I have proffered, flippantly, an idea for a classroom research assignment over the years: have a woman, clearly pregnant (really a prosthesis), drink at a local college bar and record her experiences. Clearly, if “...fewer than 5 percent of the babies born to women who drink heavily during pregnancy are affected by FAS [fetal alcohol syndrome]” (Armstrong 2003, p. 4, emphasis added), then a few drinks should pose no alarm to her companions, much less any strangers at the bar. Students’ reactions have been universal and in line with what any reasonable person knows: drinking during pregnancy is dangerous and irresponsible (Armstrong 2003), and the woman will bear the brunt of those social reactions for what she is doing to her unborn child. However, if fewer than 5 percent of babies born to heavy drinkers are defined as having FAS, Armstrong astutely asks: “how can we reconcile this fact with claims that all pregnant women must avoid alcohol?” (2003, p. 4).

The title of Elizabeth M. Armstrong’s Conceiving Risk, Bearing Responsibility: Fetal Alcohol Syndrome & the Diagnosis of Moral Disorder is witty and illustrative, hinting at several of the major issues and their interconnections that she explores in the social construction of the FAS and drinking during pregnancy “problems.” Though the theoretical framework can broadly be considered social constructionist, medicalization is an underlying analytical guide throughout the text. Mixed-methods, involving interviews with 30 obstetrician-gynecologists, pediatricians, and family practitioners in the Philadelphia area, a rich examination of historical documents concerning drinking during pregnancy and its place in social and medical history, and original quantitative analyses, provide data for the book. In essence, it is a case study of the creation and diffusion of medical knowledge (e.g., symptoms, diagnosis, etiology, epidemiology) and its impact on lay behavior and social policy.

A well-documented examination of the history of a medical diagnosis, the book explores how somatic diagnoses often reflect attempts to give order to perceived social and moral disorder or decay through control of the body, and how the individual women who drink during pregnancy and give birth to children with symptoms of FAS are the literal embodiment of immorality, disorder, and dysfunction. Among others, it asks important questions about the relationship between the mother and unborn fetus as separate (and thus possibly conflicting) entities, responsibility for individual and societal health, social intervention into individuals’ lives to prevent illness of others and promote the health of future generations, and the relationship that the institution and practice of medicine has with individuals and broader society in the form of diagnoses and behavioral control.

The production of medical knowledge and its effect on public (i.e., lay) knowledge and behavior concerning FAS is probably the book’s most substantial contribution. Early on in the introduction, Armstrong (2003) asks “Why does medical knowledge become codified even in the face of uncertainty?” She responds that “The answer lies with the power of medical knowledge to capture social anxieties” (Armstrong 2003, p. 5). In other words, how does the equivocal scientific evidence concerning the teratogenic catalyst and the (at best) vague diagnosis of FAS (resulting in prevalence estimates ranging between 2,000 and 12,000 per year) serve so well to make pregnant women avoid alcohol consumption during pregnancy? Armstrong demonstrates how medicine is at a loss to explain the majority of birth abnormalities; several of the doctors she interviewed in the Philadelphia area remarked that “don’t know” is the reason for most adverse or undesirable outcomes in childbirth. Even doing everything right while a woman is pregnant, so to speak, can result in an atypical or abnormal birth, as much about fetal development is still unknown and the outcome thus uncertain. It is precisely because pregnancy is full of uncertainties and potential risks, because the evidence concerning drinking during pregnancy is so weak, and because there is no wide-spread agreement among physicians concerning what level of alcohol consumption during pregnancy constitutes a significant threat that the most prudent thing for doctors to do is to recommend not drinking. Alcohol, nevertheless, is a modifiable risk, one that can be eliminated (p. 146).

In this way, minimizing any purported risk, however minute (and scientifically valid), reinforces the social value of the woman as a fit mother, one who is selfless, and is concerned not only with the well-being of her unborn child, but that of society and future generations as well. Even though the risks of pregnancy and childbirth (etiology, epidemiology, prevalence, and incidence) are uncertain, women have taken on almost full responsibility for the well-being of their children. In more recent medical history, in utero effects are of most concern, whereas in the past, the moment of conception was a focal concern. It is in this modern instance and medicalized framework that we can see that it is women who are inclined to try and reduce risks for an improbable outcome because it has this moral undertone, and the consequences (though unlikely) are catastrophic and would bring social condemnation, if not civil or criminal liability (Armstrong 2003; see Chen 2009). The underrun of fitness for motherhood and its moral imperative is reflected in how we think about the fetus as a separate entity in pregnancy. Quoting one of her interviewees, “…to what protections is the fetus entitled?” (p. 139, emphasis in original).

Social conditions regarding alcohol were vital for understanding how problems associated with drinking during pregnancy were understood in the late 19th century, as the temperance movement and attention to issues of race both contributed to hereditary-, genetic, and eugenic explanations of problem...
The book connects the topic of FAS to the wider complexities and conundrums that expanding medicalization is having on individual level behavior and risk, agency/responsibility, morality, and medical surveillance. Though medicalization can absolve responsibility for some behaviors adverse to physiological health and the well-being of society (e.g., alcoholism) (Conrad 2007, p. 152), medicalization has also recently reallocated the responsibility more strongly for some human outcomes to the individual themselves (Shilling 2002); that is, their volition, and thus reallocated the burden of agency on individuals for some experiences and not others. This presents a curious problem for addressing, or even theorizing, the nature of certain medical and behavioral experiences involving alcohol use/abuse. For example, today alcoholism may be at least partly medicalized and thus framed within the perspective of disease, something in need of outside intervention as the individual cannot control him/herself, but this is not often reflected in the rhetorical discourse of FAS. Women are routinely identified as the volitional body that can control the outcome of her pregnancy. As Armstrong notes, “FAS is the exception that proves the rule: the medical diagnosis of FAS heightened rather than diminished the degree of personal responsibility for birth outcomes imputed to women” (p. 210). This is an excellent point for future research to assess how medicalization affects responsibility for adverse outcomes depending on who is affected.

Furthermore, as Armstrong notes, medicalizing something like FAS has had the effect of locating the source, and consequently the solution, of FAS and drinking during pregnancy in the pregnant woman (i.e., individualizing the social problem when medicalized); a process that ignores important social factors and social context such as poverty, malnutrition, smoking, poor pre-natal care, etc. Holding women accountable for reproductive outcomes distracts us from the possible larger social sources of FAS and drinking during pregnancy. Many of these factors may well be needed, along with the abuse of alcohol, for the onset of FAS. Alcohol may be a necessary, but certainly not singularly sufficient, causal agent for FAS. However, the early scientific evidence produced in the 1970’s, though empirically weak, focuses on alcohol as the primary etiological source of FAS. Armstrong remarks: “Thus, these three articles-a total of eleven case reports of the syndrome and a noncontrolled, retrospective cohort study-formed the empirical foundation for the diagnosis of FAS” (p. 79). Much of the other research involved case studies or small, nonrandom samples, and expanded from studying alcoholism to alcohol use in pregnancy, thus democratizing the risk of FAS and widening the definition from problem or heavy drinking during pregnancy to any drinking at all.

Another important aspect of public understanding of FAS is determining who is most at risk for drinking during pregnancy, and who is more at risk for adverse outcomes because of prenatal drinking (p. 158). Armstrong’s analysis of the 1988 National Maternal and Infant Health Survey demonstrated two key findings, both of which seem to oppose dominant discourse on FAS: most women do not drink during pregnancy; and those that are most at risk for drinking at high risk levels during pregnancy include Black women, less educated women, older women, and those with less income-groups that are less likely to drink overall, but more likely to continue their drinking habits during pregnancy. Others, including White, better educated, and wealthier women, are more likely to modify their drinking behavior once pregnant. Thus, the claim that FAS is a widespread problem, being predicated on many women drinking problematically during pregnancy, is not borne out. Furthermore, the source of the disparities in drinking behavior pre-pregnancy and the outcome of FAS lies in the continuation of high risk alcohol use during pregnancy.

Interviewing 30 doctors in the Philadelphia area, Armstrong spends a considerable amount of time studying how these doctors reflected on and understand their interactions with and responsibilities to patients who drink, any experiences with children with fetal alcohol effect of some sort, and how they understand the causal role of the woman, and the alcohol, in the etiology and prevention of FAS. Though some of Armstrong’s interviewees were compassionate to the social context that may produce drinking during pregnancy, many still regard women as having some level of control, or volition, in their drinking (at times prompted by “atrocity tales” and the “emotional memory” that can shape the diagnosis). This is not surprising, as the individual is all the doctor can treat, but the patients and their bodies represent the internalization of social order (see p. 11). Curiously, in light of the social context and disease models of alcoholism, responsibility and volition for the well-being of the woman’s child (in utero) trumps explanations for these same behaviors in individuals who are not pregnant in the public’s imagination, though doctors she interviewed did range in their level of opprobrium for drinking during pregnancy (depending on if they were obstetricians-gynecologists, pediatricts, or family practitioners).

Another of Armstrong’s interviewees remarked that alcohol has not shown to have any beneficial effects on fetal development, but in excess, can and does have negative consequences. As such, drinking during pregnancy, like FAS, is controllable and reflects one aspect of how individual and social problems can be prevented. Being able to control pregnancy outcomes, though not certain, also reflects the pursuit of the “perfect child,” which is, in essence, the pursuit of the perfect society. Control over reproduction and fertility (i.e., the birth control pill and legalized abortion) is central to the “discovery” of FAS, as this too lodged responsibility for reproduction more firmly in the hands of the woman. Furthermore, in a society focused on risk assessment for disease and illness, one that is
full of “the potentially ill,” and subsequently is subjected to
greater and more intimate levels of medical scrutiny and
surveillance (Armstrong 1995; Conrad 2007; Lee 2006),
individuals are now bearing the brunt of the responsibility for
minimizing risk and maintaining good health in general
(Conrad 2007; Hallowell 1999; Jaeger et al. 2001; Luhmann
1993; Lupton 1999). And in the case of pregnant women, for
their child’s good health.

Indeed, it is immoral to not pursue behaviors that will
contribute to health; that is, decrease the risk of ill health and
disease (Ericson and Doyle 2003). Behaving in ways that can
contribute to adverse outcomes in pregnancy is especially
problematic, as it affects the woman, her unborn child, and has
the potential to negatively burden society. In this context and
more broadly in recent years, as more and more human
experience becomes medicalized (Conrad 2007), health
behavior inextricably is moral behavior, and health behavior to
lower risk is a moral responsibility (Ericson and Doyle 2003;
Verweij 1999; Wheatley 2005). Though scientific evidence is
still equivocal concerning the role of alcohol in FAS (Abel
2009), proclamations about the devastating effects of drinking
during pregnancy are common in medical journals (e.g., see
Monsen 2009).

Adopting the broader framework of social construction, the
book presents clearly how the medical knowledge about FAS
became so quickly infused in the minds of pregnant
women (and society more generally) that one should
not drink any alcohol when pregnant. Several of the
requisite social conditions for the explosion of FAS are
discussed, like books on environmental toxins, Montagu’s Life Before
Birth, co-optation with other movements (like battered children syndrome)
and the “unforgettable images of the thalidomide children ... on television and
throughout the print media” (p. 191). How FAS and its
behavioral mandates became so quickly and profoundly a part
of the social and cultural lexicon, outside of the medical and
professional journals, depended heavily on various forms of
media coverage, advocacy, and governmental intervention (e.g.,
changing minimum drinking age laws) (Golden 2005).

Given the time passed since its publication, it is useful to
ascertain how the book has influenced and is subsequently
situated currently in the fields of the sociology of risk, social
problems construction, medicalization, and substance abuse.
Though in a book review a complete undertaking of this
magnitude is impossible, the fields of medicalization and the
sociology of risk have progressed in ways that illuminate a few
issues that Conceiving Risk did not delve into.

The book does a good job of revealing the puzzling relationship
between the production of scientific evidence, its content, and
effect on broader individual and societal behavior. Particularly

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in the realm of the doctors as moral entrepreneurs and
purveyors of the diagnosis, the book demonstrates the problem
of FAS is bound to how doctors conceive it and its etiology,
and how that is related to what they consider to be the most
clear diagnostic elements of what constitutes FAS (e.g.,
problematic behavior in childhood, intellectual delays, or
physical/facial abnormalities, etc.). In other words, the
diagnosis, and knowledge of FAS and its fundamental existence
as pathology in childbirth, is simultaneously “clear” and
undeniable, but “varies” across doctors and in its collective
definition. Nonetheless, the book reads as if the diagnosis
depends heavily, if not entirely, on the doctors as gatekeepers
of this label. As others have noted, a seeming plethora of
groups are involved in the medicalization of women’s
experiences with pregnancy and childbirth (Lee 2006), and their
part (e.g., social workers) in the collective construction of the
diagnosis is not discussed.

Though this may be more relevant for other rare medical
phenomena (particularly those whose etiological source is
equivocal and complex, and whose diagnoses are vague) and
issues involving priceless/innocent children (Best 1990),
Conceiving Risk did not consider that in this age of
medicalization there is a growing and powerful movement
involving the deprofessionalization of doctors and medical
authority (Furedi 2006). This deprofessionalization involves
social anxieties about the impact of medicine itself (and
medical intervention) on greater society, and can
involve another aspect of the social construction of
medical knowledge not discussed in the book: lay
ways of knowing (Brown 1992; Furedi 2006). Though hinted at when
Armstrong notes how several of the doctors she interviewed were
profoundly affected by and gained a great deal of their
knowledge about FAS from

This raises another point concerning the relationship between
medical and scientific evidence and the public’s understanding
and knowledge of the condition. Take a similar example of
such a diagnosis and issue: the relationship between vaccination
and the onset of childhood autism spectrum disorder (ASD).
Interestingly, in light of a preponderance of scientific and
medical evidence to the contrary, a powerful vaccine-critical
social movement exists suggesting that vaccines cause autism,
which influences research agendas, Congressional hearings,
litigation, parental behavior, etc. (Perez forthcoming). Why,
then, is a collection of sound scientific evidence not enough to
convince some people about the cause (or lack thereof) of their
child’s ASD? Precisely because of their personal experiences
that are in opposition to medical authority. Medical knowledge in this way has a relationship with the public imagination in a very different way than how medical knowledge does in the case of FAS: people have not reified equivocal evidence and created a social norm around it (thus embracing the authority of doctors); people have denounced or contested demonstrative evidence and resisted medical and scientific authority (Furedi 2006). Though hinted at a few times in the book, Conceiving Risk could have benefited by interviewing pregnant women about the issue of FAS, how they get knowledge about it, how they behave as a result, their role in its construction and continuation, etc.

Armstrong’s recommendations for how to address FAS, based on her examination of the social construction of the issue, openly challenge diffuse laws and recommendations governing alcohol consumption by all women. Those most at risk for FAS births are those least accessible by mainstream policy approaches, and addressing the ills of poverty and lack of prenatal care and poor nutrition are more likely to have important effects. Similar targeted approaches (i.e., targeting groups of high risk drinkers) are practiced in some European countries, and Europe in general, though having higher rates of drinking, has a much different approach to the issue of FAS and drinking during pregnancy. Furthermore, drinking by men, arguably much more of a social problem and social cost than drinking by women, as well as non-pregnant women’s drinking, are often overlooked in light of drinking during pregnancy. Armstrong writes that “It is as if a woman’s drinking problems have no social meaning until she becomes pregnant” (p. 220). Focusing on high risk drinking by those most involved is a better strategy than a hyper-vigilance for those who are extremely unlikely to drink during pregnancy in the first place.

In all, this book is well-written and well-researched, and topics and discussion flow well within chapters and across chapters. The lineage of ideas across chapters is fitting, and allows the reader to follow the progression of FAS and drinking during pregnancy from hundreds of years ago to recent medical understandings in a way conducive to a social constructionist approach. At times the writing is repetitive, as major points and quotes are used a few times to reinforce the same ideas. Though the book does a good job of covering and tying together these numerous issues, at times the number of subtopics in a chapter can seem overwhelming—occasionally feeling like too many ideas at once to digest.

Nonetheless, it is exemplary for those interested in the social construction of social problems as a case study, the expanding jurisdiction of medicine to forms of individual health behavior affecting others (i.e., “the rest of us”), the medicalization and reification of vague diagnoses (and thus expansion of medical control), those interested in responsibility/agency for health and medical surveillance, as well as those interested in the history and development of medical diagnoses. Any number of ambiguous, debatable diagnoses, part phenomenological and part somatic, reflecting broader societal concerns and using the body as the site for contestation of social order and intervention and control, could be examined using Armstrong’s blueprint.

REFERENCES


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