I. Introduction

In his personal life, Jeremy Bentham was extremely afraid of ghosts. In the moments before sleep gave him respite from this dread, he rehearsed to himself the reasons why ghosts could not and did not exist. This article proposes that societies which utilize the ultrasound for pre-natal screening, especially for non-medically related sex-selection in the name of familial “gender proportionality” or the drain of “economic resources” based on cultural discrimination and in which is seen an increase in non-medically indicated abortions, should take note of Bentham's eclectic paranoia. While wealthy Americans rehearse the mantras of “one boy and one girl” and “gender proportionality” or who find a form of psychological relief in the “non-directivity” of genetic counselling, the ghost of eugenics still circles above prenatal genetic screening technology.

The concept of “panopticism”, as premiered by the English philosopher and jurisprudential theorist, Jeremy Bentham (1748 -1832) and as enlarged and elaborated upon by the twentieth century French philosopher, Michel Foucault (1926 - 1984), has been applied by analogy to any number of areas of academic inquiry in the last few years.1 Few, however, have explored the direct applicability of the concept to the medical arena, and fewer yet, to the current pre-natal use of the ultrasound as a type of “panopticism”.1 I will investigate in this essay whether or not the metaphor of the parent’s lack of control over the woman of prenatal testing, if it cannot, is there a legacy that is still present; can we find evidence or traces of its presence? If this is true, has it “mutated”; adapting to present social structures? What social need is implicated in its continued (mutated) existence? If that social need implicates “the moral”, how and who are making decisions as to the rightness or wrongness of any individual act?

Today’s consideration by academics and theorists of the idea of Panopticism shows a distinct split of opinion as to its continued vitality. Some who have considered the idea have taken a critical approach to the idea such as Majid Yar, C. Norris, G. Armstrong and Roy Boyne.5 Others have taken a rather more positive approach with regard to panopticism as a valid metaphor in relation to their own areas of research. These include Stanley Cohen as well as N. Fyle and J. Bannister.6 Whatever one’s position on the matter, it is safe to say, along with Roy Boyne that “the Panoptical notion is not fading away, and that development in screening and surveillance require the retention of the Panopticon as an analytical ideal type.”7 Like it or not, the concept has caught “the sociological imagination because it seems to capture neatly some feature of contemporary society.”8 Exactly what “feature” or “features” is decidedly more difficult to establish.

The pre-eminent sociologist Zygmunt Bauman has also addressed the subject. He has observed, paraphrasing Oslo Sociology of Law Professor, Thomas Mathieson, that “Bentham’s and Foucault’s powerful metaphor of Panopticon no longer grasps the ways power is working. We have moved now… from a Panoptican-style to a Synoptican-style society; the tables have been reversed, and it is now the many who watch the few.”9 As I read this statement by Bauman, he seems to imply that we have indeed come full circle from the “spectacle” (say, of the execution in Foucault’s, Discipline and Punish) to surveillance and back again to the spectacle, all “without losing any of the disciplining power of the predecessor.”10 Furthermore, Bauman says that compliance to social standards “is achieved nowadays through enticement and seduction rather than by coercion – and it appears in the disguise of free will, rather than revealing itself as an external force”11 This is the position I shall take with regard to the Panopticon-Synopticon form of social control that is embedded in the use of the ultrasound for obstetric pre-natal diagnostic purposes. Some form of “enticement”, disguised as “free will” or “choice” or the simple precursor to decision-making, the “gathering of information”, is at work in our current “houses of inspection” under the watchful eye (sic) of the expert medical professional. Or, could it be, that something like a “pre-preparation” is taking place, dressed seductively as “information” or “risk assessment” in some places at some times, managed by public-relations firms in the hire of law firms, themselves in the hire of corporate powers?12

In order to assess these premises, I will also ask how the two models – Panopticism and Synopticism (Post-Panopticism) – were originally contextualized. Then, I ask how they might be applied, individually or together, with reference to women and their lives today, within a globalized framework. What I am particularly interested in examining is if either of these models or a mutated version can be used to explain how the population of India has become biologically de-stabilized through the use of the ultrasound.13

II. Panopticism: The History

A. Bentham and Criminal Reform

Jeremy Bentham is, in the main, known as the father of utilitarianism. Put simply, this is a philosophy that is encapsulated in the phrase “the greatest good for the greatest number”. He and his works are often painted as idealistic; indeed, Jane Semple describes the Panopticon as the product of “a realistic, kindly man looking for ways to ameliorate the lot of the poor”.14 Gertrude Himmelfarb, however, paints a different picture, saying

As one proceeds in this study of the Panopticon, what emerges is more and more a travesty of the model prison and the model reformer. But the travesty is not yet complete. The final turn of the screw, the final pitch of perfection, is the discovery that Bentham himself actually intended to be the contractor and the governor of the prison.15

As evidence of her skepticism, Himmelfarb notes that, in Bentham’s proposal to William Pitt in 1791, he “slurred over the question of profit, alluding to it only in subordinate clauses” and in the last paragraph of the proposal “adopted the voice of the third person and the posture of the altruist.”16

As noted earlier, Bentham published his plans in 1791. He proclaimed them “reformist” and in the Preface to the book, he shows no hesitation in saying …morals reformed, health preserved, industry invigorated, instruction diffused, public burthen’s lightened, economy seated as it were upon a rock, the gordonian knot of the poor laws not cut but untied….18

We would do well to remind ourselves here exactly how the Panopticon was constructed. The following succinct description of the Panopticon’s architecture bears repeating:

[(I)...was a ring-shaped building that housed at its centre an inspection tower. The periphery of the building consisted of cells, each of which was meant to hold an individual prisoner. Each cell had two windows, one facing outward allowing light in from the outside, and one facing inward, allowing the inmate to be seen from the inspection tower. The walls of the prison cells were extended to prevent lateral vision and communication between prisoners. From the inspection tower, the keeper had the ability to see into each cell along the peri- phery, while the use of lighting and wooden slats prevented inmates from seeing the keeper in the tower.]
Although Bentham put a great deal of energy into trying to convince officials of the need for the Panopticon, Parliament eventually withdrew its support for the project and the penitentiary was never built - in England.

It was actually Jeremy's brother, Samuel Bentham, who probably first conceived of the idea of the “panopticon”. Samuel constructed a “prototype” panopticon in White Russia, now Byelorussia, during the autumn of 1786 on the Kirchov estate, which belonged to Prince Grigorii Ptemkin, a nobleman who had great influence over Catherine II during the 1780s. Simon Werret theorizes that Jeremy decontextualized Samuel’s “Inspection House” for use in a more general way, similar to the way in which Foucault later introduces it to us as “a figure of political technology that may and must be detached from any specific use.” The original was, quite literally, a means for solving Samuel Bentham’s problem of “who will guard the guards”, i.e. a way to supervise the imported English supervisors of unskilled Russian serfs on the Kirchov estate.

Of further interest is the fact that the frontspiece of the book in which Jeremy’s letters were published outlining the panopticon, there is a quotation from Psalm 139, describing the omniscience of God expressed through Church art as the Pantokrator icon, seen in many Russian Orthodox Church domes. So we can see that, in its re-contextualized from, the Panopticon was a type of “inspection house”, created in an absolutist Russia, where English guards who supervised Russian serfs themselves needed supervision, everyone who was involved ultimately under the gaze of an omniscient God. If we adopt this interpretation, Foucault may not have been correct in suggesting that the panopticon was a new form of power expressed through architecture. But whether or not he was accurate in thinking that the panopticon was a break from the ancien régime of Europe and as some sort of new and revolutionary concept would be to miss the point entirely. The point is that Foucault realized that it can be seen as a general form, with “polyvalent applications” which could be used as a disciplinary mechanism in any number of settings, i.e. “factories, schools, barracks [and] hospitals.”

Before leaving our discussion of the contextual influences of the panopticon and Bentham, mention must be made of the Poor Laws and their dramatic impact on eighteenth century England. The Poor Laws were a series of laws enacted in England, actually begun in the sixteenth century. The first Poor Law was enacted in 1532 in order to supply relief to the poor, or through the levying of taxes on wealthier citizens. A number of factors created the need for these laws and their constant revision. These factors included land enclosures, population increases and unemployment. The peak of the Poor Law expenditures came in 1817, during the life of Bentham. Abuses of the workhouse, which we have all encountered via Charles Dickens in his novel, Oliver Twist, led to the Poor Law Amendment Act of 1834. The New Poor Law Report in 1834 made various suggestions including labelling people as the “The Criminal Poor.” Pamphleteer J. E. Bicheno in his Inquiry Into the Nature of Benevolence wrote that the labouring poor were ‘an excrescence on the body politic” and this “growing up in society, with such an argumentation of moral values in the middle classes, presents a feature unexampled in history... One part of Society may be refined and improved while the other is degenerating.”

I make mention of the Poor Laws here because Bentham believed his plan would solve these problems; that is, it would have an economic impact on society. The vehemence in Bicheno's calling the poor the excrescence of the body politic evokes memories of the so-called ‘lives not worth living’ from the Nazi eugenics movement and the commonality of economics in both sets of attitudes, i.e. why should money from taxes levied on people who are producers in society be spent on relief of persons who do not work or produce, the reasons for unemployment or inability to work being largely ignored or politically influenced? While few would openly admit that this type of reasoning exists or is acted upon today, this does not preclude one from venturing into the societally un-acknowledged and asking if pre-natal testing is indeed a type of “new eugenics” for a “new genetics”. B. Foucault and Domination

Whoever picks up Foucault’s Discipline and Punish and reads the first five pages will undoubtedly never forget the book even if the remainder of the book remains unread. Those who continue a few pages further become undoubtedly even more intrigued; it demonstrates Michel Foucault at his best as provocateur and storyteller. Foucault’s biographer, James Miller, quotes Giles Deleuze’s impression of Discipline and Punish as “a dazzling array of perverse inventions, cynical discourses and meticulous horrors.” But the cumulative affect, says Miller, is “both simple and clear: it is to sharpen the tension established at the outset, by the first two images of the book.” In these first seven pages Foucault contrasts the execution of one Damiens, a regicide held on 2 March 1757, by a method known as “drawing and quartering” with a very mundane time-table developed by Léon Faucher for the house of young prisoners in Paris. Only 80 years separated the execution if Damiens and the writing of the schedule. What Foucault has juxtaposed in these seven pages in not simply a bloody and difficult public torture-execution and a timetable but the replacement of punishment via brute force with the “swarming” of various “scientifico-legal” complexes, all within less than one hundred years. The body of the criminal has changed and has taken on a “political economy” and is involved in a “political field” where, Foucault says, power relations have an immediate hold upon it; they invest it mark it train it torture it force it to carry out tasks to perform ceremonies to emit signs.

We can extend this by analogy to the bodies of pregnant women and insist that they too have taken on a type of “political economy” and are intimately involved in a “political field” as much as the body of a criminal ever was. Further, this is aided and accelerated by the various “scientifico-legal” complexes available at whatever historical point we find ourselves.

Discipline and Punish was written between 1972 and 1974 at a time when the “French ultra-left found itself in retreat and disarray” after the student unrest of 1968. It was conceived during the “most militant period” of Foucault’s life which saw his involvement with, but eventual separation from, both French Maoists and the Groupe d'Information sur les Prisons. In Foucault’s own estimation, Discipline and Punish was the “capstone of his career.” But others, including the reviewer for L’Express found the book’s argument “exaggerated.” What was clear, however, was that Foucault had gone beyond Marx. On the day Foucault finished the first draft of Discipline and Punish, he began work on his first volume of the History of Sexuality.

Foucault’s chapter entitled “Panopticism” is the third chapter in Part Three of his three-part book. Discipline and Punish: The birth of the prison it is in the third part entitled “Discipline” which comes after Chapter 1 “Docile bodies” and Chapter 2 “The means of correct training”. Foucault does not immediately launch into a description of Bentham’s writings but begins, instead, to set the stage with a description of how society dealt with the plague juxtaposing that with how it dealt with lepers, i.e. lepers were excluded from society and plague victims were confined. He distinguishes these two different mechanisms for dealing with medical problems in that they “do not bring with them the same political dream. The first is that of a pure community, the second is that of a disciplined society.” In addition, in this chapter, Foucault describes the Panopticon as the “house of certainty.” He also describes it as a “laboratory of power” and “a machine” which was used “to carry out experiments, to alter behaviour, to train and correct individuals.” For that matter, it could even be used in a hypothetical experiment with orphan children to see if they could be raised to believe that two plus two did not equal four or that the moon was made of cheese. In short, it “is a privileged place for experiments on men (sic) ...” Foucault theorized that forms of disciplinary power originated with the Church but migrated to the sovereign and then to institutions such as the police where “binary division and branding...[as]...normal/abnormal” could be accomplished. Disciplinary power could also be extended beyond the institution or “apparatus” and be taken over by specialized institutions such as the hospital. An entire “disciplinary society” could also develop and Foucault even considers that an “indefinable generalization mechanism of panopticism” could exist. This strange new world develops not because the disciplinary modality of power has replaced all the others; but because it has infiltrated the others, sometimes
undermining them altogether, extending them and above all making it possible to bring the effects of power to the most minute and distant elements. It ensures an infinitesimal distribution of the power relations.\textsuperscript{47}

The age of spectacle is over and, because we are all left not with a “community” or a “public life” but only with “private individuals” and the “state”, we have inherited the “exact reverse” of spectacle, which is surveillance.

Before leaving Foucault and the context and text of Discipline and Punish, we need to mention another concept. First, the development of a disciplinary society is connected to historical processes. “Tactics of power” have three criteria: to get power at the lowest cost, to bring power to its maximum intensity without “failure or interval” and lastly, to link the growth of power with “apparatuses” such as medicine, education, the military and industry. To obtain power at the lowest possible cost involves low expenditures in terms of the economy plus few “exterorization, relative independence and little resistance in terms of politics.” One example of these historical processes that example that Foucault uses is the eighteenth century “demographic thrust” and the increase of a “floating population.”\textsuperscript{48} Discipline had to deal with this mass phenomena and its ancillary nomadism; it had to “fix” the population, not by “levying violence” but by the triad “mildness—production—profit.”\textsuperscript{49}

While Foucault focused almost exclusively on the judicial system for examples of how disciplinary power works in Discipline and Punish, he did describe the hospital and the school as also crossing a “technological threshold.”\textsuperscript{50} Specifically, the hospital was reordered by the disciplines where any “mechanisms of objectification” could be used as a “justification of subjection” and where the growth in knowledge made possible various disciplines, e.g. obstetrics, psychiatry, etc. Foucault saw this process as “double”, first as an “epistemological thaw” through a refinement in power relations and second, as a “multiplication” of the effects of power through the formation and accumulation of new forms of knowledge.\textsuperscript{51} By the time Foucault died in 1984 these “new forms of knowledge” had already been in place for almost a decade. These included the technology of the ultrasound and prenatal diagnosis by molecular genetic techniques. Linkage analysis for alpha-thalassemia was first accomplished in 1976 and the genetic diagnosis for sickle cell anaemia was first done in 1978 through gene mutation analysis.\textsuperscript{52}

\section*{C. Analysis of the Bentham-Foucault Models}

At this point, a comparison of Bentham’s nineteenth century “inspection house” and Foucault’s exposition on the same subject along with the modern idea of medicalization as seen in prenatal genetic screening practices is in order. Initially, as we’ve seen, Bentham connected the physicality of architecture and a nascent interpretation of its effects while Foucault provided the epistemological maturation of the idea to panopticism. I incorporate both these architectural techniques and epistemological concepts in the following chart, in the second column, and compare them with modern prenatal genetic screening processes, in the third column. Since the prenatal genetic screening/prenatal diagnostic testing column incorporates my interpretations, the following is not strictly a comparison but also includes a means of analysis. The chart has been divided into four sections, the Person, the Place, Disciplinary Techniques and the Discourse. This is a very artificial division since disciplines do not usually operate at only one level and are interconnected. Distinguishing the differences and similarities between panopticism and pre-natal diagnostic testing also automatically leads across divisions and back again.

\begin{itemize}
  \item 1. Analysis of The Person

An individual subjected to the Panopticon was envisioned as very much a passive prisoner. He was to be isolated and secluded, atomized. The main relationship the prisoner would have had was not with other prisoners, his family or friends, or even his confessor; it was with the watcher/inspector. As Bentham named him, he was “the spider in the web.” This relationship would have been straightforward and simple. The immediate goals were 1. isolation, 2. routinization and 3. immediate intervention should the prisoner be found in violation of the rules. This strategy was meant to produce “docile bodies.”\textsuperscript{53}

The modern obstetrical patient is, on the other hand, simultaneously very different yet very similar. She is not a physical prisoner; theoretically, she may come and go as she pleases. She is not in a hospital or a clinic by virtue of a judicially imposed sentence. In other words, she has personal autonomy. Or does she? At first glance, it would appear that her participation is strictly voluntary. But her actions could also be seen as a type of “consensual conformity.” After all, the modus operandi in the Panopticon is control from within the individual, without the use of force. This strategy could also be applicable to the patient.

Another obvious difference is that, first and foremost, the prisoner was visible at all times. This was a denigrating process, which led to subjectification. But Majid Yar has questioned this “chain of equivalence (visibility = vulnerability = subjectification).”\textsuperscript{54} Yar suggests that in order to understand the concept of visibility vis-à-vis the prisoner we must understand it needs to be linked to an entire regime of “normalization” which doesn’t seem to be present in the case of the patient. This could be true except when we remember that in Foucault’s theory the technique of surveillance is control from within the individual without the use of force. In other words, this is a very artificial division since disciplines do not usually operate at only one level and are interconnected. This could be true except when we remember that in Foucault’s theory the technique of “consensual conformity” is control from within the individual, without the use of force. This strategy could also be applicable to the patient.

Some argue that the “permanent visibility” of the inspected by the inspector must be mutual. The prisoner is conscious he is being watched and therefore complies. But with the patient this situation may be different and thus opens up “the phenomenological question to intentionality.”\textsuperscript{55} That is, if the patient doesn’t realize she is “visible”, then there is no discipline and “the trap isn’t sprung.”\textsuperscript{56} But this is not as debilitating to the analogy as it might seem as we see in Peter Salmon and George Hall’s study, below.

The factors of isolation and the routinization of the prisoner could be said to be subsumed into what I consider to be an extremely important factor – that of technological expertise, especially as embodied in the doctor and in the use of the advance technology such as the ultrasound. And this could be substituted for the visibility that Yar complains of as an obstacle. We are “expert-dependent in a radical sense.”\textsuperscript{57} Expertise still manipulates “the subject’s consciousness” in various serious ways.\textsuperscript{58} The subjects and objects of – doctors and patients – do take what occurs in genetic screening very seriously, just as the patient takes the authority of the watcher/inspector seriously. The patient believes in the authority of the watch, as does the patient in the authority of the doctor.\textsuperscript{59} Given the gravity of the patient’s situation in medically indicated ultrasound use and the possibility of an “ausgang” as motive of the performance game, the Discourse is a very artificial division since disciplines do not usually operate at one level and are interconnected. This is necessary in order to deal with the psychological exigencies of the new individual/hospital or clinic as a “house of inspection”.

Patients continue to interact with doctors and this is presumably the interaction, which most influences patients’ decision-making. Even with “trendy” biopsychosocial models of doctor-patient consultation and patient-centered medicine, where consultations focus on a physical “disease” in contrast to, for example, the problematic symptomatology of “chronic pain”, doctors still “retain the authority of their specialist knowledge and the associated authority – indeed the responsibility – of diagnosis and treatment.”\textsuperscript{60} Generally speaking, the doctor-patient relationship is an authoritative relationship no matter what model of consultation might be used. Not only is authority projected but “societal ideologies are instilled in individuals’ consciousness” that cut across class, race and gender lines.\textsuperscript{61}

The ultrasound and prenatal genetic technology is not simply a convenient and amazing piece of machinery and technology. As a piece of technology it is part of a “complex social and institutional matrix.”\textsuperscript{62} It is embedded in other disciplinary institutions as well, of which medicine is but one. These institutions “typically include an organized body of technological know-how; a cadre of specially trained experts and workers; and related university teaching and research programs.”\textsuperscript{63} In the institution of the hospital, or the clinic, the reification of technology unites with the expertise and near-reification of the doctor-expert. True, more women than ever have entered the field of medicine but despite this, “masculine honor cultures
have managed to sustain themselves in science and medicine.\textsuperscript{65} In the prenatal screening process disciplinary power has infiltrated to the level of a woman's choice to have or not to have a child unless it has the "correct" set of characteristics.

Ann Maclean does not hesitate to say that doctors are "agents" of social and political control whose appearance as scientists only adds legitimacy to the control. For her, medicine itself is a political activity that "masquerades" as apolitical and value free.\textsuperscript{66} To consider that someone is ill is for Maclean, a value judgment and an ethical decision. She says, quoting Ian Kennedy that "illness is... an evaluative term redolent with moral, spiritual, political and social overtones...".\textsuperscript{67} She also argues, agreeing with Kennedy, for a view of medicine that is normativistic and for a social model of health rather than for one which is positivistic and medical.

The patient also has a public "context" as well as a private one. In this meta-narrative there exists "a public perception that the new genetics is highly accurate - indeed deterministic - when it predicts the future through certain tests."\textsuperscript{68} Medicalization also plays a role in this general, public contextualization. I would argue that there can be no doubt that medicalization has changed, conditioned and restructured people's experience of reality. It standardizes human life and if the patient fails "to fit the[m] medical norm...[she] is considered to suffer from a disease."\textsuperscript{69} The patient can become stigmatized just as Foucault's plague victim or the modern drug addict.

Furthermore, the patient brings her own personality and socio-cultural experiences to her relationship with the doctor, technology and expertise. In a study what gave patients control over treatment, i.e. control over very real pain, through PCA (patient-controlled analgesia), what came to light was that the PCA was popular not because it gave patients control but that it "freed them from the need to exercise control by "bothering" nurses with their complaints of pain and requests for analgesia."\textsuperscript{70} In another study, a psychological intervention that was designed to encourage surgical patients to be in control of their recovery, patients interpreted the study as "a request to fit in with staff's needs and to 'cooperate'."\textsuperscript{71} In summary, the negotiation process which takes place in a clinical consultation where expertise is shrouded in authority and grounded in a mysterious technology may not have proceeded any further beyond that of a techno-elite dictating to a techno-peasant. And here is not the place to even begin to consider medical "turf issues" or genetic "cowboy practitioners."

Deciding to have a child or have an abortion after ultrasound and PDT testing is a serious decision and one presumably not taken lightly by parents. Most parents desire healthy offspring. But some parents also want specific traits in their offspring, such as the "correct" sex or the absence of disability. However these decisions are taken, and genetic counselors aside, the reification of experts and technology, the infiltration of disciplinary power into medicalization or the reference to a societal co-duty-of-care which demands articulation today are rarely mentioned. The dialogue about genetic screening continues to remain at an individual, parental level; "quality of life" is determined solely by the parent. I think it is fair to say that in a country such as India, the socio-cultural demand for a male child is hardly ever determined solely by the female parent. There, culture is at work in a way that technology tries to convince us is only marginal. Also, the context of impending parenthood changes from person to person. In a review of post-diagnostic abortion trends in late capitalist nations, parents who were disabled or who had children who were disabled "sometimes regard a disorder as less disabling as do persons with no experience of the disorder."\textsuperscript{72} Rarely, if ever, do we hear an argument along the lines that "[the deployment of hi-tech reproductive technologies] has to be placed in a larger context than that of the express desires of specific individuals or couples to procreate."\textsuperscript{73}

2. The Place

For Foucault the prison is a "laboratory of power." It was a machine, a "house of certainty." It was a place for experimentation. The hospital or clinic for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the production of health, required that for Foucault was not any different. It was a "mechanism of objectification" that became an "instrument of subjectification."\textsuperscript{74} This is accomplished through what has been labeled the "panoptic sort", that is, identification, classification and assessment. The goals of the panoptic sort can be traced back to the days of plague and the development of the hospital. The fear of disease and its twin goal, the produc

3. The Disciplinary Technology

Will the disciplinary techniques aspect of panopticism transfer to genetic screening? In terms of personal power relationships it would seem that this is possible, especially where asymmetrical relationships are present. There is often the chance to consider medical "turf issues" or genetic "cowboy practitioners."

But does the process, which Foucault discusses, where surveillance seeps to the minute levels of society, to the "capillary" level actually apply in a country such as India, the socio-cultural demand for a male child is hardly ever determined solely by the female parent. There, culture is at work in a way that technology tries to convince us is only marginal. Also, the context of impending parenthood changes from person to person. In a review of post-diagnostic abortion trends in late capitalist nations, parents who were disabled or who had children who were disabled "sometimes regard a disorder as less disabling as do persons with no experience of the disorder."\textsuperscript{72} Rarely, if ever, do we hear an argument along the lines that "[the deployment of hi-tech reproductive technologies] has to be placed in a larger context than that of the express desires of specific individuals or couples to procreate."\textsuperscript{73}

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But does the process, which Foucault discusses, where surveillance seeps to the minute levels of society, to the "capillary" level actually apply in a clinical setting? How can we know if it we experience it? When Foucault discusses historical process he specifically mentions the eighteenth century population thrust and the "fixing of the population."\textsuperscript{77} If we consider this process at the capillary level we should be able to see "power at the lowest cost" and with "maximum intensity." Remember that discipline, according to Foucault, resides in exteriorization, relative invisibility and little political resistance.\textsuperscript{78} Furthermore, we have a "chain-of-discipline" beginning with "mildness" leading to "production" and finally to "profit." As was discussed above, for example, in the analysis of the "person", evidence exists that "mildness", i.e. patient directed treatment, only masks the forces at work in patient care. Even "isolation" need not be physical to be real – and painful. It is extremely likely that these particular techniques of discipline, which are seen in the Panopticon, can also be applied to the hospital or clinic situation.

4. The Medical Discourse/Philosophical Meta-narrative

While the analyses of the person, the place and the disciplinary techniques show a consistent fit with Panopticism and the process of genetic screening, the analogy has trouble fitting into the more modern meta-narrative involving ultrasound technology unless one considers that we are now in an era of post-panopticism. Anthony Giddens accurately points out prisons are "qualitatively different from other social organizations."\textsuperscript{79} In addition, the "means of economic production and the political means of administration" are different.\textsuperscript{80} For example, subordination in the workplace is very different from the violence, which the modern nation-state could use if it wanted, to guarantee obedience. And, as Bauman asks, if today's societies are so similar to prisons, why are they not more unpleasant?\textsuperscript{81} If we remember that the participatory nature of genetic screening had to be supplemented by the reification of expertise and technology in order to remain valid, we should ask what changes post-panopticism adds to the discourse.

In the meta-narrative or modern discourse, could the differences between the Panopticon and genetic screening again be leveled through the addition of other features of control? Lyon makes a convincing case for a "Panopticon-at-large" and Poster does likewise for "superpanopticism" as replacements in our modern society for the Panopticon of Bentham and Foucault.\textsuperscript{82} It is true enough that electronic surveillance has affected social order and control in society in many ways. But social ordering and social control are very large topics and cannot be reduced to simple surveillance. It may be that in the thirty years since Discipline and Punish, the disciplines in the societal body have "mutated" to include the "panopticon-at-large" and "superpanopticism" but they are one of several techniques of power at work.

Finally, the norms which one encounters in society are difficult enough to decipher much less to directly attribute to surveillance and visibility as the
norm-formations of discipline. How a patient engaged in PDT measures “well-being” is different from nation to nation. In India, for example, the maternity patient might well think her “well being”, i.e. the well being of her family, i.e. the well being of her husband, depends on her having a son rather than a daughter. While this is, to a point, only conjecture, it is probably not conjecture to assume that a son is more of a “resource” to the family than a daughter. Also, the political will to provide resources for disabled children varies dramatically from country to country and in this respect, the resource allocation question is often an under-communicated societal message. Disabled children are considered a “drag” on resources of society, not to mention the energies and resources of the individual family. The discourse that surrounds the disciplinary technologies affecting the PDT obstetric patients includes these socio-cultural questions. But instead of uncovering the meta-narrative and recognizing the similarities between panopticism and prenatal genetic screening, the hospital or clinic has become a “house of certainty”, especially when one considers the prospect of a child who does not have the “correct” characteristics. Resistance is possible but we can only begin the process by remembering that Foucault tells us that “resistance” must recognize the “human appetite for perfection.” I argue in the next section that the discourse/meta-narrative aspect of panopticism is transferable to ultrasound technology when one considers that we have moved beyond a Bentham-Foucault panopticism to something else which I will, for the sake of convenience, call the Baumann-sort, of which “gynopanopticism” is a subset.

III. Current Debates or Panopticism Morphed

The Bentham-Foucault theories of panopticism have not remained static by any means. They have been subjected to an on-going series of both sociological and philosophical questions. Questions and criticisms fall into three areas. Some write that the surveillance theory can be transferred wholesale to the public spaces of today. There are those that posit the theory was fine within the historical framework of the 19th th and early 20 th centuries; it is now found in the encoding of personal information that gives the ability to predict and channel behavior without the actual “gaze” itself.

Finally, there are some who write about “panoptic sorting” and “super-panopticization” as a reformulated version of the original theory. Post-panopticism is a subject that has received little attention.

This also brings us, albeit circuitously, back to Bauman’s idea of synopticism. I proposed earlier that the “spectrum” was a motivational force in the time of regicide and submerged in the time of Bentham has now re-emerged, thanks to such visual technologies as the omnipresent television, video-telephone and internet. Images are now the force behind discipline. Furthermore, images are a force that impact cultures at the same time as cultures discipline the meaning of the visual. This will be shown in the sex selection example below.

However one approaches the issue, we do find that there are some assumptions in place that first need comment. Regarding the panoptic sorting approach, we must wonder if its adherents assume the equivalent disciplinary mechanisms as in the original Panoptic, i.e. “drills that train the body, regimes that closely regulate schedules of activity, and swift interventions that punish deviations from the prescribed norm.” Those who believe the applicability of the original to today’s public spaces have to contend with the idea that nothing like continuous observation by CCTV is in place. Here, the response is that the problem is “one of degree, rather than kind” and that while it is not possible to conduct total surveillance “its deployment is analytically justified subject to empirical limits.” In short, we are still left with Roy Boyne’s assertion that the Panoptic is still an “analytical ideal type.”

Since the ultrasound is the technological nexus where visibility could join with some form of subjectification or end in actual subjectification, we need to understand how patients, especially women, negotiate medical images. We need to remember that while images are dependent on culture and society for their meanings, these images can have multiple meanings. We learn to decode or to interpret images. This also brings us, albeit circuitously, back to Bauman’s idea of synopticism. Cultural enticement and seduction are the disciplines now in place.

In Norway, in 1985, during a debate on the economic feasibility of the ultrasound in the press, questions were raised about the ultrasound becoming “big business”, aping the US model of mobile ultrasounds with advertising such as “See your baby live” - that is, unless the Norwegian health service introduced the service. Professor Harold Buhaug of the NIS (Norsk Institutt for sykehuseforskning) wondered if “grandparents of unborn children [would] bring ultrasound pictures to Balkakefestival?” Professor Buhaug was acknowledging, in a very real, concrete way, the power of fetal ultrasound images. Visualizing these “sonographic blurs” is obviously mediated by “the codes and conventions of visual realism embedded in the very design of the technology” and what we make of the blur is “constructed of cultural understandings, both local and global.”

A great deal of social and cultural power is at work, the “gaze”, whether one calls it post-panoptical, synoptical, or the Baumann-sort. For the majority of women patients, the technology of the ultrasound is mysterious, it is new and ideally, potentially beneficial. Acontextualized, it is as innocent as “nuclear power” or the phrase “Healthy Mothers, Healthy Children”, and it is simply another form of free and individual “choice”, so prized under liberal democratic theory. Or have we here entered a zone, where things are not as they appear, where language has been distorted by politics and economics, where “GE brings good things to life”? If we also consider that the “old media” has been replaced or will soon be replaced by a new even more powerful media, the context for female ultrasound patients is more complete. It is this new mass media that Mathiesen might have in mind when he speaks of the “synopticon” where the many watch the elite. Have we reached the Mathiesen post-panoptical or synoptic con spectacle? And, if so, what are the norms behind the gaze, especially when that gaze falls on women?

Roy Boyne has discussed why post-panopticism is not fading away but also “changes in the cites of application have been such as to require some adjustment to the concept.” While he finds it is “much harder to argue that Panopticism has been entirely overtaken by seduction as the mechanism of interior social control”, he nonetheless writes that, as far as seduction is concerned,

...it will actually be no surprise if it can be shown that urban society and all its inhabitants remain within a sub-Panoptical system, in which health and nutritional surveillance (as well as of other kinds of monitoring) may be routine, and in which there are constant reminders that social orders most generally crumble (and are patched-up) from within.

Boyne cites with approval the “Silicon” McKinley and Taylor data in which management structures and employee involvement were researched. Boyne’s assessment is that it shows that in an organizational setting, there is an “inevitable relationship between power and resistance, and also to that between capital and control.” But it also shows that in a “concentrated applied form”, Panopticism does not work. But he also writes that his “impressionistic survey” of private and public sector trends does “tell a story of incremental surveillance.” The general picture one finds is that theorists themselves are confused as they continue to debate the further utility of Panopticism, all the while maintaining that something like it is at work. Boyne does leave one idea to consider.

Perhaps, however, [the failure to actualize a Baumann-sort in quasi-total institutions] simply illustrate the differences between actual social contexts and the updated ideal type that, driven by general fears, desire and possibilities within contemporary technoculture, we can arrive at by reinterpreting Bentham’s model for today.

Indeed, it is in a sub-Panoptical system wherein gynopanopticism is contextualized that we can find a reinterpretation of Bentham’s model for today.

IV. The Case of Pre-Natal, Non-Medical Sex Selection

In June of 2006, the Washington D.C. Examiner ran an article with the Associated Press dateline of Shanghai, China. As bureaucrats allowed themselves to be lowered by escalators into the bowels of the Washington Metro system they read
That fetal sex selection would eventually become an issue was researched, beginning in the early 1970s. In 2003, the issue was clearly raised within the medical establishment when Dr. John Robertson, acting head of the Ethics Committee of the American Society for Reproductive Medicine (ASRM), sent a letter to the Society supporting the use of PGD for cases where couples wanted "gender variety" in their children. Four years earlier, in 1999, the ASRM had said that the very thing Robertson supported would present a "greater risk of unwarranted gender bias, social harm, and the diversion of medical resources from genuine medical needs." That this proposal for a reversal of policy took only 4 years to occur owed much to the following: Subsequently, a letter was sent to the ASRM from a number of organizations including the Center for Genetics and Society, urging that both pre- and post-contraception sex selection be discouraged for anything other than a serious medical condition. Among those signing the letter were representatives of numerous women's groups as well as well-known American and Indian professionals. Four years later, we read in The New Atlantis Notes & Briefs the following:

Speaking of PGD: A recent report from the Genetics and Policy Center at Johns Hopkins University chronicles the march of IVF practices toward eugenics…. The survey, which included nearly all IVF clinics in the United States, found that 74 percent of IVF clinics offer PGD services. Increasingly, the study noted, PGD is being used to screen for more than just severe or fatal abnormalities. Forty-two percent of clinics that offer PGD, for instance, provide it for non-medical sex selection, so that couples can have the boy or girl they desire.

This survey, done by Susannah Baruch, David Kaufman and Kathy Hudson was answered by 190 of 415 assisted reproductive technology clinics in the United States and consisted of 87 questions. In this questionnaire, the choices given for the "setting" of the clinics were "commercial," "academic" or "other." The percentage of "commercial" clinics providing PGD was 80%. 6% above the average. Of the clinics that did not provide non-medical sex selection, 79% said it was for ethical or moral concerns. A full 73% the IVF-PGD clinics surveyed did not have a formal policy addressing whether PGD would be provided "in cases where ethical questions arise." But it is in India perhaps more than the United States or China, where we see the effect of the use of the ultrasound for sex selection. Today, we know that perhaps as many as 10 million female fetuses have been aborted in the last 20 years in India as result of abortion in the service of "securing a male heir." A 1.1 million Indian household survey was conducted by Prabhat Jha and colleagues in order to examine the reasons why females were missing from households and these results were published in the British medical journal, Lancet. In an accompanying commentary, Shrish S. Sheth reported that the female infanticide "of the past is refined and honed to a fine skill in this modern guise." Despite the fact that sex selection based on sex determination has been illegal since 1994 in India, the practice continues unabated. Sheth notes that there are cultural and economic pressures for the phenomenon. Nonetheless, Sheth still asks if there are "unearthed scientific factors, particularly in the developing world, responsible for the lower number of girls, or should we continue to concentrate on prenatal sex determination?"

In 1996, Professor Dolly Arora of the Indian Institute for Public Administration in Delhi, asked exactly how "potentially dangerous technologies acquire people's approval?" I would submit that an answer can be found in post-panoptical theory. Arora admitted that it might be wise to "first look into the subtle ways in which discursive space…. [legitimizes and expands]….the use of prenatal tests in general, and sex determination techniques in particular…. At that time she delineated five elements of this discursive space that were used by proponents of various technologies such as "ultrasound, amniocentesis, chorion villi biopsy, foetoscopy, maternal serum analysis, etc." The five discourses which she "unpacked" were 1. the mystification of technologies, 2. utilitarian discourse, 3. social arguments, 4. quality control in child birth and 5. eliminating disability at birth. Within the Indian context of 1996 and the ten subsequent years, all of these can be subsumed very neatly within a Panopticon that operates to benefit a patriarchal society and have been discussed above in connection with my comparison chart. Wherever there is the possibility of electricity, the "capillaries of power" can flow. Given that "son preference is a fact", these technologies are not simply science giving a sober form to what was hitherto an irrational practice. In committing female infanticide, it is also science promoting, protecting and reinforcing the reasoning, which went into the later.

But where does this "reasoning" originate? Who is at the helm of the post-panoptical ship of state in these muddy normative waters? Bentham would probably answer this with reference to some benevolent, normative and utilitarian society. Foucault's examples of the prison and the psychiatric hospital put a more cynical – and dramatic - spin to the "Who is watching" question. But if Baumann is correct and if we are in a world where compliance to social standards "is achieved nowadays through enticement and seduction rather than by coercion – and it appears in the guise of free will, rather than revealing itself as an external force", then the Panopticon/Synopticon is alive and well in India or wherever the rhetoric of "choice" is used to convince women to become instruments of a patriarchal society. As Arora notes [In the name of 'choice' not only is the position of women likely to be further devalued, [but] control of men over [the] reproductive rights of women will only be further strengthened. What is made out to be an issue of choice in effect is an issue of control. The now rhetoric of choice continues and in March, 2006, an on-line debate took place for the University of Texas at Austin School of Law, News and Events page between Professor John Robertson, who holds the Vinson and Elkins Chair in Law at Austin and Professor Barbara Rothman, a Professor of Sociology at the City University of New York. Robertson argued non-medical sex selection was as aspect of reproductive rights guaranteed by the Supreme Court while Rothman argued it is inherently sexist. As Rothman noted regarding the question of "harm" in the practice, which Robertson said he’d be hanging his "nice liberal hat on", included a problem. That problem is the same problem as what the "gaze" omits looking upon. As Rothman said,

The problem I have then is a kind of sleight of hand, which by focusing entirely on the individual, makes it look like no one is harmed: women get 'choice,' and children get created. There is no room for a discussion of the enormous social harm that can be done as gender differences are further reified and publicly endorsed. But there is an advantage to looking in one direction and not in another. Each PGD treatment, at about $20,000 per treatment, could buy a lot of standard childhood inoculation sera against preventable disease in the third world. The "gaze" is nonetheless focused and refocused on which sex is more important in a culture to the individual. Thus, disciplinary control is achieved through the vehicle of male-formed rhetoric whereby fetuses and women go "missing". Can there be any doubt that in these circumstances the "gaze" is directed by a patriarchy towards women? Within the context of India, there is a gynopticism at work, a form of the Bauman-sort. April Cherry has discussed this "double-bind" that women find themselves in when considering to abort an engendered fetus. When the sex of the fetus is known, the choices that a woman has are

restrained and conditioned by the tenets of patriarchy which devalue the lives of women and girls. The patriarchal values at work here are 'not incident to occasional and hence avoidable, but are systematically related to each other in such a way as to catch one (i.e. woman) between and among them and restrict or penalize motion in any direction.' This restriction is the same for the Benthamite prisoner, the Foucauldian plague victim, the CCTV hooligan and Baumann’s seduced consumer. But in the case of Indian women and their experience with the ultrasound, there is nothing "impressionistic" about 10 million "missing" female fetuses. The triad of "mildness—production—profit" is at work and the only obvious act of resistance is to pull the plug on this technology for this purpose.
I began this article with the historical context for Bentham's development of the Panopticon and then turned to its subsequent development by Foucault. I then asked if the Bentham-Foucault model could, by analogy be extended to the modern practice of modern genetic screening. It did this by analyzing the "person", the "place", the "disciplinary techniques" and the "discourse or meta-narrative" involved in the two areas. I found that, if one includes the mystification of technology and the reification of the doctor-expert the Bentham-Foucault model can be applied to PGD screening, with the possible exception of the meta-narrative or discourse. This was made possible once a review of the post-panoptic, pace Boyne, era was done. This review shows that in the Baumann-sort era, we have come full circle back to the spectacle and that the use of seduction and "choice" makes the loss of ten million female fetuses possible. Gynopositivism is at work as sub-Panoptic practice.

"Excrescence" is such an ugly, difficult word, but so also is "missing". The capillaries of power have reached to the sub-microscopic levels of life. Resistance is possible but we need to be able to analyze power in a new way, a way that forces us to see the words "excrescence" and "missing" for what they are -- the patriarchy at work.

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Michel Foucault, Discipline and Punish: The birth of the prison (New York: Second Vintage Edition Books, 1995) p. 200. Use of the word "panopticon" was originally developed in a series of letters Jeremy Bentham sent to his father in 1786. The letters outlined a design for a new prison in Middlesex for a competition held by the St. James Chronicle. The letters were eventually published, along with the proposal in a book entitled Panopticon: or, the Inspection House in 1791. The word "gynopositivism" is my own formulation.


4 Some feminists, such as Gena Corea have adopted an attitude of distrust toward modern medical intervention implicated in the lives of women. Please see, G. Corea, "How the New Reproductive Technologies Could Be Used to Apply to Reproduction the Brothel Model of Social Control Over Women II" (April, 1984) paper presented at Second Interdisciplinary Congress on Women, Women's Worlds: Strategies for Empowerment (Gronigen, The Netherlands), also G. Corea The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs


10 ibid., p. 86.

11 ibid.

12 While this may seem rather conspiratorial, it is not without precedent.

13 My use of the phrase "biologically destabilized" is intentional.


16 ibid., p. 60.


18 ibid., p.31.


22 Werret, Potempkin and the Panopticon, p. 8.

23 ibid., p. 6 – 7.

24 Gertrude Himmelfarb notes that "It was of no little significance that the Panopticon was born out of this amalgam of Toryism and enlightened despotism." Victorian Minds (London: Weidenfeld and Nicholson, 1962) p. 72 – 73.

25 See also, Jane Semple and M. Ignatieff's interpretations.

26 Foucault, Discipline and Punish, p. 205.

27 ibid., p. 228.

29 Ibid., p. 113 – 114.


31 Ibid.

32 Foucault, Discipline and Punish, pages 1, 6.

33 Ibid., pages 21, 23.

34 Ibid., p. 25.

35 Miller, Passion, p. 209.

36 Ibid., p. 208 – 209.

37 Ibid., p. 209

38 Ibid., p. 235.

39 Ibid., p. 234. Miller’s interpretation of Foucault’s statement “Power is exercised rather than possessed.”

40 Ibid., p. 241

41 Foucault, Discipline and Punish, p. 198.

42 Ibid., p. 203.

43 Ibid.

44 Ibid., p. 204.


46 Ibid., p. 216.

47 Ibid.

48 Ibid., p. 218.

49 Ibid., p. 219.

50 Ibid., p. 224.

51 Ibid.


53 See Chapter 1 in Part 3 of Foucault’s Discipline and Punish entitled, “Docile Bodies”.


55 Ibid., p. 261.

56 Ibid.


58 Yar, Panoptic Power, p. 266.

59 Yar refers to this as the “performative effect” and cites S. Žižek.

60 Ibid. This is another obstacle that Yar advances saying that society does mock the authority of surveillance.


63 Leo Marx, “ Technology: The Emergence of a Hazardous Concept ” in Social Research (Fall, 1997) page 979.

64 Ibid., p. 979 – 980.


67 Ibid., p. 191 citing Ian Kennedy in Unmasking Medical Ethics, Chapter 10.


69 Ibid., p. 405.

70 Peter Salmon and George M. Hall, “Patient Empowerment and control: a psychological discourse in the service of medicine” in Social Science and Medicine, Vol. 57 (2003) p. 1976. This idea rings especially true when one consider the sex of patients.

Ibid.


Ibid., p. 421.

Ibid.

Ibid. If we accept that the Mathieson synopticon is in place then we are prompted to ask who are the “elite” upon whom all eyes are turned and what is the spectacle that is being seen? Has the fetus become the “elite” spectacle? Have we succeeded in going from the “macro” degenerate (immigrants, etc.) down through the “micro” degenerate (germs) to the “sub-micro” degenerate level where genes determine “normality”? Is big brother watching little brother? Or, in this case, is big brother watching little sister?

Baumann, Liquid, p. 86.

Arora, Victimizing Discourse, p. 423.


Foucault, Discipline and Punish, p. 219.

**Theory & Science**

Genetic screening tests are available to all pregnant women to assess whether they have an increased or decreased risk of having a baby with a genetic abnormality. There are options that include blood tests, ultrasounds and more invasive tests such as chorionic villus sampling and amniocentesis. All of these options are available to all pregnant women regardless of age, personal or family history or without a previous abnormal screening test result. These tests have been developed after many years of research and are updated constantly to allow them to detect more babies with genetic abnormali Clinical Scientist, West Midlands Regional Genetics Laboratory, Women’s Hospital, Birmingham, United Kingdom Interests: familial cancers; prenatal diagnostic diagnostics and screening; non-invasive prenatal testing (NIPT); non-invasive prenatal diagnosis (NIPD). Prof. Dr. Felicity K. Boardman Website Guest Editor. Associate Professor, Warwick Medical School, University of Warwick, United Kingdom Interests: mixed methods; genetic and reproductive technologies; disability; Spinal Muscular Atrophy; qualitative research methods; stigma. Special Issue Information. Dear Colleagues, Over recent years