality and size. Studies funded from public sources were significantly less likely to report conclusions favourable to [influenza] vaccines... reliable evidence on influenza vaccines is thin but there is evidence of widespread manipulation of conclusions and spurious notoriety of the studies."

Reporting bias is compounded by the pharmaceutical industry's well-documented history of concealing unfavourable findings[16, 17] making it impossible for anyone, including policy-makers, to really establish the reliability of the evidence that is available.

Efficacy, honesty and coercion

For many parents, the chance of harm is outweighed by the reassurance gained that their child is now protected from these diseases…that vaccines are safe *and effective*. Tests of vaccines for efficacy (the ability of the cavvine to induce an antibody response in ideal circumstances), do not tell us about the degree to which they are effective, ie whether they reduce the occurrence or severity of the disease in real life. Finding reliable data about the level of protection conferred by a vaccine is difficult as information is often contradictory. This is best illustrated with some examples.

- The Welsh Government circular briefing health boards and medical practitioners said that influenza vaccine effectiveness was 52.4%, broadly in line with in a typical flu season[18]. Meanwhile, Public Health Wales on their website say that the vaccine generally gives good protection with 70-80% reliability in healthy adults against all strains of flu included in the vaccination[19].
- A 2014 Cochrane review[20] concluded that the preventive effect of parenteral inactivated influenza vaccine on healthy adults is small with 71 people needing vaccination to prevent one case of influenza. Vaccination showed no appreciable effect on working days lost or hospitalisation. Meanwhile, more and more people each year are urged to accept influenza vaccination, targeting the elderly in whom the vaccine in the years (2016-2017) was 0% effective [21]
- The Cochrane review also found that the protection afforded pregnant women from influenza vaccination is uncertain or at least very limited with the effect on their newborns, not statistically significant. Yet in the same year, the MBRRACE enquiry into maternal deaths[22] stressed that increasing immunisation rates in pregnancy against seasonal influenza must remain a public

health priority…an uncertain policy that will leave many thousands of women experiencing flu-like side-effects [23].

- A report published this month about influenza vaccination for healthcare workers in the UK[24] concluded that the evidence for safety benefits was not straightforward and had been interpreted differently by different systematic review authors. Cochrane[25], whose job is to make sense of the complexity, also recognised the poor quality evidence but concluded that offering influenza vaccination to healthcare workers who care for the elderly may have little or no effect on laboratory-proven influenza. Meanwhile, the NHS 'Flu Fighter Campaign'[26] aims for 100% compliance from health care staff with the offer of incentives to staff such as a 'flu fighter sticker'.
- And, plans to vaccinate children in the UK this autumn (2017) with the nasal flu spray Fluenz Tetra seem to be going ahead even though the CDC (Centers for Disease Control and Prevention) in the US has prohibited its use this year because no protective benefit could be measured.

With such conflicting information, I feel I can be forgiven for my indecision. The good intention of vaccination does not remove the need for honesty, knowledge and respect in those giving advice about vaccination. Very few women are aware that the 'whooping cough' vaccine offered in pregnancy (Boostrix[27]) is in fact four vaccines in one. When I asked an immunisation nurse at a GP surgery I was visiting if she informed pregnant women of the four-in-one nature of the vaccine and of the fact that it had not been tested on pregnant women, I was told to 'move along'. When I asked again, I was told to move along more forcibly. I suspect that she didn't know. Then earlier this year, older members of my family received letters, purportedly from our GP surgery but actually from the health board. These letters strongly advised take up of the influenza vaccine stressing that flu could be fatal and saying that they must attend the surgery urgently. I was shocked by the alarmist and coercive use of language and wrote to the health board expressing my concern that this approach was unethical and breached the principles of informed consent…but received very short shrift.

If the uncertainty and complexity of the risk-benefit analysis was explained to people beforehand, vaccination take-up could well decline, but informed consent is still the law. The modern concept of herd immunity requires a large majority of the population to be vaccinated in order to protect the vulnerable, but the ethics of mass medication are complex. If the UK government adopted a policy of mandatory vaccination, believing the end would justify the means, they could equally argue the case for mandatory contraception for the poor; poverty being a major risk factor for increased morbidity and mortality from all causes. The original concept of herd immunity refers to the way that a healthy community becomes more resistant to a disease that is in frequent circulation. The cold virus for example, might wipe out a South American tribe exposed to it for the first time, but in the West it is regarded as a minor illness, even though it can lead to serious complications in the vulnerable. If a vaccine against the common cold was ever available we would quickly be educated about this 'deadly disease' and if the cold became less 'common', our herd resistance might dwindle making us all more vulnerable when outbreaks occurred. Building resistance to common diseases by improving living conditions and by maximising the incidence of breastfeeding is absolutely safe and effective, and without risk of debilitating side-effects. With the scale of economic inequality in the UK being one of the worst in the developed world[28], genuine

intentions to reduce morbidity and mortality should perhaps address this first; that would indeed be spun gold. My children, now grown up, make their own decisions about vaccination, while I remain undecided, but as a family we are all agreed that while the Emperor may not be naked, he is perhaps only partly clothed. With the number and combination of vaccines increasing yearly, it is time we all started to ask questions.

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References

1. Boggs, C. (1976) Gramsci's Marxism. London: Pluto Press.
2. The Guardian (2002) UK babies given toxic vaccines, admits Glaxo. https://www.theguardian.com/uk/2002/jun/30/tracymcveigh.antonybarnett
3. Bystrianyk R. Humphries S. (2013) Vaccines: A peek beneath the hood. http://www.vaccinationcouncil.org/2013/11/12/vaccines-a-peek-beneath-the-hood-by-roman-bystrianyk-and-suzanne-humphries-md/
4. Tew, M. (1990). Safer childbirth? : A critical history of maternity care. London: Chapman and Hall.
5. Marini S. C. (2007) How Do Vaccines Work? Immune Mechanisms and Consequences http://pathwaystofamilywellness.org/Informed-Choice/how-do-vaccines-work-immune-mechanisms-and-consequences.html
6. Vaccine Decision.info (2011-2017) How Vaccinations Affect the Developing Immune System http://www.vaccinedecision.info/cgi-bin/viewcontent.cgi?article_id=18
7. Siegrist C-A (2008) Vaccine immunology. In: Plotkin S, Orenstein W, Offit P, editors. Vaccines. United States: Saunders. pp. 17–36
8. Niewiesk, S. (2014). Maternal Antibodies: Clinical Significance, Mechanism of Interference with Immune Responses, and Possible Vaccination Strategies. Frontiers in Immunology,5, 446. http://doi.org/10.3389/fimmu.2014.00446
9. Edwards K. M. (2015) Maternal antibodies and infant immune responses to vaccines http://www.sciencedirect.com/science/article/pii/S0264410X15010634
10. Turner N (2014) The ethics of placebo use in vaccine trials. Health Research Council of New Zealand http://www.hrc.govt.nz/sites/default/files/23972%20HRC%20Ethics_1114-online.pdf
11. BOOSTRIX (2016) https://www.gsksource.com/pharma/content/dam/GlaxoSmithKline/US/en/Prescribing_Information/Boostrix/pdf/BOOSTRIX.PDF
12. Narcolepsy UK (2017) A new narcolepsy epidemic https://www.narcolepsy.org.uk/resources/pandemrix-narcolepsy
13. Castells L. Butler D. (2017) Vaccine ruling from Europe's highest court isn't as crazy as scientists think. Nature News https://www.nature.com/news/vaccine-ruling-from-europe-s-highest-court-isn-t-as-crazy-as-scientists-think-1.22222
14. Miller N. Z. (2016) Combining Childhood Vaccines at One Visit Is Not Safe. Journal of American Physicians and Surgeons Volume 21 Number 2

15. Jefferson T, Di Pietrantonj C, Rivetti A, Bawazeer GA, Al-Ansary LA, Ferroni E. Vaccines for preventing influenza in healthy adults. Cochrane Database of Systematic Reviews 2010, Issue 7. Art. No.: CD001269. DOI: 10.1002/14651858.CD001269.pub4.
16. (2015) Only full disclosure of drug trial results will maintain trust. https://www.newscientist.com/article/mg22730393-200-only-full-disclosure-of-drug-trial-results-will-maintain-trust/
17. Goldacre B (2013) Trial sans Error: How Pharma-Funded Research Cherry-Picks Positive Results https://www.scientificamerican.com/article/trial-sans-error-how-pharma-funded-research-cherry-picks-positive-results/
18. Welsh Health Circular (2016) The National Influenza Immunisation Programme 2016-17 http://filestore.wcppe.org.uk/Enhanced-Service-Resources/Influenza/CMO%20letter%20-%20T.pdf
19. Public Health Wales (2017) - Influenza Immunisation http://www.wales.nhs.uk/sites3/page.cfm?orgId=457&pid=25480
20. Demicheli V, Jefferson T, Al-Ansary LA, Ferroni E, Rivetti A, Di Pietrantonj C. Vaccines for preventing influenza in healthy adults. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD001269. DOI: 10.1002/14651858.CD001269.pub5
21. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/641162/Influenza_vaccine_effectiveness_in_primary_care_1617_final.pdf
22. MBRRACE-UK (2014) Saving Lives, Improving Mothers' Care: Executive Summary https://www.npeu.ox.ac.uk/downloads/files/mbrrace-uk/reports/Saving%20Lives%20Improving%20Mothers%20Care%20report%202014%20Exec%20Summary.pdf
23. Package leaflet: information for the user inactivated influenza vaccine https://www.medicines.org.uk/emc/PIL.17376.latest.pdf
24. Influenza vaccination for healthcare workers in the UK: appraisal of systematic reviews and policy options http://bmjopen.bmj.com/content/bmjopen/6/9/e012149.full.pdf Kliner M, Keenan A, Sinclair D, et al. Influenza vaccination for healthcare workers in the UK: appraisal of systematic reviews and policy options. BMJ Open 2016; 6:e012149. doi:10.1136/bmjopen-2016-012149
25. Thomas RE, Jefferson T, Lasserson TJ. Influenza vaccination for healthcare workers who care for people aged 60 or older living in long-term care institutions. Cochrane Database of Systematic Reviews 2016, Issue 6. Art. No.: CD005187. DOI: 10.1002/14651858.CD005187.pub5
26. NHS (2017) Planning your campaign a flu fighter guide http://www.nhsemployers.org/~/media/Employers/Publications/Flu%20Fighter/Planning%20your%20campaign%20a%20flu%20fighter%20guide.pdf
27. BOOSTRIX: Package leaflet: Information for the user https://www.gsksource.com/pharma/content/dam/GlaxoSmithKline/US/en/Prescribing_Information/Boostrix/pdf/BOOSTRIX.PDF

28. The Equality Trust (2016) The Scale of Economic Inequality in the UK https://www.equalitytrust.org.uk/scale-economic-inequality-uk

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