

Introduction and Chapter Overview

The most dramatic changes with regard to the birth attendant and place where the birth transpired occurred between the years 1959 and 1965. Ingrid's story reflects these changes, which often occurred within a single reproductive lifetime. In this six-year period, birthing took a decisive step into the realm of institutionalized medicine, situating the physician as the primary figure of authority. Even though the majority of births on the island now took place in the hospital, a minority of municipalities kept the auxiliary midwives busy in the domestic setting. Private and district hospitals ceded little room to midwives and nurses, but municipal hospitals, beside turning to doctors, often placed the responsibility of delivering babies on nurses and some midwives. Efforts to consolidate and standardize health services were bearing fruit. More doctors were specializing and obstetrics was slowly gaining some momentum, though general practice still predominated.

In a society whose cultural beliefs were leaning ever more toward scientific and institutional expertise, industrialization programs, together with biomedicine and public health efforts transformed medical practices and professional social relations. It was during this time that practices and beliefs that surround birthing today began to predominate. These included believing more in formally trained experts than popular wisdom, trusting technology over human analysis, and accepting standardized methods as the most adequate, even if they failed to account for difference. Standardization and

widespread bureaucracy at the state level were characteristic of industrialization in Puerto Rico just as in most industrial societies.²⁷⁴

In this chapter I will suggest why women moved to clinical settings to give birth, examining the links between the industrial project and the recasting of experts and authoritative knowledge in relation to childbirth. Definitions of birthing changed in ways that affected practices. The public health care system itself was restructured to concentrate all public welfare services around the hospital and provide for more attractive options for some mothers. The hospital became a focal point of welfare and access to state services. Yet despite the fact that the great majority of women were delivering in hospitals by 1965, access to prenatal services and public clinics continued to vary by class, and women in some regions proved more resistant to hospitals than others. In this period the education of nurse midwives became solidified within the medical school and that of auxiliary midwives drifted into the shadows. The medical school grew beyond its physical and monetary capacity and needed to look into expanding.

Moving to Hospitals

Between the 1940s and the late 1950s, the standard of living had improved and with it the expectations of better medical attention. General mortality rates had improved and the death of young children, once commonplace, especially in larger families, became rare.

²⁷⁴ For an analysis of this phenomenon in general, Louis Althusser, *Ideología y aparatos ideológicos de Estado* (Buenos Aires, Ediciones Nueva Visión, 1974); Antonio Gramsci, *La política y el Estado moderno* (Barcelona, Ediciones Península, 1971).

Table 3: Selected Demographics, P.R., 1945-1963.

Year	General Mortality Rate p/1,000	Infant Mortality Rate p/1,000	Maternal Mortality Rate p/100,000	Birth Rate p/ 1,000
1945	14.1	93.4	319	42.2
1953	8.2	63.3	183.5	35.1
1958	7.0	53.7	85.4	33.1
1963	7.0	44.8	54.3	31.1

Source: Oficina de Planificación, *Informe Anual de Estadísticas Vitales de 1985* published in 1987, p.13^a.

Early death no longer formed part of the expected course of life. Many citizens increasingly felt entitled to access to food, jobs, education, medicine, expert opinion, scientific advances and an overall improved quality of life. Public welfare projects geared toward defending those who are defenseless, such as babies, increased. Therefore it would be expected for mothers to desire, or at least be willing, to use institutional services such as hospitals.

By the 1960s most would look toward experts and scientific institutions to deal with ill health and risk. Accordingly, mothers moved to hospital settings, where experts, science, and regulations were at their disposal to protect them and their babies from possible risks. To refuse these options available to them made little sense.

Would it not be irresponsible to refuse the advances that modernity and science had to offer when they seemed to be having such positive results? Ingrid, the mother in the story opening this chapter, moved to the hospital setting for the first time under the insistence of her midwife, but went back to birth at home for her next delivery a couple of years later. It was not until the midwife, doctors, and her own experience with complications convinced her that she was better off birthing in the hospital that she finally decided to deliver her last two children there instead of at home. Eventually she would admit that she felt safer in the medical setting.

Risk itself had moved swiftly up the socio-cultural ranks and became an important consideration in significant life events. Perhaps because now people felt they had more choices, control, or could strive for a higher quality of life, they could weigh risk and even take the time to consider it seriously. There was a sort of new collective agreement that sustained the truth claim that one could plan, control, and work toward a goal successfully. Life, it seemed, could be studied and predicted and risk could be managed.²⁷⁵ Beck writes that risk

may be defined as a way of dealing with hazards and insecurities induced and introduced by modernization itself ... [I]n contrast to earlier epochs the risk society is characterized essentially by a lack: the impossibility of an external attribution of hazards²⁷⁶

The search for control over nature, the socialization of scientific knowledge, the division of labor, the preparation of experts and the belief in predictability all guided the project of modernization and industrialization.

These changing values and tendencies adapted by mothers, doctors, and midwives served to regulate their behaviors, eliminating the need to coerce them into using the available tools of modernity. They seamlessly moved away from what was now deemed as “folkloric,” domestic, and backward for health and reproductive matters.²⁷⁷ Indeed, if we recall from the previous chapter as well as the opening story, it was often the auxiliary midwife who eventually convinced many mothers to access government health services instead of continuing to birth with them at home.

²⁷⁵ Sundar Sarukkai, "Symbols of Truth: Objectivity and Reality in Science" in *Science and Tradition*, eds. Patnaik Raina and Chadha Indian Institute of Advanced Study, 33 (Shimla, 2000).

²⁷⁶ Quoting Ulrich Beck, *Risk Society: Toward a New Modernity*, in book review by William Leiss, *Canadian Journal of Sociology* 19, no. 4 (1994) 545.

²⁷⁷ See Michel Foucault's discussion of the micro-physics of power and the technology of power in, *Discipline and Punishment: The Birth of a Prison*, (New York, Vintage Books 1995) 25-27.

By the 1960s, authoritative knowledge regarding birth had moved into the hands of institutionalized medicine. Before the 1960s, however, expert and authoritative knowledge regarding birthing practices had not resided primarily in medicine or its institutions. Hospitals and specialists were still struggling to assert themselves in the early 1960s, but were gaining ground quickly. The tendency toward authoritative knowledge and universal processes formed part of the ideological foundations of capitalism.²⁷⁸

The bodies of women in Puerto Rico were increasingly conceptualized by the government, doctors, and women themselves within a capitalist context of rapid industrialization and development. Female bodies needed to be controlled and behave in expected ways. Reproduction was not to be left to nature or chance. It was to be planned and limited and carried out efficiently within pre-established norms. Responsibility for one's health and circumstances resided more in each individual than in the hands of God or nature.

Reproductive processes were reconceptualized in terms of efficiency and organizational function.²⁷⁹ The definition of a normal birth changed over time to include time limitations. Whereas before women could be in labor for several days and still fall into the "normal" spectrum, by the mid and later 1960s this began to change. Normal labor and delivery needed to transpire within more constrained temporal parameters. Several of the doctors that I interviewed for this project addressed these new birthing parameters and definitions. Doctor Mulero, for example, explained during an

²⁷⁸ Fraser, *African American*, 167.

²⁷⁹ Refer to Emily Martin, *The Woman in the Body: A Cultural Analysis of Reproduction* (Boston, Beacon Press, 1992); "Introduction" in *Gender and Health: An International Perspective*, eds. Sargent and Brettell, 2.

interview that before the mid 1960s most births were normal and a normal birth simply was one that was progressing.²⁸⁰ Doctor Onis added that eventually normal births were medically defined as those that occurred within twenty-four hours because the longer the birth, the less oxygen the baby was getting.²⁸¹

Modern medical practice presented itself as a science with access to efficient technology. It was undergoing a process of reorganization and legitimacy claims. It now produced local, certifiable, trained professionals who operated within licensed institutions and followed particular protocols and procedures. More doctors were specializing and reaching different areas of the island.²⁸² Doctor Tomas, a doctor from a rural southwestern town, described the early 1960s as a medical turning point in his area. He stated that after 1960 a new hospital was inaugurated in his town and specialists began arriving to serve the local population.²⁸³ Another rural doctor from the northwestern area of the island testified to a similar situation. He too referred to the year 1962 as a moment when the new health centers began operations. This doctor, Villamil, pointed out during his interview that once patients saw the new facilities, which were better staffed and equipped than the old health units, they were inclined to use them.²⁸⁴ Previously women had avoided using the older, local hospital because of its poor reputation. "The Hospital had a bad reputation...it was a little room there eight by eight, a hallway of six by eight

²⁸⁰ Isabel Córdova, *Interview with Mulero*, October 13 2005, 20.

²⁸¹ Soon thereafter, however, he went on to clarify that most complications due to lack of oxygen happened before labor and delivery. Isabel Córdova, *Interview with Onis*, September 6 2005.

²⁸² In 1956 there were fifty-six obstetricians registered to practice in Puerto Rico and by 1971 there were 160 registered. Oscar Costa Mandry, "Statistics about Physicians in Puerto Rico," *Boletín de la Asociación Médica de Puerto Rico* 48, no. 1 (January 1956) 16; Oscar Costa Mandry, *Apuntes para la historia de la medicina en Puerto Rico: reseña histórica de las ciencias de la salud, 1493-1971* (San Juan, Departamento de Salud de Puerto Rico 1971) 25.

²⁸³ Isabel Córdova, *Interview with Tomas*, December 15 2005, 21.

²⁸⁴ Córdova, *Interview with Villamil*, 16.

[feet]... and a small room in front to give stitches, nothing else. It had another room on this side where the nurse was to give shots and the like."²⁸⁵

Modern medicine follows many standardized protocols and seeks to constrain irregularities.²⁸⁶ Each disease has stages of development and the medical field establishes what it considers adequate responses to restore health to the sick. Average and normal patterns are determined by means of data collection and observation, which require particular professional responses.²⁸⁷ "From the moment that the etiology and pathology of an anomaly are known, the anomaly becomes a pathology."²⁸⁸ An anomaly is the distancing from the normal or average. In the biological sciences (including physiology) few processes or subjects fulfill the "ideal" or "average."²⁸⁹ Once the cause, origin and behavior of an event or situation that does not respond in an average or predictable manner are identified, it becomes pathological and thereby should be "normalized."²⁹⁰ *Pathos* refers to a direct suffering or impotence, a sentiment contrary to the maintenance of life.²⁹¹

Standardization is a classification process that determines how one should proceed and what is expected according to a particular area in question. Standardization methods determine what should be considered "normal" and establish an ideal by means of generalizations to be followed by all involved in that process. Jurgen Habermas

²⁸⁵ Ibid., 14-15.

²⁸⁶ See the discussion in Fraser, 19-20.

²⁸⁷ For a discussion on the connections between the rise of the industrialized nation state and standardized, scientific administrative experts see Helga Nowotny, Peter Scott and Michael Gibbons, *Rethinking Science: Knowledge and the Public in an Age of Uncertainty* (Cambridge, Polity Press, 2001) especially 218-19.

²⁸⁸ Author's translation. Georges Canguilhem, *Lo normal y lo patológico* (México, Siglo XXI, 1978) 103.

²⁸⁹ Ibid., 98.

²⁹⁰ Sargent and Brettell, "Introduction" in *Gender and Health*, 6.

²⁹¹ Canguilhem, 103.

argues that norms and values become more generalized and formalized as a society evolves.²⁹² As a consequence, we spend much time and energy trying to satisfy these standards. Those who labor in each specialized area (education, medicine, law, etc) are to ensure that their particular guidelines and preset standards are observed.

Beginning in the 1960s, though many physicians still described childbirth as a natural phenomenon, medical discourse began referring to labor and delivery as potentially pathological and high risk. Some took a particularly extremist stance along these lines. A prominent retired Puerto Rican obstetrician trained in the mid 1950s and board certified by the late 1950s in the United States, for example, described all first births as abnormal. According to him all first-time deliveries are "high-risk".²⁹³

Pregnancy, labor and delivery were becoming more universally standardized processes within the medical community by the 1960s. Doctors acted according to set standards and expectations set by the medical community, their literature, and their own experiences. Hospitals established their own predetermined protocols and demands within existing scientific, legal, social and economic boundaries. All of these standardized expectations and procedures provided clients, in this case parturients, more universal or at least uniform parameters in which to move and set their own expectations.

As medicine became more organized, centralized and institutionalized, the Department of Health also moved to centralize its services around the ever-growing regional hospitals.

²⁹² Jurgen Habermas, *Teoría de la acción comunicativa: crítica de la razón funcionalista, II* (Madrid, Taurus, 1999) 245-4.

²⁹³ Córdova, *Interview with Onis*.

'Operación Regionalización': A Move Toward Centralizing Health and Welfare Around the Hospital

During the 1960s, the Department of Health underwent structural changes. The Department of Health reforms mentioned in the previous chapter, Operation Regionalization, were finally implemented on a broad scale.²⁹⁴ The plan centralized the health, welfare and data collection systems around the regional hospitals.²⁹⁵

The Secretary of Health from 1957 through 1966, the entire span covered in this chapter where birthing moves into the hospital setting and the Regionalization Plan was implemented, was Doctor Guillermo Arbona. Arbona was from a remote rural town on the interior western side of the island. He studied medicine at St. Louis University and returned to Puerto Rico in 1934.²⁹⁶ He was a supporter of the Popular Democratic Party social programs but tried to remain at the margins of party politics. An important leader in public health, he believed in community health, family planning, and socialized medicine. Arbona represented Puerto Rico regularly in the World Health Organization meetings. During the 1960s Arbona collided with the Medical Association of Puerto Rico when he pushed for the further socialization of medicine in Puerto Rico.²⁹⁷ The Puerto Rican Medical Association was very outspoken about its opposition to socialized medicine.

Dr. Arbona submitted his executive plans for Puerto Rican public health to the United States Public Health Service from 1959-1961, stating his intention to decentralize

²⁹⁴ The Secretary of Health called for initial studies regarding this plan in 1954, but it was not until 1959 that the plans were presented to Government. Nayda Berríos Colón, "Análisis de la estructura del departamento de salud: la necesidad de un nuevo modelo de servicio" (MA thesis, School of Public Administration of the University Of Puerto Rico, 1990) 22-25.

²⁹⁵ Berríos, "Análisis de la estructura," 24.

²⁹⁶ "Up by the Bootstraps", *Time*, Friday, October 29, 1965.

²⁹⁷ "Puerto Rican MDs Fear Socialism." *American Medical Association News* 6, no. 2 (1963), <http://mcr.sagepub.com/cgi/reprint/20/2/58-a.pdf>.

services into regions while integrating welfare and public health services under one roof.

²⁹⁸ He then went on to make reference to the rapid changes that Puerto Ricans faced and how the health care system needed to expand its services in light of these changes.

In the face of the radically new life circumstances which many Puerto Ricans now face as a result of the rapid cultural and socioeconomic developments of recent years, it is becoming necessary for the Department of Health to assume a progressively wider span of responsibilities. Health in Puerto Rico can no longer constitute merely the absence of disease, nor can well being automatically be assumed if the more overt manifestations of personal need or social disorganization are not immediately apparent. The Department of Health must utilize to the fullest extent all the possibilities it now possesses for helping the clients it serves on a multidimensional basis.²⁹⁹

The Regionalization Plan divided Puerto Rico into five health regions. Each region coordinated its health with social welfare and public services through a regional hospital. Under the head of the regional hospital, were smaller public health units such as the municipal health centers, the municipal hospitals, and the public health units of the fifty-four health districts, the district hospitals, and the University Hospital of Río Piedras. This was the first of several attempts at restructuring the health care system.³⁰⁰ The health care focus was centralized on direct patient care institutions.

The proliferation of health centers and hospitals, public health restructuring and the success of the medical school in graduating many more doctors expanded the options for health care. Puerto Rican daily newspapers reported on the inauguration and

²⁹⁸ Guillermo Arbona, *Puerto Rico Health Plan, 1959-60-1960-61*, San Juan, Puerto Rico, 1.

²⁹⁹ *Ibid.*, 2.

³⁰⁰ Arbona, *Un borrador para el discurso del Gobernador*, 22-29.

expansion of many health centers and hospitals around the mid-1960s.³⁰¹ Often, these constructions were under the auspices of the federal Hill-Burton Act funds and the reorganization plans of the Puerto Rican Department of Health.³⁰²

The School of Medicine

The University of Puerto Rico's School of Medicine, along with institutionalized medicine in general, took root and showed impressive signs of expansion by the first half of the 1960s. The 1960s proved to be a time when plans for more academic and scientific rigor and expansion in higher education within the clinical sciences would come to fruition. By the close of the 1950s the Superior Educational Council had voted to establish a Graduate School of Arts and Sciences. In this spirit, the School of Medicine added graduate education to its curriculum.³⁰³ The 1958 University of Puerto Rico School of Medicine and Tropical Medicine Annual Report opened with a statement by the Dean that the "school of medicine is physically bursting at its seams." The Dean declared that the school was in need of a new medical science building and required more attractive salary scales to maintain and recruit personnel.³⁰⁴

³⁰¹ Carmen García, "Inauguran Abril 18 Centro Médico Dr. Enrique Koppisch," *El Mundo*, Thursday, April 9, 1964; "Inauguran Hoy Centro Médico en San Sebastián," *El Mundo*, Friday October 9, 1964; Julia Vda Pont, "Expanden Hospital," *El Mundo*, Tuesday, October 12, 1965; Miguel Angel Pellicier, "Inauguran Hospital Menonita," *El Mundo*, Tuesday, October 19, 1965.

³⁰² President Truman approved the Hospital Survey and Construction Act, also called the Hill-Burton, in 1946 in order to improve health care in the United States, through the improvement and construction of hospitals. This act lasted until 1975. Starr, *The Social Transformation of American Medicine*, 283, 348. Puerto Rico was assigned 6.5 million dollars in 1962 from the federal government to build hospitals under the Hill-Burton Act.

³⁰³ *University Of Puerto Rico School Medicine and Tropical Medicine Annual Report 1958*, 17.

³⁰⁴ *Ibid.*, i.

Annual reports authored by the School of Medicine staff would locate its efforts, successes, and limitations within the context of broader industrial expansion occurring in the 1960s. The 1960 report describes the School's expansion as a "product of recent growth of Puerto Rico."³⁰⁵ Antonio Medina, in a 1965 publication by the School of Public Health's Maternal and Child Health program described Puerto Rico as a "country passing through a rapid transitional process...forced to deviate from the classical patterns" and with urgent needs to come up with quick medical responses.³⁰⁶

In general, the School of Medicine did not experience any sudden or unexpected changes during the early 1960s. Clinical medicine would continue to be heavily influenced by and focus its exchanges with the United States while remaining locally grounded and motivated, but other departments, such as Public Health, would persevere "and stand ready to assume a larger role in medical education in Latin America."³⁰⁷ Funding continued to increase but could not keep up with the rise in medical costs and demand. Facilities were limited and the Obstetrics and Gynecology department struggled with some alterations of space and shifts in location during this period. The school counted on the well-prepared physicians among their faculty and welcomed a few more women among their ranks but salaries could not compete with the lure of private practice. The curriculum and student body remained relatively stable in comparison to earlier years.³⁰⁸

One of the biggest changes had to do with a temporary transfer of locations of hospital facilities. The University of Puerto Rico's Medical School continued to be

³⁰⁵ *University of Puerto Rico School Medicine and Tropical Medicine Annual Report 1960*, 1.

³⁰⁶ Antonio Medina, *The Teaching of Maternal and Child Health*, San Juan, Puerto Rico, 1965, foreword.

³⁰⁷ *University of Puerto Rico School Medicine and Tropical Medicine Annual Report 1958*, i.

³⁰⁸ *University of Puerto Rico School Medicine and Tropical Medicine Annual Report 1960-1963*.

affiliated with the San Juan City Hospital, but the Bayamón District Hospital became the main clinical teaching hospital. The Puerto Rico Department of Health turned over its three hundred Bayamón beds to the University. The Obstetrics and Gynecology unit of the San Juan City Hospital was closed for repairs and transferred to Bayamón, where faculty reported they were "faced with a new type of medical practice -- practice geared to the needs of a region made up of several widely scattered communities."³⁰⁹ Yet further difficulties arose. In January of 1960, the Obstetrics and Gynecology Department of the University of Puerto Rico became the first to officially carry out all of its academic activities within that hospital.³¹⁰ The problem was that seniors were required to attend a minimum of twenty deliveries and the Bayamón hospital did not have a high enough maternity volume for this requirement. Therefore the San Juan City Hospital had to be used in conjunction with Bayamón for this purpose.³¹¹

The school of medicine continued confronting shortages of resources and space. At the close of the 1950s the Rockefeller Foundation had granted the University of Puerto Rico School of Medicine 400,000 dollars to improve teaching and research in the Hospital.³¹² Despite the significant increase in funds in all areas, complaints persisted about the obstacles faced regarding the recruitment and retention of qualified teaching staff. The University was still having trouble coming up with sufficient full time positions and offering competitive salaries.³¹³ Several years later, the 1964 Obstetrics and

³⁰⁹ *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1959*, 69.

³¹⁰ *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1960*, 63.

³¹¹ *Ibid.*

³¹² *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1959*, 2. For information on Rockefeller Foundation funding for Latin American Medicine see Marcos Cueto, "The Rockefeller Foundation's Medical Policy and Scientific Research in Latin America: The Case of Physiology," *Social Studies of Science* 20, no. 2 (1990) 229-254.

³¹³ *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1959*, 70-71.

Gynecology Annual Report informed of a serious lack of space, deterioration of facilities, lack of ability to offer tenure to faculty "men," and an overwhelming workload placed on their staff. Faculty worked for low salaries were expected to take on teaching, administrative, clinical, and research duties simultaneously.³¹⁴

In 1964 a significant sum of money coming from the federal government had a noticeable impact on maternity care in San Juan. Public Law number eighty-eight assigned over 800,000 dollars from the Children's Bureau in order to improve maternity services in Northeast Puerto Rico.³¹⁵ This event altered maternity services being offered through the obstetrics and gynecology clinics run by the University of Puerto Rico School of Medicine. By the following year, the local Maternal and Infant Care Program had started to work thanks to this initiative. Clinic visits increased by 500 per cent and hospital deliveries by 10 per cent.³¹⁶

Most obstetrics and gynecology research and articles produced by University of Puerto Rico staff were concerned with cancer, anemia, and contraception.³¹⁷ During the 1960s, contraception and population control remained on the University of Puerto Rico Obstetrics and Gynecology's agendas. The connection between the Worcester Foundation of Experimental Biology and Doctor Gregory Pincus, well known for the development of oral birth control pills, continued and the University of Puerto Rico's Doctor Celso Ramón García, who had directed most reproductive related research projects, became assistant director of the Rockefeller Foundation's Reproductive

³¹⁴ *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1964*, 83.

³¹⁵ *Ibid.*, 76.

³¹⁶ *University of Puerto Rico School of Medicine, Tropical Medicine Annual Report 1965*, 73.

³¹⁷ *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1962*, 55; *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1963*, 74-5; *University of Puerto Rico School of Medicine, Tropical Medicine Annual Report 1964*, 81-2.

Center.³¹⁸ Five years later, the University of Puerto Rico received two additional grants from the Population Council to participate in an international study on the effectiveness of the family planning program based in the San Juan City Hospital and on the effectiveness of contraceptive drugs and Intra Uterine Devices (IUDs).³¹⁹

Women obstetricians, such as Ana Casals Scott, gradually began appearing on faculty payrolls.³²⁰ This would not follow a consistent upward trend, though. In the 1961-1963 bulletin for the School of Medicine, of the nineteen professors and instructors of obstetrics and gynecology, Doctor María Berio was the only woman listed.³²¹ A few years later, there were no women listed as instructors.³²² In 1964, the University of Puerto Rico's Dr. Adeline Pendleton Satterthwaite stepped into an important position as a liaison with Planned Parenthood.³²³ In the mid-sixties, Dr. Gloria Vega received a dual appointment as Associate in obstetrics and gynecology as well as in internal medicine and Dr. Adeline Satterthwaite served as an international consultant.³²⁴

University of Puerto Rico medical faculty persisted in their engagement with both local organizations and the medical communities of the Americas. During the early 1960s there was a continued flow of visiting professors in obstetrics and gynecology

³¹⁸ *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1960*, 65.

³¹⁹ *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1965*, 77. In January of 1958 Doctor Fuster, Chair of the School's Obstetrics and Gynecology Department, passed away, passing the torch to Doctor Ivan Pelegrina. *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1958*, 66.

³²⁰ *Ibid.*, p 80

³²¹ *Bulletin of the School of Medicine-school of Tropical Medicine of the University Of Puerto Rico; Announcements for the Academic Years 1961-62, 1962-63*, 85.

³²² *Bulletin of the School of Medicine-School of Tropical Medicine of the University Of Puerto Rico; Announcements for the Academic Years 1963-64, 1964-65*.

³²³ *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1964*, 82-83.

³²⁴ Doctor Satterthwaite consulted for the South Korean government to evaluate their family planning program and she was present at the International Family Planning conference in Geneva, Switzerland. *University of Puerto Rico School of Medicine and Tropical Medicine Annual Report 1965*, 74, 76.

from the United States as well as a few from Latin American nations such as Chile, Argentina and Uruguay.³²⁵ University of Puerto Rico teaching staff continued holding leadership positions in the Medical Association of Puerto Rico and their Obstetrics and Gynecology section, attending American College of Obstetricians and Gynecologists meetings and conferences, and visiting other important medical schools in the United States.³²⁶

Medical students moved between Puerto Rico and the United States. Senior students completed their internships in the mainland United States and Puerto Rico and graduates from the School of Medicine worked in both private and public institutions in both the United States and Puerto Rico as well, but ratios would vary from year to year. For example in 1962, twelve seniors served their internships in the United States while ten did so in Puerto Rico. In 1964 a total of 29 senior students remained on the island for their internships and only ten went to the United States.³²⁷ During these same years, about 17 percent of graduates were serving in the armed forces and between 15-19 percent were working in private settings. The majority of graduates were working for the public sector.³²⁸

The educational curriculum and training preparing general physicians in the area of obstetrics and gynecology did not undergo any significant changes during the sixties. Students studied embryology during their first year in medical school and had an hour and fifteen minutes a week on obstetrics during their second trimester of year two. This

³²⁵ *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1962*, 54; *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1963*, 74; *University of Puerto Rico School of Medicine Tropical Medicine Annual Report 1964*, 76.

³²⁶ *University of Puerto Rico School of Medicine Annual Report, 1959*, 2; *University of Puerto Rico School of Medicine Annual Report 1958*, 93.

³²⁷ *University of Puerto Rico School of Medicine Annual Report 1963*, 8-9.

³²⁸ *Ibid.*

increased to three hours a week during the third trimester of the second year. Medical students rotated in specialty clerkships during their last two years of study. Obstetrics and gynecology was one of the areas on which students spent the most hours.³²⁹

Nurse Midwives

Institutional medicine was expanding and more than ever in the 1960s. The professionalization of physicians was consolidated and medical specializations were growing. Yet nurses had been struggling to gain professional and social status, despite great demand for them in the ever-growing trend of institutional healthcare. Nurse-midwives sought to present themselves as a modern medical profession. By 1960, the school of nurse-midwives moved to the medical school as a way to stabilize and better establish itself according to these new medical currents.

The nurse-midwives' training center moved to the Obstetrics and Gynecology Department of the University Hospital at the University Of Puerto Rico School of Medicine, but remained under the administration of the Department of Health with funding from the Federal Government's Secretary of Maternal and Child Health.³³⁰ There, the training lasted twenty-eight weeks and covered complete maternal care from prenatal to post partum. Previously, it lasted twice as long. This allowed for a greater number of graduates, although the number never rose above nineteen per year.³³¹

³²⁹ 1965-66, 1966-67 *Bulletin of the University of Puerto Rico School of Medicine*, 52.

³³⁰ *Informe Anual del Departamento de Salud de 1960-61*, 38.

³³¹ Miriam Castro de Castañeda, "Nurse Midwifery in Puerto Rico" (unpublished essay) claims that between 1954 and 1960, 17 nurse-midwives graduated from this program in Puerto Rico.

The program always maintained a link both to Latin America and the United States. About 10 per cent of graduates every year were from different areas of Latin America and the director served as consultant in Colombia, Peru, and the World Health Organization.³³²

There were a few key players behind this move to the school of medicine. As stated in the previous chapter, Miriam Castro de Castañeda, the new director of the nurse-midwife program, had united forces with prominent obstetricians from the school of medicine as well as the Puerto Rican Secretary of Health, and were succeeded in transferring the nurse-midwife training program to the University of Puerto Rico School of Medicine, with an annual budget of 30,000 dollars in 1960.³³³

Castro knew this mandate would not be enough for she had already witnessed the resistance that many physicians had to the new nurse-midwives. It was a new program and seemed out of place to some. She also knew that for the program to be successful she had to act cautiously and use some diplomacy in order to assure medical acceptance. She redesigned the curriculum that had been in place when the program began in the Monjas Public Health Unit, and though the program could have been geared toward independent practice, she reformulated the role of the nurse-midwife to function under direct medical supervision in order for the program to be well accepted and supported in the school of medicine. She felt the program was not yet ready to strive for independent practice. In Castro's words, this "was a new program...in the Medical School...we could

³³² Rafael Vilar Isern, *Informe Annual de la División de Salud de Madres y Niños Lisiados del Departamento de Salud de Puerto Rico, 1967-68*, Anexo 3.

³³³ Córdova, *Interview with Miriam*, 13.

not go looking for independent practice. We had to be very smart. I have learned this."

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During a trip to Baltimore, Castro decided to visit a well-known obstetrician with whom she had worked during her graduate studies in the United States and ask him if he could come and talk to Puerto Rican doctors and medical students about the importance of nurse-midwives at his own expense as she had a very restricted budget. He agreed. The talk was a success and very well attended. This served to clear the path for the nurse-midwife training program in its new 1960 medical school setting.³³⁵

The first class of nurse-midwives graduated in 1961, and the school remained stable for the following decade, thanks in part to Castro's lobbying in the Puerto Rican legislature. Castro petitioned the support of physician and legislator Pablo Morales Otero, in her effort to revise the existing law concerning midwives to include nurse-midwives.³³⁶ Her efforts resulted in the passage of law 97, in 1961, which added the words "obstetric nurses" to the previous law regulating midwives. This opened spaces for new, institutionally trained medical practitioners to assist in labor and delivery. Unlike midwives (comadronas auxiliaries), obstetric nurses were restricted to hospital settings and operated under the direct supervision of doctors. Therefore, while the law recognized obstetric nurses as a legitimate profession, it also restricted the practice further.

According to Castro, auxiliary midwives were no longer practicing or being trained. When referring to childbirth in the 1960s she claimed, "we were in another era.

³³⁴ Ibid., 14-15.

³³⁵ Ibid., 15.

³³⁶ Ibid., 16.

We were now preparing obstetric nurses" instead of midwives.³³⁷ Though it was clear that times were changing, Castro's belief that midwives no longer delivered babies on the island was inaccurate. Comadronas were in decline but still in service.

Auxiliary Midwives (Comadronas Auxiliares)

During the first half of the 1960s, the Department of Health continued administering licenses to auxiliary midwives, but the numbers diminished. By 1963 only 900 midwives were listed in official government records compared to almost twice that number in 1950.³³⁸ The number of meetings and training sessions for midwives went down from 800 to 330 a year by 1960.³³⁹ The number of meetings went up again to 789 in 1962 but meetings were never mentioned again in subsequent health reports.³⁴⁰ The future of the auxiliary midwives seemed quite uncertain and there was no indication that new recruits would renew the pool.

Some midwives explained that they abandoned midwifery due to the level of sacrifice that it entailed and the low pay. Doña Antonia, an auxiliary midwife from the South claimed that they "retired on their own accord because it was a lot of work and there wasn't much money."³⁴¹ Others mention that they felt intimidated by the medical world and simply succumbed to the social shifts toward hospitals and technology. Doña Rosa was another woman who worked as a midwife in the Southern area of Puerto Rico before mid-century. Doña Rosa's doctor told her that she needed to retire because of a

³³⁷ Ibid.,16.

³³⁸ *Informe Anual del Departamento de Salud de 1962-63*, 7.

³³⁹ *Informe Anual del Departamento de Salud de 1960-61*, 40.

³⁴⁰ *Informe Anual del Departamento de Salud de 1961-62*, 25.

³⁴¹ L. Ayabarreno, *Cuestionario sobre partos por comadrona Antonia*, Universidad de Guayama, 2001, 4.

heart ailment. He filled out her retirement papers for her to get her social security and she abandoned her work.³⁴² A few mothers spoke of how the midwives got older and no longer wanted to deliver babies and how they insisted that the mothers move to the local health centers to be seen by doctors and nurses.³⁴³

Midwifery was born from popular knowledge and we frequently typify it statically as such in contemporary culture, but we should not assume that it could not evolve and move alongside its socio-political environment. It did so in other countries such as Sweden and the Netherlands with tremendous success. In Puerto Rico, however, midwifery was labeled as folklore in a period where there was great pressure to leave the past behind. Folklore is a conceptual framework, whether or not it is deemed primitive or incoherent. Gramsci, for example, described folklore as a philosophy of common sense.³⁴⁴ But how much value did common sense retain in 1960 Puerto Rico?

In his article *Morelli, Freud and Sherlock Holmes: Clues and Scientific Method*, Ginzburg discusses the difference between what modern societies classify as “low knowledge” and “high knowledge.”³⁴⁵ In an industrial society, he argues, popular knowledge loses its footing and scientific knowledge takes the throne. Low knowledge, like that represented in the auxiliary midwife’s practice, is that which is acquired through informal means, based on quotidian experiences and usually transmitted orally. It is widely accessible and doesn’t tend to have rigorous methods to dissuade non-specialists from obtaining or handling it. “High knowledge” is associated with power. This also is another form of stratified reproduction as conceptualized by Colen and often used as a

³⁴² Ibid., 2.

³⁴³ Córdova, *Interview with Tomasa*, 6; Córdova, *Interview with Vanesa*, 3.

³⁴⁴ Portelli, *Gramsci*, 22.

³⁴⁵ Carlo Ginzburg, “Morelli, Freud and Sherlock Holmes: Clues and Scientific Method,” *The History Workshop Journal* 9, 1980.

theoretical framework by anthropologists. If a group manages to define and limit access to knowledge, like doctors and obstetricians did, it can better assure its power within that area, at least. Furthermore, if academic institutions (UPR Medical School) and the government (licensing laws and the Department of Health) join forces to support this endeavor, we have a successful formula for exclusion and power. In Puerto Rico, this process led to the empowerment of obstetricians and the exclusion of comadronas, who became obsolete by the mid-1960.

Regions

Between 1959 and 1965 the great majority of births transpired in the hospital setting (over 80%), a dramatic rise from the previous period. Yet, these global statistics provide an incomplete picture. Attention to the situation in specific municipalities shows that the Northeast region was area where mothers first moved toward hospital births and the Southern region was the last, but by the 1970s, women around the island were using hospital services. There were still a few municipalities in 1960 where home births attended by midwives predominated.

Two extremes co-existed in Puerto Rico in the early 1960s. In 1960, the municipalities where over three fourths of babies were born in hospitals were: Fajardo, Vieques, Río Piedras, San Juan, Bayamón and Dorado, all in the Northeastern half of the coast except for Vieques, an island off the Eastern shoreline.³⁴⁶ On the other end of the spectrum were the 12 municipalities where less than a fourth of women were delivering their children in hospitals. These cases attest to a sort of containment or limitations of the

³⁴⁶ *Informe Anual del Departamento de Salud de 1959-60*, 182.

industrial project. They were areas where the institutional births had not taken over. A mixture of eight interior, Northern and Southern municipalities reported that less than 5 per cent of women would leave their home to give birth.³⁴⁷ Overall, around a third of the municipalities (28) were still seeing more homebirths. There were a handful of areas where nurses tended to a significant number of women at home as well.³⁴⁸

Most hospital births occurred under the care of physicians, but there were some exceptions. These exceptions challenge the assumption that equates hospital births with obstetric-attended births. In fifteen municipal hospitals the number of nurses and midwives who assisted births was equal to or greater than the number of doctors. Notable cases included the Municipal Hospital of Aguas Buenas, which reported 187 midwife-assisted deliveries compared to ten by doctors.³⁴⁹ Several municipal hospitals reported that most of their births were midwife-assisted.³⁵⁰ Once again, the case of Ponce was the most extreme as far as midwife-assisted births. The Municipal Hospital of Ponce reported 1,231 of their deliveries done by midwives, 150 by doctors and thirteen by nurses. Carolina was also an interesting case. There, the numbers of nurse, midwife, and doctor-assisted births were fairly balanced.

³⁴⁷ Culebra, Guayanilla, Peñuelas, Hatillo, Vega Alta, Luquillo, Morovis and Quebradillas reported less than 5 per cent of hospital births and Adjuntas, Ceiba, Cidra, and Orocovis also reported a great majority of home births. *Informe Anual del Departamento de Salud de 1959-60*, 182.

³⁴⁸ Isabela, on the Northwestern coast (of a total of 629 births, 189 were at home) reported many nurse supervised home births and Juana Diaz on the mid-southern coast (of a total of 930 births, 531 at home) reported 172 of their homebirths under the care of nurses. *Informe Anual del Departamento de Salud de 1959-60*, 182.

³⁴⁹ The Municipal Hospital of Arecibo reported 1,279 of their deliveries done by nurses and twenty-one by doctors and Arroyo reported 2,501 by nurses, one midwife-led birth, and fourteen doctor-assisted births. The municipal hospital of Caguas and Lares experienced most of their deliveries under the care of nurses and Juana Diaz reported 306 by nurses, 100 by midwives, and sixteen by doctors. *Ibid.*

³⁵⁰ These municipal hospitals were: Ciales, Guanica, Gurabo, Juncos, Loíza and Manatí. *Informe Anual del Departamento de Salud de 1959-60*, 182.

District and private hospitals, as we have seen before, reported extremely low numbers of deliveries by any provider other than physicians. This might have been because district hospitals had more doctors and specialists on hand, even though they too were government run.

The following year (1961) there were still fourteen municipalities where more babies were born outside of the hospital setting. This meant that in a one-year period, just over a dozen municipalities crossed over to the side of hospital-assisted births. In Ponce, the majority of women were now choosing the hospital as the preferred setting to give birth, but 1,612 births did remain at home and, at least in the municipal hospital, were many attended by midwives.³⁵¹

If there were midwives who had moved into the institutional setting and they were trained and licensed by the Department of Public Health, why did they eventually disappear as an option for parturients in the hospital setting in the early 1960s, even in "normal" births? The only midwives who managed to find a small space in this new birthing order were the nurse-midwives in their role as physician-assistant.

Differences in birthing practices did not only vary by region, but also by class, just as they had in earlier periods. These forms of stratified reproduction were crucial to defining differentiated childbirth practices that would re-enforce both class and regional difference as birthing also moved toward a hegemonic medical model.

³⁵¹ In Aguada, Jayuya, Luquillo, Morovis, San Sebastián, and Vega Alta, three fourths of all deliveries still occurred at home. Aguas Buenas, Barceloneta, Cayey, Cidra, Juana Díaz, Maunabo, Orocovis and Patillas reported more home births than hospital births in 1961-62. *Informe anual del departamento de salud de 1961-62*, 122-24.

Use of Services and Prenatal Care-Mothers

The class divide related to maternity and health care in general persisted during the 1960s. According to an exhaustive study done from 1965-1966, one sixth of all pregnant women never received any form of prenatal care.³⁵² Almost three fourths of expectant mothers who received no care had less than a sixth grade education. This is significant considering that merely 1 per cent of women who had attended college went without prenatal care.³⁵³ Most teenagers visited public facilities for their prenatal care.³⁵⁴ What was true for women across the board was that the more pregnancies a woman had, the less likely she was to seek prenatal care, even though almost all women felt they should be cared for by a physician.³⁵⁵

Close to twice as many expectant mothers went to government clinics for their prenatal care than private facilities.³⁵⁶ Women who sought private clinics for their prenatal care in 1965 were overwhelmingly professional, from urban areas, and had high levels of education.³⁵⁷ Some factory workers also frequented private clinics. Over 40 per cent of private users were employed at the onset of pregnancy. Among the women who

³⁵² University of Puerto Rico Medical Sciences Campus, School of Medicine, Department of Preventative Medicine and Public Health, Maternal and Child Health Section, Antonio Medina, MD, MPH Director, *The Utilization of Prenatal Services in Puerto Rico, 1965-66*, 1. 7,486 women who had birthed between the summers of 1965 and 1966 were interviewed at home under a US Children's Bureau Grant (#400) conducted by the University of Puerto Rico School of Public Health. Interviews were supported with birth certificates and the government health records of 80 per cent of those served in public facilities. 200 interviews were later crossed checked. See pages v, 8, 12.

³⁵³ University of Puerto Rico Medical Sciences Campus, *The Utilization of Prenatal Services in Puerto Rico*, 16, 19.

³⁵⁴ *Ibid.*, 2.

³⁵⁵ *Ibid.*

³⁵⁶ *Ibid.*, 1. In 1951 about 9 per cent of women gave birth in private clinics, *Informe Anual del Departamento de Salud del 1951*, 113.

³⁵⁷ University of Puerto Rico Medical Sciences Campus, *The Utilization of Prenatal Services in Puerto Rico*, 1, 22.

were employed, domestic and factory workers were most likely to use government clinics for their prenatal care.

Reasons for not seeking prenatal care varied. Interestingly, lack of information and the cost of care (free care was available) did not seem to explain why women did not receive prenatal care.³⁵⁸ Accessibility and cost of transportation were listed by women as the major obstacles to their care. This would explain perhaps why women in rural areas might have a harder time accessing services than those in the cities. It is likely that in rural areas levels of education were lower for similar reasons, among other things. Having no one to look after their other children and having to wait for long hours in a medical office also kept women out of medical facilities. Half of all women claimed to feel embarrassed when a male physician performed vaginal exams, though it is not clear as to whether this kept women from receiving prenatal care.³⁵⁹ Despite government and the Medical Association of Puerto Rico's campaigns and interest to inform the community about prenatal care and public health, the main source of information about prenatal care and medical services for women in the 1960s came from family and friends. Only 10 per cent mentioned professionals and 3 per cent mentioned the mass media as sources of information and forces behind their move to seeking prenatal care.³⁶⁰

Though most pregnant women received prenatal care by the mid 1960s, a marked change from earlier periods, few received what the medical community and government institutions prescribed as adequate care. Women by the 1960s sought out medical care more often. Review of medical records revealed some surprising statistics. One of every five women who had received prenatal care was never actually seen by a physician of any

³⁵⁸ Ibid., 2.

³⁵⁹ Ibid., 3-4.

³⁶⁰ Ibid.

kind. Despite the fact that Puerto Rico had a long history of parasite infection and high levels of anemia, hemoglobin determination was not performed in 29 per cent of cases and stool exams were not performed in 57 per cent of the cases studied. Polio and tetanus shots were almost never provided and fewer than 60 per cent of expectant mothers were actually tested to determine their Rh factor. All of these procedures were recommended by doctors at the time. A quarter of all pregnant women ceased their prenatal care between their sixth and eighth month of gestation.³⁶¹ Not one of the women attending public facilities in 1965 made the recommended number of prenatal visits prescribed by the standards of care of that time.³⁶²

The government had been pushing for the consolidation of medical and social services and moved them under one roof in order to promote better and more balanced care. Yet, only handfuls of expectant mothers were referred either to social or nutritional services even though almost every woman had a prescription for dietary supplements and doctors were well aware of the widespread nutritional deficiencies on the island. Medical staff did refer half of the women to public welfare services, however. This meant that staff considered their clientele fell within state-defined levels of poverty and were entitled to food stamps and the minimal welfare support that was available for poor families.³⁶³

There was a direct connection between welfare and prenatal services for many mothers.

Medical and public health faculty and researchers at the University of Puerto Rico believed there was a correlation between prenatal care and maternal-fetal outcomes.

They noted that Puerto Rican women in New York, regardless of their rates of poverty

³⁶¹ All of the information in this paragraph before the footnote is from, *The Utilization of Prenatal Services in Puerto Rico*, 4-5.

³⁶² *Ibid.*, 6.

³⁶³ *Ibid.*, 5.

and difficulties assimilating, were experiencing, on average, better outcomes than women on the island. They claimed that women who did not obtain prenatal care suffered higher neonatal, premature and still birth rates. The high number of teenagers with no prenatal care showed the poorest outcomes of all groups.³⁶⁴ The neonatal mortality rate in Puerto Rico was twenty-eight in 1,000 births compared to eighteen in 1000 for Puerto Ricans in New York but went up to forty-eight in 1000 for those women who had not received prenatal care.³⁶⁵

Just as outcomes and use of services varied by class and between the island and the United States so too did birthing patterns among the different regions on the island itself. As the years progressed, though, regional differences, at least with regard to the location where mothers choose to deliver their babies, diminished and more and more babies were born in hospitals with doctors.

Conclusions

By 1960 women had finally taken a decisive step towards institutional birthing, away from the home. They placed the delivery of their children in the hands of physicians and demonstrated a good amount of confidence in the medical health system. They might have been comfortable at home and perhaps really trusted their midwives, but now there were nurses and doctors who claimed access to knowledge and instruments of science and progress that could assist them. The Health Department had been insisting on getting women to see doctors for prenatal care and trained midwives to refer women

³⁶⁴ Ibid.,7.

³⁶⁵ Ibid., 6, 33.

to a hospital if they presented any complications. The regionalization project organized health and welfare services around the hospital and women became familiar with these centers. They went for medical visits, dental referrals from their children's schools, and for for free milk and other public assistance programs.

As the government and its social institutions became more organized and complex, women's pregnant bodies began to represent "an uncontrollable, unpredictable threat to a regular, systematic mode of social organization."³⁶⁶ It was no longer acceptable to simply let nature take its course and accept whatever outcome God, nature, or one's destiny had planned. Experts and institutions were now available and were legally and culturally sanctioned to reduce risk and increase predictability. They could intervene with nature and destiny to some extent. They had access to higher knowledge, operated within licensed institutions and were allied with science and technology. People, including pregnant women and their families, began to leave their domestic settings in search of these experts due to a new found trust in "expert systems."³⁶⁷

The very definition of normal childbirth had changed. Since the 1940s, midwives had been trained to refer complicated or high risk births to doctors, and to follow basic standardized procedures such as wearing a uniform, meeting monthly, sterilizing sheets and scissors and even using silver nitrate drops for newborn eyes, but they did not follow rigid timeframes in order to distinguish normal from abnormal deliveries. By 1960, biomedicine emerged as an almost exclusive option for the care of parturients. Most

³⁶⁶ Kathleen Canning, "The Body as a Method? Reflections on the Place of the Body in Gender History." *History* 11, no. 3 (1999) 505.

³⁶⁷ Giddens defines the expert systems as a "systems of technical accomplishment or professional expertise that organize large areas of the material and social environments in which we live today." Anthony Giddens, *Consequences of Modernity* (Stanford University Press, California, 1990) 27.

physicians practiced general medicine but medical specialties were gaining momentum and several groups of obstetricians had already completed local residencies.

Obstetricians began distinguishing normal from abnormal births and shortened the acceptable timeframe in which a delivery should take place. From considering most births normal, some new obstetricians began considering most births to be abnormal and pathological. This set the stage for medicalized, technocratic births.

For a birth to be considered normal, women needed to birth quickly and under close medical supervision. They needed to be helped with episiotomies and forceps so as to not overexert themselves or put their babies in danger. Doctors preferred to cut and later suture because, according to them, it was easier to sew a calculated cut in the perineum than risk a spontaneous tear, even though tears in the pelvic floor are rare and this was never reported as a problem for midwives or even doctors who did not perform episiotomies.

Class played an important role in maternal services. Who would get episiotomies and who would birth with midwives at home depended greatly on the mother's background. Women with higher levels of education, factory jobs, or professional positions, tended to use private clinics, receive episiotomies and pain medication, and better prenatal care than those from more marginal sectors of society. It seemed that rural, lower class women were expected to be less healthy, yet needed less help in childbirth. Most women received some sort of prenatal care but for many who used the public health care system, this prenatal care was poor.

Medical institutions were growing and expanding. The University of Puerto Rico Medical School could barely keep up with the demand for medical services. The government was looking into a new, state of the art, cutting edge concept to expand and

coordinate medical services. This would become a reality soon enough, but for the time being, medical students and faculty had to make do with what was available. The country still needed more doctors in many rural towns and nurses were in tremendous demand. The school of nurse-midwives found a new home in the medical school and graduated several hundred medically trained nurses who specialized in childbirth to assist doctors during the following decade. Auxiliary midwives were disappearing. It was an indication of a new era for childbirth.

CHAPTER FOUR

STAGE FOUR- MEDICALIZED BIRTHS, 1966-1979

Doctor García's Story³⁶⁸

José García graduated from Georgetown University in 1963 with a major in pre-medicine, then returned home to Puerto Rico to begin his studies at the University of Puerto Rico's Medical School. He graduated in 1967 and went off to Baltimore to complete his medical internship. Thanks to this, García was able to escape the horrors of the Vietnam war. García had been drawn to maternal medicine and decided to apply to do his residency in obstetrics and gynecology in Puerto Rico. He was accepted as a resident in obstetrics and gynecology at the University Hospital in the newly formed and growing Medical Center. He was trained to use prophylactic forceps and to administer demerol and vistaril to laboring women once they reached five centimeters of dilation. As he was completing his residency in the early 1970s, the use of the Electronic Fetal Monitor had just become routine for most deliveries at the University Hospital. Episiotomies continued to form part of the standard of care as they had been in the 1950s and 1960s.

³⁶⁸ This story is based on Isabel Córdova, *Interview with García*, September 13, 2005.

Upon completing his specialization in 1973, Dr. García worked in the Maternal and Infant Care program in prenatal clinics for a few years. Most of his clinical work was done in Cataño, a sub-region of the San Juan metropolitan area. Once Doctor García passed the second part of his United States Obstetrics and Gynecology Board Exam in 1975 he began a short stint as a professor at the University of Puerto Rico's Medical School. Somehow, even with his demanding schedule, Dr. García managed to finish a Masters Degree in Public Health by 1976 with a concentration in Maternal and Infant Health.

Like most doctors, García decided to go into private practice in 1977. He teamed up with a couple of other specialists to build a large and steady clientele and run a successful practice in Santurce, an urban area in the San Juan region. All three obstetricians kept abreast of the latest currents and debates and agreed to challenge many of the practices that predominated in Puerto Rican obstetrics at the time. They allowed fathers to accompany the mothers in their process of labor and delivery. A few years before the American College of Obstetricians and Gynecologists put out its statement in support of VBACs (Vaginal Birth After Cesarean), García's practice was performing such deliveries. Dr. García and his colleagues also began questioning the efficacy of the Electronic Fetal Monitor after seeing the first studies coming out of the United States that cast doubt over its success rates, and stopped using it in normal deliveries.

Dr. García was unable to maintain the intensity of both a faculty position and his private practice and eventually left his faculty position. This lasted for less than ten years. Often, García would be overcome with feelings of guilt for succumbing to private practice and leaving his public health commitments behind. He would reflect on his principles and beliefs and recall the scholarships he had received during his Public Health

training. In the mid-eighties, Dr. García decided to take a radical and uncommon step in his profession. He left his successful private practice and ventured back to the University of Puerto Rico. This time, he did not approach the Medical School, but rather the School of Public Health. The two schools had parted ways, taking different directions by 1970. The divorce of Public Health and Medicine presented plenty of tension for García as a doctor working in Public Health. His commitment to public health and critical views of medicine were interpreted by many doctors at the medical school as betrayal. His initial job in The School of Public Health was to organize and coordinate public health courses for medical students. Medical students consistently asked García what he was doing in the School of Public Health after staring in disbelief at all of the medical diplomas on his wall. They had assumed that he was employed in Public Health due to his lack of qualifications and achievements in medicine. Doctor García would move on to a long, prestigious career in the program for Mothers and Infants in the School of Public Health, where he faced ongoing controversy because of his opposition to some obstetric standards, like routine interventions and authoritarian behaviors toward patients.

Eventually, even the courses García had once organized as joint offerings of Public Health and the Medical School would disappear, severing the final connection between the University of Puerto Rico's School of Public Health and the School of Medicine. As a result, there has been a detrimental lack of communication between specialists in Public Health and Medicine in Puerto Rico for decades. If we recall from previous chapters, it was the leaders trained in public health and welfare, many of whom occupied prominent positions in the Department of Health, who organized and pushed for programs such as the preparation of home-based midwives. These midwives were disappearing by the 1970s. The only midwives in training after the 1960s were nurse

midwives and the nurse midwife program was running out of the Medical School. It placed midwives under medical supervision in the hospital setting. The program only graduated a small number of nurse midwives per year and these women attended births as part of an obstetric team and not as independent practitioners.

Introduction and Overview

Doctor García's obtained typical medical training during the 1960s in Puerto Rico and the United States, but later decided to break with conventions of mainstream Puerto Rican obstetrics and dedicate his career to maternity in public health. This decision was based in large part because of his conflicts with the turn obstetrics took toward authoritarian medicalized practices after the 1960s. García's story is emblematic of how difficult it was to carve out a space for alternative birthing practices in obstetrics during the 1970s. It was during this stage in Puerto Rican history that the auxiliary midwife disappeared and physicians became the only birth attendant option for women.

In 1966 an article appeared in the daily newspaper, *El Mundo*, in reference to a small group of women from the Health Department of the Southern region of Puerto Rico who wished to call the public's attention to what they claimed was an important and overlooked issue. Asunción María Velázquez, obstetric nurse and midwife supervisor, clarified:

I am referring to the group of midwives who for years and years has been working with the poor and humble people of Puerto Rico, a cooperative group of women who have fulfilled their duty without...limits...as public servants. And today these midwives are interested in knowing to which group they belong, because after so many years of hard labor, they are now forgotten. Most of them today are

elderly women who need to obtain the benefits of their sacrifices, nevertheless they receive nothing and no one can say how to help them.³⁶⁹

Auxiliary midwives did not receive pensions, social security or health insurance, a factor that might have motivated many women to move toward the formal government labor force. Many women became public school teachers, nurses and government office workers. The work of the auxiliary midwife was fading quickly and would not last through the next decade.

During the second half of the 1960s birthing in Puerto Rico began its final significant phase of transformation of the twentieth century. Midwives disappeared, the hospital consolidated its power, and birth became medicalized. What distinguishes this period from the previous one is that childbirth was fully medicalized by the late 1960s everywhere on the island, whereas in the early 1960s, there were still homebirths in some regions and general practice and low-technology births still predominated in most hospital settings. Medicalized hospital births became hegemonic in Puerto Rico during this period.³⁷⁰ Specialists and technologies took over and fear began to make its mark on medical practice by the 1970s. Doctors often made decisions fueled by fear of legal reprisals and struggled with social pressures generated by the rising costs of their practice and malpractice insurance. In 1971 there were fewer than one hundred auxiliary

³⁶⁹ Samuel Irizarry, "Piden Orientación Comadronas se Quejan Gobierno ELA las Tiene Abandonadas," *El Mundo*, Thursday, 10 March 1966, 37.

³⁷⁰ There were alternative birthing methods such as the "parto sin dolor" (Lamaze and Bradley Method inspired) introduced during this time period, but they were conceptualized within a hospital-medical-scientific setting.

midwives registered with the Department of Health.³⁷¹ A year later only five hundred home births were registered throughout the entire island.³⁷² By the late 1970s midwives and evidence of their practice had vanished from government reports all together.

In the late 1960s strong social and cultural forces were coalescing, which gave birthing a final push toward medicalization. In this chapter, I will discuss some of these social and cultural forces and suggest the ways in which they transformed childbirth. These forces included changes in social structures within the family and the workforce. The economic crisis of the 1970s resulted in a significant expansion in federal welfare programs and pushed many women out of the home in search of jobs and food stamps. Families sought out institutionally sanctioned experts and became active consumers of biomedicine as well as material culture. Puerto Rico became predominantly urban with a growing lower-middle class. The population learned to accept and seek out expert advice, scientific truth claims and universalisms, as well as technology in their day-to-day lives. There were new considerations regarding risk management, clinical pathology and fetal personhood that played significant roles in birthing in unprecedented ways. I will argue that it was these kinds social shifts that contributed to the medicalization of birth.

Regions

The final traces of recordable regional differences in reference to where and under whose supervision the delivery took place occurred in the latter 1960s. But by the late 1970s, homebirths were unheard throughout the island. If we compare all five health

³⁷¹ *Informe Anual del Departamento de Salud de 1970-71*, 37.

³⁷² *Informe Anual del Departamento de Salud de 1971-72*, 46.

regions shortly after 1965, we can still find some geographical disparities. The Northeast region (San Juan and University of Puerto Rico's Medical School) saw the fewest homebirths in 1967, while the South (Ponce) claimed almost half of all home births.³⁷³ The Northeast region was also the only area where women would use private hospitals more than public hospitals to give birth. In fact, just over half of all private hospital births were in the Northeast, even though only 28 per cent of all island births occurred in a private setting.³⁷⁴ In 1967, the Southern region reported that 88 per cent of their births took place in hospitals whereas the Northeast region, the region with the highest rates of hospital births, reported 98 per cent.³⁷⁵ Three years later, the South reported that over 95 per cent of their babies were born in the hospital setting and in 1971, every region was reporting a minimum of 96 per cent of their deliveries as hospital deliveries.³⁷⁶ Public hospitals continued to be used over twice as much as private hospitals by parturient women in Puerto Rico.

Therefore, although changes in birthing practices did not happen at perfectly even rates and in neat patterns throughout the island, by the 1970s virtually all women in Puerto Rico were having their babies in the hospital under the care of an obstetric team. The speed in which this change in scenario occurred was significant. It took less than twenty years for birth to become almost universally medicalized and for midwifery to disappear.

³⁷³ Rafael Vilar Isern, *Informe Anual de la División de Salud de Madres y Niños Lisiados del Departamento de Salud de Puerto Rico, 1967-68*, 12.

³⁷⁴ Vilar Isern, *Informe Anual de la División de Salud de Madres*, 12.

³⁷⁵ *Informe Anual del Departamento de Salud, 1967-68*, 122.

³⁷⁶ *Informe Anual del Departamento de Salud de 1970-71*, 37; *Informe Anual del Departamento de Salud de 1971-72*, 46.

Auxiliary Midwives

The 1967 Bureau of Maternal and (disabled) Child Health annual report recognized that the numbers of auxiliary midwives were dropping yearly, and that auxiliary midwife registries needed updating, but that they should not disappear because there would always be homebirths and medical staff could never oversee all pregnant women in Puerto Rico.³⁷⁷ According to the report, the Northern region (Arecibo) especially needed the midwives because some remote rural areas were still turning to clandestine midwives.³⁷⁸ The Health Department did not envision medicine ever reaching the capability of covering the entirety of births throughout the island, and projected a need to somehow maintain midwifery services on some level. This perspective seemed at odds with the momentum that obstetrics and medicine had gained.

The practice of midwifery was never persecuted in Puerto Rico. There were never overt campaigns to eliminate the practice as there had been earlier in the United States. Instead, midwives' space and acceptance diminished as modern discourse, technology, and institutions squeezed out the more informal, local alternatives. Women, including midwives themselves, assumed the discourse of modernity and little by little abandoned "folkloric" labor practices. Midwives were not organized, had no professional representation or any kind of forum in the formal structures of power and their voices were silent in the social restructuring of Puerto Rico.

Midwives were not perceived by doctors as rivals or competition. No major debates concerning midwives appeared in medical literature, newspaper articles, or government campaigns. No doctor whom I interviewed for this project mentioned taking

³⁷⁷ Vilar Isern, *Informe Anual de la División de Salud de Madres*, 11.

³⁷⁸ *Ibid.*, 54.

any action against midwives, nor did they express any resentment toward them. As an example we can look at the 1964 Medical Association presidential report. In this address, there is a section entitled *Quackery* where Doctor Carlos Bertrán expressed a concern about "the grave consequences that result from the practice of healers (*santiguadores*), spiritists, chiropractors and other charlatans" and goes on to affirm that "the theories and practices of scientific medicine are the correct ones."³⁷⁹ Not only does he refrain from mentioning midwives, but he also avoids the female gender as a whole. In sum, I found no evidence of large-scale tension or struggles between midwives and doctors.

Throughout this dissertation we have been discussing some of the key factors that moved childbirth from the home with midwives to the hospital with doctors. Chapter three, covering the years of 1959 until 1965, established the hospital setting under the care of doctors as the primary birth choice for women in Puerto Rico. By the 1970s, birth becomes fully medicalized and sets the stage for the technocratic model of birth of the 1980s and 1990s that we will cover in chapter five.

Factors Leading to the Medicalization of Childbirth

There were many changes that contributed to the medicalization of birth in Puerto Rico and the general context of the public management of social tensions and ills provided fertile ground for it. The economic crisis of the 1970s, and the political activism that accompanied it highlighted the stagnation of the industrialization project. The United States federal government increased funds for social relief and welfare with

³⁷⁹ Author's translation in Bertrán, "Informe del Presidente." *Boletín de la Asociación Médica de Puerto Rico* 56, no. 12 (1964) 124-125.

the hope of alleviating the social crisis, creating further dependency on the state. Puerto Rican society overall took a turn toward pathologizing its social behavior in order to manage it. Modernization and urbanization had brought on what many considered to be new social evils such as abortion, crime, drug use, record unemployment rates and a general breakdown of moral values and work ethic. Over half of the general population fell under the poverty line and came to depend on government welfare programs, which permitted the state to monitor and control family life more than ever.³⁸⁰

Reproduction was at the center of many discussions concerning civil rights, poverty reduction, feminism, and over-population. After 1973, as a result of the Roe v Wade supreme court decision, abortion went from being a crime to a contested right. About half of all Puerto Rican women were sterilized during their reproductive years and many others began to incorporate birth control into their lives. Many women felt they needed to plan their families to secure a better future for themselves and their children.³⁸¹ They sought medical and scientific expertise in order to do this and opened up their bodies to science in the hope of escaping biological impositions. Now it was not only social scientists who could study the social body and offer analysis and solutions to problems, but the experts in hard sciences and complex technology could also make concrete and significant social contributions.

³⁸⁰ Luisa Hernández-Anguiera, *Mujeres Puertorriqueñas, "Welfare" y Globalización* (Mayaguez, Publicaciones Puertorriqueñas, 2001) 42-43. For information on the economic crisis of the 1970s see Orlando Sotomayor, *Poverty and Income Inequality in Puerto Rico, 1970-1990S* (San Juan, Centro de Investigaciones Sociales, 1998) 62-64, see p. 23 for further statistics on poverty and comparisons with the United States.

³⁸¹ According to a study done by the School of Public Health, by 1968 almost three fourths of married women had used some form of birth control and 60 per cent were resorting to birth control at the time of the interview. Hernández-Anguiera, *Mujeres Puertorriqueñas*, 61.

Medicine, like the economy and social sciences, followed the path of heavy technology and further specialization, thereby redefining professional and patient relationships. Machines helped the medical gaze to penetrate the human body and a new patient emerged: the previously inaccessible fetus. Oddly, doctors came into tension with patients and as they gained access to social clout through new technologies but also found themselves having to justify their practice and decisions more than ever. Medicine became defensive, expensive, specialized and technology-driven, but it also offered some new options for women.

Ideologies and culture are essential when explaining the significant transformations in birthing that occurred in Puerto Rico after the mid-twentieth century. It is clear that ideas about medical knowledge and intervention, birth, and science underwent massive change during the last five decades of the twentieth century. Institutional biomedical control over birthing became hegemonic. This occurred in particular social, cultural, economic, and ideological settings that either facilitated or promoted biomedical acceptance.

When I refer to social structures and social aspects in general, I am referring to the organization of systems of labor, inter-professional relationships and family structures. Work was restructured into specialties and new normative practices and professional relations. Ideologies or belief systems also changed.³⁸² Social institutions such as the family reformulated their roles, structure and practices during this time. Women had more years of schooling and worked outside of the home more, families

³⁸² I am using a Marxist definition of ideology as a system of ideas and representations that come to dominate the human spirit and/or particular social groups (Althusser 1974, 47). Gramsci summarizes ideology as a system of cultural values (Portelli, 1973,10) and Althusser points out that ideology is as a representation of the relationship between an individual's imaginary existence and his or her existing real life conditions (Althusser 1974, 52).

became smaller, and most basic needs were met outside of the home and in urban settings. Social institutions were increasingly regulated, tracked, analyzed and normatized according to preset protocols and guidelines. For instance, educational standards were set according to "normal" stages of child development, home economics was professionalized in order to help with scientific motherhood, and pregnancy and labor were divided into stages and standards were set in order to regulate it and intervene whenever norms were not met. Accepted patterns of behavior and the delimitations of proper usage and distribution of space were implemented and most aspects of life began to be systematized into standards and categories. Science and technology became bearers of truth and masters of solutions.

The medical establishment was growing and well established by the late 1960s and had no reason to feel threatened by midwifery. Obstetricians had gained full control of childbirth, faced greater demand than they could even supply and had no reason to believe this would change. The evolution of the University of Puerto Rico's Medical School contributed to the sense of security that doctors felt about their position in Puerto Rican society. In fact, in the late 1970s another two medical schools, The Central Caribbean University in Cayey (1976) and the San Juan Baptist School of Medicine (1978) began training doctors on the island. Medical education was expanding and going through further administrative subdivisions, just like medical practice.

The School of Medicine

In 1966, the University of Puerto Rico was reorganized by a University law that divided it into three separate campuses, one of which was the Medical Sciences Campus,

where the medical school was housed. Each campus had its own administrative government that oversaw the activities of all of its schools, programs and departments. This was representative of the compartmentalization and specialization of professions and education in general.

The University's Medical Sciences Campus continued to flourish. In 1967, the first Doctor of Philosophy degree was awarded in the Medical Sciences Campus.³⁸³ The Medical School increased its enrollment after 1966. At this time, plans to build an innovative and ambitious Medical Center, where all the newest forms of medicine, science and services could interact within one space, were underway. The Medical Center would contain all of the medical educational facilities as well as several hospital and specialty services.

The Department of Obstetrics and Gynecology experienced changes beyond the administrative restructuring, which directly affected the entire medical school. The volume of deliveries increased exponentially making the department of Obstetrics and Gynecology one of the school's busiest and largest units. In the mid 1960s, the University Hospital was already admitting more pregnant women than it could attend. Between 1964 and 1966 the number of deliveries increased by over 1000 and continued to follow similar patterns in the following years.³⁸⁴ By the 1970s, half of all hospital admissions were in obstetrics and gynecology.³⁸⁵

³⁸³ This degree was in medical zoology. *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1967*, 1.

³⁸⁴ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1966*, 138.

³⁸⁵ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1974-75*, 187.

By the mid 1970s reports from the Department turned bitter when referring to repeated requests for physical expansion and improvement of facilities, which were ignored by campus administrators.³⁸⁶ The move from the home to the hospital and from the countryside to the city happened so quickly that the urban medical infrastructure struggled to keep stride. At the same, new technologies and equipment became available to obstetricians, which increased expenditures and stressed the Medical School budget.

New medical equipment was purchased and machines allowed obstetricians to analyze and manage a new patient, the unborn fetus. The fetus and perinatal medicine began to occupy a considerable space, appearing almost overnight as a new subspecialty. This assigned the fetus a new form of personhood, beyond the moral, imagined, or religious dimensions.³⁸⁷

Technologies such as fetal ultrasound (sonograms), neonatal care units, and fetal surgery, all available by the 1970s, allowed doctors to take on the care of the fetus in ways that were not previously available.³⁸⁸ Sonograms and electronic fetal monitors, allow medical experts to "bypass pregnant women's self-reports in favor of a 'window' on the developing fetus."³⁸⁹ The combination of available technologies, the ability to see a fetal image and assign it its own clinical status, and the recasting of childbirth as a medical event riddled with danger served to stress the mother's separateness from her

³⁸⁶ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1974-75*, 174-175, 187-189.

³⁸⁷ For more discussion on visual images of the fetus and personhood see Rayna Rapp, *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America* (Anthropology of Everyday Life, New York, Routledge, 1999) 121; Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford, B. Blackwell, 1984) ch 7-8.

³⁸⁸ Laury Oaks, *Smoking and Pregnancy: The Politics of Fetal Protection* (New Brunswick, NJ, Rutgers University Press, 2001) 3.

³⁸⁹ Rapp, *Testing Women*, 29.

fetus and as either a possible adversary or protector of her developing baby.³⁹⁰ The relationship between the fetus and the mother also changed as mothers had access to the baby's heartbeats and images, through these technologies. It was no longer an abstract future possibility of a child that became more real as the pregnant woman began to feel its movements and see her belly grow, but a miniature person long before the female body could detect its presence. The fetus became an autonomous actor and a new patient by the 1970s.

This new fetal personhood undoubtedly fueled the anti-abortion movement in the 1970s. Even though Puerto Rican medical organizations had taken anti-abortion positions for decades, the anti-abortion campaigns on the island were not as radical or active as they were in the United States during the 1970s and doctors practiced abortions regularly throughout the island. Abortion was illegal in Puerto Rico before 1973, except when it was to preserve the life or health of the mother. This allowed for some legal flexibility and there is plenty of evidence indicating that abortions were carried out both in medical settings and in clandestine spaces. Nevertheless, doctors in Puerto Rico made a significant amount of noise concerning what they named "criminal abortions." The Medical Association of Puerto Rico, with the help of *El Mundo*, a daily newspaper, had mounted a campaign during the early 1960s against what they understood to be a growing plague of elective abortions. They were indeed concerned about the health risks to women but they were even more concerned about the moral implications. After the Cuban revolution, women from the United States stopped traveling to Cuba for weekend visits to terminate unwanted pregnancies. Puerto Rican doctors claimed they were now

³⁹⁰ Oaks, 140.

flying instead to the island of Puerto Rico in search of abortions.³⁹¹ Outraged at this turn of events and that Puerto Rico could be seen as a haven for what they decried as immoral and illegal, the Medical Association mobilized many of their resources to convince the government of Puerto Rico to take action against those who performed elective abortions. This, of course, lost impetus after the decision of *Row v Wade* in 1973, which changed the legal status of abortions. By 1974 the Department of Obstetrics listed abortion among the problems it would confront as the demands for abortions, now legal, had increased and there were not enough medical personnel elsewhere to fulfill the demand. Due to this demand and the fact that they had too much work and too little space, and that the issue caused tension among staff, the Department recommended a separate facility be built to handle elective abortions.³⁹²

At the same time, a tremendous amount of time and energy was put into research and discussion of population control and family planning. The medical community was deeply engaged and committed to issues revolving around female reproduction. Abortion and contraception were addressed by doctors in many arenas, bridging the laboratory and mass media.

Puerto Rican obstetricians were now presenting themselves as experts in population control and family planning, which they had been practicing and researching over a decade already, as well as the newer field of perinatal medicine. There were new research projects involving amniotic testing and fetal health or information.³⁹³ In 1967

³⁹¹ Bienvenido Ortiz, "Ven Médicos Locales Envueltos Denuncian Ráquet Internacional Abortos," *El Mundo*, 2 May 1963.

³⁹² *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1974-75*, 194.

³⁹³ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1967*, 119-120.

the Department of Obstetrics and Gynecology acquired the equipment necessary to open a perinatal unit.³⁹⁴ Now doctors could monitor amniotic blood pressure, maternal blood pressure, respirations, and heart rates, and collect data on fetal heart rates, movement, pH levels in the blood, carbon dioxide and lactate levels. Doctors were now confident that they were equipped to practice more scientifically-sound obstetrics. Acquisition of this perinatal equipment indicated that Puerto Rican obstetrics had moved into the medicalized, heavily managed care of childbirth, which entailed clinical management of fetal pathology as well as maternal pathologies. In 1967, University of Puerto Rico obstetricians organized a special postgraduate symposium on "The Diagnosis of Intrauterine Fetal Disorders" which included distinguished specialists from Columbia University, the University of Uruguay, the University of Berlin, University of Milan, London University, and many others.³⁹⁵

Many of the medical school research projects also revolved around contraception and were funded by pharmaceutical companies or the Population Council.³⁹⁶ Among the problems reported by the Department of Obstetrics for the year 1966 was that of issuing an official statement or position on family planning. Ironically, despite having been directly implicated in population control efforts for over a decade, neither the Department of Health nor the Department of Obstetrics ever issued an official position statement or directive on the matter. Yet, the Department stated that the "population problem" was "one of the most serious problems facing the Puerto Rican community" in its 1966

³⁹⁴ Ibid., 109.

³⁹⁵ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1968 and 1969*, 117; Karlis Adamson, ed., *Diagnosis and Treatment of Fetal Disorders: Proceedings of the International Symposium on Diagnosis and Treatment of Disorders Affecting the Intrauterine Patient* (New York, Springer-Verlag, 1968).

³⁹⁶ The Population Council is an international non-profit organization, established by John Rockefeller in 1952, dedicated to reproduction and family planning.

report.³⁹⁷ In 1968, following the death of doctor Pincus, head of the Worcester Foundation for Experimental Biology housed in Massachusetts, and key figure in the development of "the pill," the supervision of the Foundation projects was transferred to the Department of Obstetrics of the University of Puerto Rico. The Ford Foundation stepped in to take over the funding of the research already underway.³⁹⁸ This time, research was mostly focused on the potential dangers and side effects of contraception.³⁹⁹ Initially the potential dangers of the pill were denied by doctors and scientists in the United States.⁴⁰⁰

A great deal of the funding and intellectual exchange linked Puerto Rico to the United States, as it had in the past. And as it had before, Puerto Rico often served as a bridge between United States' developments and the "developing world." Visits from doctors and specialists from around the world and the United States continued. The University of Puerto Rico's School of Medicine received visiting professors from Brazil, Uruguay, Africa, Taiwan, Peru, Malaysia, Trinidad, the Dominican Republic, Berlin, Chile and the United States in the latter half of the 1960s alone.⁴⁰¹ In the context of the Cold War, Puerto Rico served as an anti-communist showcase bridging Latin America and the United States, and in contrast to Cuba.

³⁹⁷ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1966*, 137.

³⁹⁸ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1968 and 1969*, 123.

³⁹⁹ See *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1969-1970*, 98-100.

⁴⁰⁰ Malén Rojas Daporta, "Descubridor Píldora Contraceptiva Asegura es Infalible; No Causa Cáncer." *El Mundo*, 30 November 1959.

⁴⁰¹ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1966*, 132; *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1967*, 116, 113; *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1968-69*, 123.

Puerto Rican medical experts also influenced and led medical efforts in the United States. University of Puerto Rico professors traveled all over the United States to present work and meet with colleagues. Director Ivan Pelegrina initiated an exchange with the University of Michigan and Wayne State University in Michigan which would later lead him to take leave from the University of Puerto Rico in order to study Public Health in Ann Arbor with an emphasis in community obstetrics.⁴⁰² In 1974 Pelegrina resigned his position as head of the Obstetrics Department at the University of Puerto Rico in order to work as a clinic director at the University of Michigan.⁴⁰³ This made Puerto Rican doctors leaders in medicine and not merely receivers of knowledge and funding from the North.

Crisis, Social Monitoring, and Consumption

Puerto Rico underwent a crisis after the fall of the populist-industrial project after the late 1960s. The stagnation of the local industrialization project and the crisis of world capitalism in the 1970s led to the reform of the welfare state as it assumed a leadership role in the hope of providing some direction and stability to a deteriorated system.⁴⁰⁴ Underprivileged families sought to make their lives more tolerable by seeking public assistance as the welfare state monitored, studied, and penetrated into the homes of families, especially those in need. Public hospitals, public housing, unemployment, food

⁴⁰² *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1966*, 133, 135; *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1967*, 112.

⁴⁰³ *University of Puerto Rico Medical Sciences Campus School of Medicine Annual Report 1974-75*, 183.

⁴⁰⁴ Hernández-Angueira, *Mujeres puertorriqueñas*, 6.

Table 4: Selected Consumption Data, 1940,1964

	Year 1940	Year 1964
Consumption of quarts of milk (p/capita)	65	212
Number of motor vehicles	27,000	281,402
Percentage of homes with electricity	29%	81%
Students receiving public vocational training	1,929	127, 590

Source: *Progreso Economico Social* (pamphlet, year and author unknown), p. 1-7

stamps, and W.I.C. (Women, Infant and Children Support Program) expanded and kept many families afloat.

Though perhaps not apparent at first glance, this expansion of welfare in Puerto Rico affected birthing practices. The midwife once worked largely within communal and domestic spaces and garnered wider acclaim in rural, poorer and more marginal sectors, which had engaged little with mass media, culture and consumption. In previous decades, birthing was a private ritual taken care of within the confines of the family unit. The state did not intervene and women did not seek government aid in order to satisfy the basic needs of their families. Moreover, the population was not previously involved in the consumption of organized biomedicine.

The expansion of welfare services obligated families to spend a significant amount of time in government offices and pulled them into the network of institutionalized and monitored services, where experts would hand out, regulate, and condition the education, dental services, health services, food intake and even purchasing power of families. Their family members would learn about and be channeled into mainstream institutions and consumption patterns. The majority of Puerto Ricans had

maintained a relatively marginal role in mass capitalist consumption until after the 1960s. This general move toward the state and institutional spaces of expertise, opened the pregnant body of women up to obstetric intervention.

Specialization

After mid-century, in Puerto Rico, knowledge resided in the hands of professionally (institutionally) trained experts, who specialized in a particular field of knowledge. People place their trust in and seek help from those they consider knowledgeable or who have access to what they need or see as socially advantageous. One does not tend to question an “expert,” especially if one had little or no formal preparation or experience in that field. Experts could monitor, control, and take care of those subjects that were deemed culturally valuable. It would make sense to place things of value in the hands of the proper authorities. The value of children changed as families got smaller, moved to cities and became more nuclear. Grandmother or mother’s wisdom on child rearing, nutrition, and when to push during labor, diminished in value. Public institutions were insisting on specialists and licensing codes also required expertise.

Medicine and public health also insisted on specialized experts. By the late 1960s, over a third of the island population was living in the Northeast Region, which included San Juan.⁴⁰⁵ It was an especially young population. Doctor Juan Hernández Cibes, laboring in the Northeast region, claimed that there was a new philosophy in Public Health that insisted on professional specialization. These specialists were then to

⁴⁰⁵ Juan Hernández Cibes, *Statistical Comparison of the First Five Years Functioning MIC Project #505*, Department of Health of the Northeast Region, 1968, 2.

work in multi-disciplinary teams in order to be most effective.⁴⁰⁶ By 1967 the University of Puerto Rico Hospital Maternity unit was insisting on specialized nurses, and new equipment for fetal monitoring, while it hired its first full-time anesthesiologist assigned exclusively to obstetrics.⁴⁰⁷ The hospital also had improved on its handling of records but continued to battle with inadequate space for the increased demands.⁴⁰⁸

Obstetricians, educators, psychologists, social workers and pediatricians now held the upper hand in knowledge related to family dynamics and child development. In childbirth, the general practitioner gave way to the obstetrician. Cesarean sections, forceps, induced labor, episiotomies, and fetal monitoring were regularly used. Many of these procedures were practiced with little consideration of the risks and costs and without previous clinical research yet they were consumed and applied with the assumption that they were scientifically sound and efficient. Those who put these kinds of practices into place and came to control them were precisely those experts sanctioned by the state, medical institutions and the prevailing cultures of the time. Once a woman was in the medical domain of the hospital, she had little say as to her own birthing interventions or procedures. The entire birthing experience was structured to facilitate the work of the medical expert in the way that he (and now sometimes she) saw fit. It was now the doctor who “delivered” the baby. And the doctor was bound by norms imposed by the medico-legal, political and cultural milieu in which *he* moved.

After the mid 1960s there were more articles in local medical journals that actually debated the role, position and evolution of medicine than in the previous ten years. Doctors themselves were publicly referring to medicine as a science and either

⁴⁰⁶ Ibid., 8.

⁴⁰⁷ Ibid., 9-11.

⁴⁰⁸ Ibid., 9, 12.

desisted in referring to it as an art as they had for decades, or called it both an art and a science. Doctors claimed that medicine was an "applied science" that oscillated between the biological sciences and observable systematized clinical research.⁴⁰⁹ This is not to say that doctors pretended to separate themselves from their religious beliefs. Relating medicine to science did not strip it of its connection to God in the eyes of many doctors. In addition, there was considerable worry about the rising cost of medicine and the relationship between medicine, society, and the government.

In a 1967 inaugural speech given to the Medical Association, the elected president, Izquierdo Mora, repeatedly referenced God as he spoke of the many positive and problematic transformations Puerto Rico had undergone in the past years. According to him, Puerto Rico was changing into an urban society, with a decent infrastructure and higher salaries. People were living longer and suffering less from tropical diseases and more from degenerative diseases. According to Mora, the "medicine we practice now is a lot more scientific."⁴¹⁰ He explained that about one hundred and fifty doctors were acquiring new licenses every year, that medicine had splintered into twenty specialties and sub-specialties and that it was undergoing transformations. He also mentioned that already close to half of the population had medical insurance.⁴¹¹ All of the preceding issues formed part of a rhetoric of modernity as assumed evolutionary progress. But on a more alarmist note, he pointed to the rising costs of medicine and the increases in drug and alcohol addiction, criminal abortions, and delinquency, the unfortunate side effects of progress.

⁴⁰⁹ Ramón Torres Pineda, *¿Hacia una medicina más científica?* *Boletín de la Asociación Médica de Puerto Rico* 58, no. 11 (1966) 561.

⁴¹⁰ Luis Izquierdo Mora, "La época de oro de la medicina." *El Boletín de la Asociación Médica de Puerto Rico*, 59, no. 2 (1967) 86.

⁴¹¹ *Ibid.*, 87.

Defensive Medicine and Patient-Doctor Tensions

Social and scientific progress came at a cost. The biomedical-technological consolidation of medicine generated its own social tensions. Interestingly, scientific medicine became hegemonic as it simultaneously lost some moral standing in the public eye. Doctors repeatedly alluded to this. There appeared to be a nostalgia for what doctors perceived to be a past when doctors garnered more public reverence and inhabited priest-like altruistic characteristics.

The breakdown in doctor-patient rapport was also present in the medical literature in the United States. The reliance on bio-medical experts and the belief that science was equipped to cure almost any ailment, also came accompanied with distrust in individual experts who could abuse their place of power and authority. Some articles and statements that originally appeared in the United States were reprinted in medical journals in Puerto Rico, demonstrating a common concern. Charles Price published an article in the *Ohio Medical Journal*, for example, which was reprinted in 1971 in Puerto Rico.⁴¹² The focus of the article was on malpractice, an issue that would haunt medicine into the current millennium. Malpractice loomed over medical practice and initially worked its way slowly into medical decisions after the 1960s. In explaining why malpractice claims were soaring, Price listed a breakdown in traditional patient-physician rapport as a fundamental factor. Patients and doctors had changed their attitudes, in Price's analysis. Explanations offered for this included the general lack of time experienced by the

⁴¹² Charles Price, "Malpractice Insurance- Past, Present and the Uncertain Future." *El Bolétin de la Asociación Médica de Puerto Rico*, 63, no. 2 (1971) 31-33.

population, publicity leading patients to expect too much and finally that the general public resented the salaries that doctors were earning.⁴¹³

Doctor Ramirez, as well as all of the other doctors I interviewed, expressed their consternation concerning how malpractice law and insurance had overtaken medicine. Ramirez explained that the Puerto Rican Medical Association had fought to pass a law requiring all doctors to have malpractice insurance. At the time about one third of physicians were covered. In 1966 this law had been passed and all doctors were obliged to buy insurance in order to practice legally in Puerto Rico. Originally the Medical Association hoped to lower insurance costs and protect their members by pushing for mandatory coverage. Today doctors, such as Ramirez, classify this effort as a fatal error that has served to exacerbate the precarious legal climate in which doctors work.⁴¹⁴ Most obstetricians have either a personal lawsuit story that haunts them, one from a close colleague or one they have heard about others. Ramirez explained that among the factors that pushed him out of private practice was a lawsuit. When his own niece sued him, he decided he no longer wished to work under the strains of the medico-legal climate.⁴¹⁵

The medical profession was on the defensive by the late 1960s. Physicians persistently referred to three themes: high medical costs, *libre selección* (having no primary care physician and thereby having direct access to specialists), and social deterioration, especially among the youth. Their position and power in society was stronger than ever, but it was rendered vulnerable by a growing tension between rising medical costs and access to medical care. Doctors would constantly insist on their desire to serve the population and claimed that their motivations were not self-interest and

⁴¹³ Price, "Malpractice Insurance," 32.

⁴¹⁴ Córdova, *Interview with Ramirez*, October 3, 2005, 26.

⁴¹⁵ *Ibid.*, 39.

wealth. In 1971, the incoming Medical Association president addressed these issues. Doctor Fernando Cabrera listed medical costs, *libre selección*, and juvenile delinquency as major concerns that the medical profession needed to address.⁴¹⁶ He pointed out that "the generational gap has never been so abysmal."⁴¹⁷ Cabrera then moved into a heartfelt reaction declaring that their "profession has been accused of lacking social conscience and of unscrupulously seeking profit...Our country counts on a medical profession which in its majority serves disinterestedly and above all protects the health of its people."⁴¹⁸

With respect to salaries, the rising costs of medicine, and the demand for more doctors, Annette Ramírez de Arellano, from the School of Public Health, wrote in 1976 that medicine did not follow the laws of the free market.⁴¹⁹ She argued that more doctors would not solve the geographic and economic distributions problems facing Puerto Rico, as many argued. Ramírez de Arellano explained that licensing laws blocked free and open insertion into the health service market.⁴²⁰ Doctors chose the services they provided, the frequency, and hours of their services, and established their honorariums within a wide margin.⁴²¹ In addition to the economic analysis, Ramírez de Arellano made another important point about the general medicalization of society. What were seen before as moral, legal or social issues, such as alcoholism, addiction, crime, marital problems, and population control, that would be addressed through the church, welfare,

⁴¹⁶ Fernando Cabrera, "En Busca de Quijotes Médicos," *Boletín de la Asociación Médica de Puerto Rico* 63, no. 12 (1971) 327.

⁴¹⁷ *Ibid.*, 328.

⁴¹⁸ *Ibid.*

⁴¹⁹ Annette Ramírez de Arellano, "El Mercado de los Servicios Médicos," *El Bolétin de la Asociación Médica de Puerto Rico* 68, no. 7 (1976) 167-170.

⁴²⁰ *Ibid.*, 168.

⁴²¹ *Ibid.*, 167-168.

or judicial systems, had now become medicalized social issues.⁴²² This was the pathologizing of society.

The Medical Association of Puerto Rico invited Edward Reinhard, a Missouri doctor and professor, to address its constituency at its 1976 Annual Conference. His talk was titled, *Medicine and the Crisis of Confidence*. Reinhard began by mentioning that medicine had gone from witchcraft to science in the last one hundred years and was now in its "golden age," yet physicians were not regarded with respect.⁴²³ According to this doctor, the medical profession itself was to blame for the lack of respect it received. He presented the audience with examples to help them take a patient's perspective and made a compelling case for increasing compassion levels toward patients. Reinhard claimed that the factors that influenced what patients thought about the medical profession included the,

depersonalization and fragmentation of medical care, the skyrocketing cost of medical treatment, doubts about the competence of large segments of the medical profession, and the role of the news media and drug advertising in creating false ideas and expectations as to what can reasonably be achieved.⁴²⁴

He warned, though, that these were not the real problems "that have led to the crisis in confidence" but rather "the way in which [medical professionals] have reacted to them."⁴²⁵ According to Reinhard, physicians had "a great tendency to develop a God Complex" and arrogance was "a luxury physicians [could] no longer afford"⁴²⁶ He felt

⁴²² Ibid., 170.

⁴²³ Edward Reinhard, "Medicine and the Crisis in Confidence," *El Bolétin de la Asociación Médica de Puerto Rico* 68, no. 5 (1976) 111.

⁴²⁴ Ibid., 116.

⁴²⁵ Ibid.

⁴²⁶ Ibid.

that physicians should walk with their patients "through the valley of the shadow of death" if need be.⁴²⁷

A couple of years earlier, a visiting third year medical student from New York University had written a letter to the editor of the Puerto Rican Medical Association's bulletin remarking about local physicians' attitudes toward patients and how they compared to the United States. His take about the doctor-patient relationship was slightly different than Price's. The student, Jeffrey Lessing, was visiting the island for three weeks. Apparently Lessing understood that relationships with patients in the United States were improving. Though relations might have improved Lessing's opinion might also be due to the fact that he was new in the medical field, likely from a different generation than other established and practicing doctors who were publishing at the time, and had no point of reference from the past. He claimed that U.S. patients were becoming active participants in their healthcare and in doctor-patient relationships and placed it in a positive light. Lessing wrote,

despite the excellent quality of medical care afforded the patients in the Mayagüez Medical Center, I am disappointed to find that the changing relationship between doctor and patient found in the United States is for the most part absent here. Several examples may clarify this point: All too often a doctor entered the room of a patient, said no more than a curt hello, performed an examination and left. There was no attempt at conversation, nothing was done to alleviate the patient's anxieties... The Puerto Rican patient at the present time seems to be less medically sophisticated, less demanding of the health care delivery system. However, the lack of demand for better communications is no reason not to provide it.⁴²⁸

⁴²⁷ Ibid., 117.

⁴²⁸ Jeffery Lessing, "Carta al editor," *El Bolétin de la Asociación Médica de Puerto Rico* 65, no. 8 (1973) 200.

Although one might be inclined to interpret this as another degrading attitude from the United States toward Puerto Ricans, I would argue that Lessing might in fact have had an important point to make.

Engrained in mainstream United States culture is an individual sense of entitlement that does not exist to the same extent in Puerto Rico. Public health and alternative health movements have also made their mark on United States medicine, while this has been much weaker in Puerto Rico. This can perhaps explain to some degree why United States women might be more likely than Puerto Rican to demand a more active role in their health care and why United States doctors might take a slightly less authoritative role. To this we might add that because of historical reproductive conditions and abuses, women's movements in Puerto Rico have focused on violence, abortion, and HIV in the last forty years and mostly overlooked quality of care and birthing alternatives.⁴²⁹

Science, Technology, and Ideology

Few would disagree that life in Puerto Rico changed dramatically between the 1940s and 1970s. The role and composition of the state itself changed. So did the expert and the relationship between science, technology, knowledge and power. Perhaps the most difficult topic to handle is that of the ideological changes. It is historically difficult

⁴²⁹ Briggs, *Reproducing Empire*; Ramirez de Arellano, *Catholicism, Contraception*; Dorothy Roberts, *Killing the Black Body*; Edna Acosta Belén, ed., *The Puerto Rican Woman: Perspectives on Culture, History, and Society* (New York, Praeger, 1986); Yamila Azize, ed., *La Mujer En Puerto Rico; Ensayos De Investigación* (Río Piedras, Ediciones Huracán, 1987); Félix V. Matos Rodríguez and Linda C. Delgado, eds., *Puerto Rican Women's History: New Perspectives*, (Armonk, N.Y., M.E. Sharpe, 1998).

to measure, quantify, and ground trends and flows in the social imaginary and mentalities of a people. Even so, I wish to take on the challenge in explaining the cultural practices related to birthing. Without having undergone significant transmutations in the collective consciousness, Puerto Ricans would not have managed to change their birthing practices and lifestyles as they have. Simply put, Puerto Ricans began accepting many new practices and truth systems and discarding previous ones.

Althusser in his book, *Ideología y aparatos ideológicos de estado*, clarifies the relationship between ideology and practice. He explains that every conscious person who believes freely in his or her ideas usually acts upon them. Ideas exist in their acts and acts form a part of rituals and practices which are henceforth inscribed within the material existence of an ideological apparatus.⁴³⁰ There is no practice free from ideology.⁴³¹ Institutional, medicalized birth would not have held its ground were it not for the complicated ideological forces sustaining it. Since there doesn't seem to have been an open battle against or in favor of midwifery, then we can assume that it was the industrial, economic, cultural and ideological changes unfolding in Puerto Rico that drove it into virtual extinction. Medicalized birth became hegemonic as opposed to imposed unilaterally by explicit force.

Science and technology had taken root in the popular mental universe. The sense that technology was infallible, free from human subjectivity and a fundamental agent for progress took precedence in contemporary culture. Technology is not an organized, self-contained institution that operates on its own, but it does promote and facilitate other institutional operations and structures which situate it in a place of privilege. Of course,

⁴³⁰ Althusser, *Ideología*, 60.

⁴³¹ *Ibid.*, 63.

these ideas were not new in the world. They date back to the industrial revolution.⁴³²

Even though the industrial revolution first unfolded in Europe, it later found even more fertile ground in the United States. Then, very slowly it found its way to Puerto Rico and probably didn't truly become culturally universalized until the last half a century or so. Two hundred years separate the first developments and implementations of the steam engine in Europe from the period to which we are referring here in Puerto Rico. Doctor Quevedo, a renowned Puerto Rican doctor and historian, offers an example in his 1949 publication, of how science and progress were conceptualized as one in the same while rendering all else deficient. He describes the world of the midwife as dark and foreign, but more importantly, as harking back before the era of "modern science" which:

guaranteed better births, thus imposing its scientific jurisdiction...because science, in no way can be responsible for irregularities, which could compromise scientific truth...The pure practice of the art of birthing followed, with all of its of rigor, and...practical triumphs of obstetrics...⁴³³

Technology and science were among the main motors driving the modern, industrialized world. Technology was a way out of underdevelopment, a liberating force of sorts. By the 1950s, science and technology could relieve the work of housewives with its washing machines and stoves, save the life of a premature baby with incubators, give women options for controlling fertility, provide fast freeways and transportation to health centers and even offer better job opportunities.

Machines and technological instruments became more obstructive and played a key role in Puerto Rican obstetrics after the mid 1960s. The electronic fetal monitor, the sonogram, anesthesia and cesarean sections exploded onto to the scene and after the

⁴³² Merritt Roe Smith and Leo Marx, "Introducción," in *Historia y determinismo tecnológico* 11-14 (Madrid, Alianza Editorial, 1996).

⁴³³ Quevedo Baez, *Historia de la medicina*, 264-65.

1970s one was hard pressed to separate them from the experience of pregnancy and childbirth. In fact, I would argue that women, and their bodies, came to accept and expect technological, medical intervention with respect to their reproduction. By the 1970s, women of childbearing age were resorting both actively and passively to contraception, abortions, sterilizations, fetal monitors, sonograms, epidurals, cesarean sections and eventually to fertilization treatments. That is to say that medical technology became a central and active part of most women's lives by the 1970s, in sharp contrast to what their mothers had experienced.

The role of the electronic fetal monitor in obstetric care illustrates the interplay between technology, medical practice and culture. The electronic fetal monitor (EFM) was developed in the 1950s but became commercially available only in the late 1960s. It then spread swiftly throughout all of the Americas and Western Europe during the 1970s.⁴³⁴ Doctor García, who specialized as an obstetrician in Puerto Rico during the early 1970s, as we read in the opening story of the chapter, recalls that "the use of the monitor at the start of the 1970s was practically automatic as soon as we had access to it, because at first we did not have it."⁴³⁵ The EFM is a machine that is usually connected to the mother during delivery to detect and record the continuous fetal heart rate as well as uterine contractions and captures movement and maternal blood flow. It is a data gathering and processing device. Initially the EFM was conceived of as technology to be employed only during high risk labors but soon was applied to the management of normal deliveries. It was initially hoped that it would alert doctors to situations of fetal distress

⁴³⁴ K. Shy, Larson and Luthy, "Evaluating a New Technology: The Effectiveness of the Electronic Fetal Heart Rate Monitor", *Annual Review of Public Health* 8 (1987) 182; Ken Bassett, "Anthropology, Clinical Pathology and the Electronic Fetal Monitor: Lessons from the Heart," *Social Science and Medicine* 42, no. 2 (1996) 283.

⁴³⁵ Córdova, *Interview with García*, 30. Also see Córdova, *Interview with Ramirez*, 20.

and lack of oxygen, which could lead to neonatal death, cerebral palsy, and retardation. The machine was accepted widely in obstetric wards long before performing evaluations or clinical trials.

A couple of decades later, once it had undergone extensive studies, there was virtually no evidence to support the link between EFM and improvement in neonatal outcomes in normal births. There was however considerable evidence between EFM and increases in the number of unnecessary interventions, which led to further complications and morbidity rates.⁴³⁶

In the United States and similarly in Puerto Rico, the EFM had several concrete effects on medical practice during labor and delivery. Cesarean rates increased significantly.⁴³⁷ The EFM tends to alarm medical staff and parents because often the fetal heart rate can seem altered or irregular when the fetus actually remains healthy and stable. EFM's allowed for or justified the reduction of nursing staff in many hospitals because it could appear to monitor the progress of labor in the absence of medical personnel. Intermittent auscultation⁴³⁸ ceased forming part of the standard of care for

⁴³⁶ Chester Martin, "Electronic Fetal Monitoring: A Brief Summary of its Development, Problems and Prospects," *European Journal of Obstetrics and Gynecology and Reproductive Biology* 78, 1998, 136; Bassett, "Anthropology, Clinical Pathology," 285. The EFM has proven to be useful during inductions and augmentations, when doctors artificially accelerate contractions, which increases risks such as rupturing of the uterus of the parturient or distressing the fetus (commonly, fetal hypoxia). The way the EFM could be useful in these cases is because it is tremendously sensitive, often giving false positives, but is rarely misread if all is well. If the EFM shows no sign of distress to the fetus, then medical staff can rest easy that the augmentation is not significantly cutting off oxygen flow to the fetus.

⁴³⁷ Ken Bassett, Nitya Iyer, Arminee Kazanjian, "Defensive Medicine During Obstetrical Care: a By-Product of the Technological Age," *Social Science and Medicine* 51 (2000), 530. The relationship between the EFM and increased cesarean rates seemed to diminish in teaching hospitals after the early 1980s. Shy, "Evaluating a New," 186.

⁴³⁸ Auscultation is to listen to the sounds made by the internal organs of the body for diagnostic purposes. For example, nurses and doctors auscultate the lungs and heart of a patient by using a stethoscope placed on the patient's chest.

laboring women after the introduction of EFM henceforth altering the dynamic between the patient and medical staff.⁴³⁹ It reduced the direct contact between patient and staff.

The EFM changed the relationship between the mother and the fetus, the doctor and the fetus, medical practice and the law, and medical staff and nature or biology. The EFM presented itself as a means to trace nature and "reveal part of nature's code" and make it permanently available for interpretation.⁴⁴⁰ It separated fetal health from maternal health and allowed experts to intervene in the name of the fetus. Often, fetal health and maternal health seemed pitted against each other for the first time. Fetus and mother were not only two individuals, each under the care and management of medicine, but both appeared to be competing over scarce resources. In some cases, the mother's laboring body seemed to be acting to the fetus' detriment and depriving it from precious life sources, such as oxygen. These impressions contrasted sharply with those that had predominated which conceived of the mother as a nurturing life source capable of great achievements and strains for her child.

Labor and delivery under electronic monitoring involve a disembodied physiological recorded set of data that is interpreted by, or at least available to, anyone who is engaged in the birthing process. It gave access to the conditions of the fetus invitro and opened them up for mathematical interpretation and evaluation throughout labor and delivery and long thereafter. "EFM recordings bypassed the constraints of any human consciousness and opened up obstetrical events to repeated interpretations spread

⁴³⁹ By the 1980s general medical staff in the United States were trained to treat mothers with the EFM but few were trained to perform auscultations. Shy, "Evaluating a New," 187; M. Lent, "The Medical Legal Risks of the Electronic Fetal Monitor," *Stanford Law Review* 5, no. 4 (April 1999) 807-837.

⁴⁴⁰ Bassett, "Anthropology, Clinical Pathology," 286.

over time and space.⁴⁴¹ It allowed the assessments and actions of medical staff to be re-evaluated by experts who were not present. In contrast, childbirth without the EFM allows the mother to retain "awareness of and responsibility for her own condition" and confines decision making processes to the nurse or doctor directly in charge of the case and following its developments.⁴⁴² The EFM facilitated reducing fetal health to the heart rate, which could not accurately stand in for overall fetal health.

The use of EFM has also had a dialectic relationship with litigation and the law, within a society everyday more vested in the standardization of clinical care and the management of risk.⁴⁴³ EFM was a contributor of defensive medical strategies. Defensive medicine is a result of perceived threat of public scrutiny and legal action. It pressures physicians to order medically unnecessary tests and procedures, which respond more to their own protection and legal pressures and less to medical savvy.

Medicine influences law by developing clinical practices seen as culturally related to patient injury; and associated documentary practices which offer the means to reconstruct relevant clinical events. Law is entirely dependent on these medical developments. But law, in turn, influences medicine through both its litigation process and judgments at trial, affecting both the behavior of individual physicians and medical standards.⁴⁴⁴

Mainstream, Western medicine has come to focus on care which identifies, categorizes and treats diseases. It revolves around the pathologies, or scientific approach to abnormalities caused by disease.⁴⁴⁵ The EFM collects data in such a way that helps to

⁴⁴¹ Bassett, *"Anthropology, Clinical Pathology,"* 286.

⁴⁴² *Ibid.*, 287.

⁴⁴³ Chester Martin, "Electronic Fetal Monitoring," 133-140; M. Lent, "The Medical Legal Risks," 807-837.

⁴⁴⁴ Bassett, Iyer and Kazanjian, *"Defensive Medicine During Hospital,"* 524.

⁴⁴⁵ Bassett, *"Anthropology, Clinical Pathology,"* 281.

treat childbirth as a pathology in need of medical management but that must be accountable to litigation.

The continued and prolonged use of technologies such as EFM despite all of the evidence against its routine use has been sustained by the newly emerging faith in the ability of technology to resolve clinical pathologies, which is ironic because while this depends on a cultural tendency to favor technology and science, the EFM was not subject to scientific-clinical validation. This is a common irony and medical scholars and scientist are well aware that the United States and Puerto Rico did not build effective mechanisms to evaluate and analyze the use and applications of new medical technologies that emerged after the 1960s.⁴⁴⁶ Technologically mediated images of bodily processes have fed into the move toward defensive medicine and high medical costs, which worried doctors in Puerto Rico and the United States by the late 1960s.

Medical historians and doctors in Puerto Rico would agree that the cult of high technology in medicine came to life in the 1970s. Doctor García points out that the rupture between medicine and public health in Puerto Rico coincided with the encroachment of high technology in medicine.⁴⁴⁷ The schools have not joined forces since then. Despite the physical proximity, these two schools have grown quite distant and communicate very little. Public Health has dedicated its efforts to community based work and prevention. The school does a lot of research relating health, medicine and social behavior or outcomes. The School of medicine focuses on cures and the clinical sciences. Dr. García claims that there has been a general disregard and devaluation of public health in Puerto Rico. Both the Puerto Rican government and Puerto Rican

⁴⁴⁶ Shy, "Evaluating a New Technology," 187.

⁴⁴⁷ Córdova, *Interview with García*, 2.

medicine have underplayed the possibilities and contributions of public health to medical practice after the 1960s. By placing birthing within the realm of medicine and less in public health, as it had been decades earlier, the tendency is to medicalize and compartmentalize it.

Standardization, Efficiency, Disease, and Reproduction

Government leaders based the industrialization project upon ideas of rationalizing society and making it more efficient and productive. This led to standardizing procedures and often eliminated the possibility to take each event as unique, distinct and individual. One prevailing doctrine was that one cannot know what one cannot measure or quantify.⁴⁴⁸ It became essential to identify what is “normal”, regular, and average in the effort to establish laws and to proceed with exactitude.⁴⁴⁹ The problem with this is that we know that human development and biology do not manifest themselves as identically progressive experiences unaffected by individual possibilities and interpretations. Bureaucratization and standardization have the effect, in part at least, of erasing individual difference and placing established standards above individual interests. This could actually produce results that undermine the predetermined goals. In birthing, the human rights of mothers could be at stake by overlooking their individual needs, decision-making processes or personal beliefs. Nonetheless, this systematic ordering became an accepted part of daily life and contemporary culture.

No disease follows identical patterns and stages nor does it respond in the same manner to drugs and treatments. Few physiological systems respond and react the same

⁴⁴⁸ Murphy-Lawless, *Reading Birth and Death*, 161.

⁴⁴⁹ *Ibid.*, 162

just as children do not learn at the same rhythm.⁴⁵⁰ What two women have identical pregnancy, labor and delivery? Doctor Ramirez exclaimed in an interview during my research that, "the only thing predictable about [laboring] women is that they are always unpredictable."⁴⁵¹ What is ironic, though perhaps useful, is that we have come to establish, accept, depend and fully operate under standardized norms even though they do not reflect the complexities of what they represent, and thereby lose precision. These attempts at establishing patterns and norms provide some comfort, predictability, and often raise standards and parity of services to a certain extent, but also alienate those involved be it in a factory, labor and delivery, or a classroom. Midwifery and older general medical practice had little interest in establishing this type of rigid standardization and was more open to individual differences. Each birthing experience was mostly left to follow its own course, whatever the outcome. It was less prone to standardize and normatize or seek mediums. This would not find an acceptable fit in the contemporary rubric of institutionalized medicine and post 1950s Puerto Rican cultural patterns.

Female reproduction was also organized in terms of efficiency and function. It needed to operate within hospitals and medical protocol. Instead of conceptualizing pregnancy, labor, and menopause as healthy life cycles, medicine and the general culture approached them as pathological disorders with possible deficiencies that posed dangers to women and at times, society at large. By conceptualizing female reproductive cycles in this way, it raised the likelihood of a woman placing her reproductive health in the hands of experts in control of scientific, specialized knowledge who could reduce

⁴⁵⁰ Canguielhem, *Lo normal y lo patológico*, 133-116.

⁴⁵¹ Córdova, *Interview with Ramirez*, 19.

disorder and normalize their deficient and problematic bodies. When pregnancy becomes a pathology, posing possible risks, the scientific expert is legitimized by a society dominated by beliefs in scientific, industrial progress. Who could justify risking something as valuable as the birth of a child by distancing it from experts and their technocratic options?

The processes related to this era of technology, science and industrialization that I have mentioned above rest on an acceptance of universal truths or tendencies. Getrude Jacinta Fraser in her book *African American Midwifery in the South* calls our attention to this dynamic. She draws on Immanuel Wallerstein's writings in *Historical Capitalism* (1983) to define the ideology of universalism, which has been a keystone of capitalist ideology. It is a set of beliefs claiming that what is knowable and meaningful can be generalized and that science can eliminate the subjective by identifying and describing these truths about our physical and social world.⁴⁵² The ideology of neutrality, a claim of positivist science, closes the doors to criticism and assigns exclusive power to science (and those who have access to scientific knowledge) and its universal truths. It becomes an instrument of social control. The probability of eliminating individual difference is related directly to the emotional distance of the observer. The natural sciences sacrifice the individual case study in order to give way to a rigorous mathematic standard of generalizations.⁴⁵³ This situates the physician on a pedestal and relegates the midwife as a curiosity of the folkloric past.

The hegemony of the medical expert feeds from these socially accepted universals as it discredits popular wisdom and trivializes the intuition or knowledge of the pregnant

⁴⁵² Fraser, *African American Midwifery*, 167.

⁴⁵³ Ginzburg, "Morelli, Freud and Sherlock Holmes," 17.

or laboring mother. The midwife does the reverse. Medical pathology establishes models of disease by means of inductive reasoning while popular medicine describes them as mosaics of cases without arriving at a particular synthesis.⁴⁵⁴ The *comadrona* gained her knowledge and training through experience and the knowledge of her own births, other women and other midwives. They were self-educated and saw each woman as different, yet capable of handling her own birthing process, which was arduous, relatively unquestioned, and innate to women. Loss or death was also interpreted as part of the natural or spiritual world, where humans had limited agency. They did not see much of a need to intervene with the pregnant and laboring body and non-physiological aspects of birthing and life were also included in the birthing process. The irrational or what was not fully understood was not considered to be necessarily negative nor was it distrusted.

Socio-cultural and economic patterns had changed and affected the definitions, expectations and interpretations of childbirth. These same changes also affected the role of women and the structure of their families, which makes for another contributing factor in the medicalization of labor and delivery.

The Role of Women

Women were targeted by local and federal academic and government leaders for different reasons with the hope of achieving change. Throughout the 1950s and 1960s Puerto Rican women, at home or in the workplace, were especially prompted to let go of

⁴⁵⁴ Joseph Comelles y Angel Martínez Hernáez, *Enfermedad, cultura y sociedad* (Madrid, EUDEMA, 1993) 1.

backward folkloric beliefs and practices and apply scientific, rational behavior, taught by experts.⁴⁵⁵ They were to stop “believing in old lies and absurd superstitions” regarding pregnancy and childrearing.⁴⁵⁶ Women were directed toward people “familiar with the scientific truth” like nurses and social workers.⁴⁵⁷ Government campaigns and public service mounted long-term and multi-faceted efforts to re-educate women and draw them into government-run institutions. The Division for Community Education, for example, distributed pamphlets, movies, and posters and went door-to-door all over the island with this kind of information and propaganda.⁴⁵⁸

In Puerto Rico after the 1930’s, women began working more outside of the domestic sphere. By 1970, employment and educational opportunities for women were different. Midwifery was once one of the few jobs available to women outside of agriculture and not directly related to work in the home such as washing and sewing clothes. Midwifery was not well paid and required plenty of personal sacrifice but it also held social prestige. It was a way of generating some extra income for the home. At the same time, it provided an intellectual outlet or a way of developing knowledge and skills for women. With industrialization came employment opportunities in factories, education, nursing, sales, and clerical work.⁴⁵⁹

⁴⁵⁵ Ibid., 18. See also, DIVEDCO, *Nuestros hijos*, 1966, 16, 24, 27.

⁴⁵⁶ Ibid., 27.

⁴⁵⁷ Ibid., 28.

⁴⁵⁸ For further information about DIVEDCO goals and campaigns directed at women see José Enrique Flores Ramos, "Mujer, Familia y Prostitución: La Construcción Del Género Bajo la Hegemonía del Partido Popular Democrático" (PhD diss., Río Piedras, University of Puerto Rico, Department of History, 2002) 57-79.

⁴⁵⁹ Marcia Rivera, “The Development of Capitalism in Puerto Rico and the Incorporation of Women in the Labor Force,” in , *The Puerto Rican Woman; Perspectives on Culture, History, and Society*, ed Edna Acosta-Belén; Alice Colón, Marya Muñoz, Nefatlí García and Idsa Altagracia, “Trayectoria de la participación laboral de las mujeres en Puerto Rico de los años 1950 a 1980,” in *Crisis, sociedad y mujer: estudio comparativo entre países de América, 1950-1985* (Havana, Federación de Mujeres Cubanas, 1988); Luz del Alba Acevedo, “Género, trabajo

The degrees of acceptance of the technocratic model of birth and of medical interventions in health vary by race and class. Robbie Davis-Floyd in her article, *The Technocratic Body and the Organic Body: Hegemony and Heresy in Women's Birth Choices*, brings to our attention studies that demonstrate that working class women had more of a tendency to resist medicalization, though white women accepted technocratic models of birth more readily. This manifestation of stratified reproduction resulted in women from higher echelons of the professional world perceiving technology and efficiency as integral to their world and thereby their reproductive health. They demanded the best of modern technology in their health care.⁴⁶⁰ Despite the economic crisis in Puerto Rico, there were more middle class women and women with higher levels of education giving birth after the mid-sixties than in the mid fifties. It would follow, then, that more women would seek technocratic services where experts would interpret the pregnant body.

Stratified reproduction plays out on many levels. Notions of class, race and gender, for example, have complex roles in birthing. These notions join forces with those related to modernity, science and techno-medicine, expertise, and standardization. For instance, the tolerance to pain is a phenomenon closely associated with race and hard to separate from social class. Race and class are closely related in Puerto Rico. "Refined," whiter women were conceptualized by doctors as weaker, intolerant of pain, and more

asalariado y desarrollo industrial en Puerto rico: la división sexual del trabajo en la manufactura," in, *Género y Trabajo: la industria de la aguja en Puerto Rico y el Caribe Hispánico*, ed. María del Carmen Baerga (Puerto Rico, Editorial de la Universidad de Puerto Rico, 1993).

⁴⁶⁰ Robbie Davis-Floyd, "The Technocratic Body and the Organic Body: Hegemony and the Heresy in the Birth Choices," in *Gender and Health: An International Perspective*, eds. Carolyn Sargent and Caroline Brettell (New Jersey, Prentice Hall, 1996) 126-128.

susceptible to illness than their darker counterparts.⁴⁶¹ In fact, this is the image that predominates about women in many parts of the world. Gender norms and ideals proposed that these fragile women needed to be protected from the agonies of birthing.

The demands of women also had an effect on interventionist strategies on the world of medicine in relation to the female body. The link between the request that women had placed upon medical science and the acceptance of medicalized births is relevant to previous claims made in this study. The struggle to obtain access to safe abortions and contraceptives in order to liberate women from their “biological destinies” brought women closer to the world of medical interventions. Women wanted to have fewer children and assure that the ones they did have would run fewer risks.⁴⁶² They did not want to leave their reproduction to chance and pregnancy and birthing is necessarily uncertain. Monitoring, cesareans, and sonograms give a sense of control and reduction of uncertainty not only to the doctor, but also to the woman. Efficiency requires avoiding difficulties and pain, not doing more work than necessary, following predetermined routines, reducing risks, incorporating expert, scientific knowledge and technological advances, and saving time. Brevity is valuable and monitoring becomes a necessary factor.

⁴⁶¹ For a discussion concerning the racial characteristics of female slaves in the Caribbean see Hilary Beckles, “Sex and Gender in the Historiography of Caribbean Slavery,” in *Engendering History: Caribbean Women in Historical Perspective*, eds. Verene Sheperd, Bridget Brereton, Barbara Bailey (New York, St. Martin’s Press, 1995); Martin Pernick, *A Calculus of Suffering. Pain, Professionalism, and Anesthesia in Nineteenth-Century America* (New York, Columbia University Press, 1985); in Ferguson, *Class Transformations*, 504, refer to a note describing the birthing pains of rich and poor woman in Puerto Rico.

⁴⁶² Referring to a study published by Vázquez Calzada, Laura Briggs explains that in 1939, 34 per cent of women in Puerto Rico used birth control compared to 74 per cent in 1968, Briggs, *Reproducing Empire*, 122.

Feminist and women's movements in Puerto Rico have not focused attention on birthing and maternal health. There have, though, been some recent breast-feeding projects and campaigns directed toward maternity rights in the workplace that have come out of women's movements and efforts.⁴⁶³ Puerto Rico does not follow the example of the United States and Europe where women's groups have mobilized to improve the care of the mother and her baby in the hope of offering greater alternatives.⁴⁶⁴ Mothers have said very little in the hospitals and about their births at a public level in Puerto Rico. It is rare to hear a mother claiming her rights over her baby and her body in a hospital or obstetric office. This silence merits further study.

The medicalization of birth alters women's self-concepts. Jo Murphy-Lawless, a scholar on reproduction, reminds us that notions about the female body are inscribed within the cultural discourses circulating at an one given time. Obstetric interventions affect how women visualize themselves. Medicine and obstetrics treat the female body as fragile and incapable of supporting and managing its own labor and delivery.⁴⁶⁵ Murphy-Lawless argues:

our experiences are constructed by obstetrics [and]... the obstetric viewpoint becomes part of our experience. And the real dilemma for us is how that process is made to appear ordinary and normal.⁴⁶⁶

Here we see the ideological frameworks of science, government, medicine, the law, and gender interacting and reinforcing each other. Women, who are subsumed in the culture

⁴⁶³ One of the more recent projects for the protection of working mothers is the P. of the C. 2944 of 1999.

⁴⁶⁴ For information on U.S. women's healthcare activism see Starr, *The Social Transformation*, 391-393; Sandra Morgen, *Into Our Own Hands: The Women's Health Movement in the United States, 1960-1990* (New Jersey, Rutgers University Press, 2002) 5,11,27.

⁴⁶⁵ Murphy-Lawless, *Reading Death*, 44.

⁴⁶⁶ *Ibid.*, 32.

of progress and science, which once served to free them from their own biology, came to believe that they were not only incapable of withstanding labor and delivery, but also that they could pose a threat to the life of their baby during that same process. The body of the parturient becomes defective, dangerous to her and her child, intolerant to pain and hard work, unpredictable and thereby needs monitoring, control, and medical intervention. It is the woman herself that demands the pharmacological and technical intervention of the obstetrician. She is a product of the ideological formation of industrialization and comes to appreciate the institutionalized birthing system of the modern world.

Conclusions

The years between 1966-1977 were significant for a variety of reasons, with relation to changes in birthing. The mass appeal and success of the Popular Democratic Party and their industrialization projects crumbled. Even so, the experience of political participation and a newfound sense of entitlement to a better quality of life within the neo-colonial framework had reached into even the most remote sectors. The general population was now accustomed to leaving their houses and waiting in long lines for many types of public assistance or in order to fulfill to the bureaucracy required by the state. Moving within institutional settings and turning to specialized service providers on a regular basis had become a part of everyday life on the island. It followed that pregnancy, labor and delivery, would also come to be seen as a natural part of this institutional world.

To this institutional matrix, we must include the powerful aggregate of scientific advances. The years between the mid 1960s and 1970s were replete with new

technologies that allowed direct entry into the human body. The public had access to heart and kidney transplants, prenatal diagnosis of Down Syndrome and neonatal intensive care, legalized abortions and hormonal contraception, and the possibility of being able to listen to and track fetal heart beats as well as watching the first fetal, invitro images by sonogram.

If we refer back to the history of birthing, we can see that specialties in medicine are relatively recent in Puerto Rico and proliferated as midwives disappeared. Specialization led to more aggressive medical practices and a higher perceptions of risk demanded expertise. At mid-century, only select physicians had adopted specialist discourses and identities, and they rarely referred to technological interventions as a sign of good medicine in birthing. By the late 1960s this was no longer the case. Medicine began to specialize and aggressively manage pregnancy, labor and delivery because it was considered, more often than not, a pathological process. Along these lines, more experts were called upon to cover the different medical sub-fields (anesthesia, perinatal medicine) and a centralized system of data collection and record keeping was needed. Specialists, technologies, and institutional areas were developed in response to these demands. And with these developments, came new anxieties.

The University of Puerto Rico's Department of Obstetrics was heavily vested in new technological developments and moved swiftly to develop a new sub-specialty in perinatal medicine. Puerto Rican obstetrics entered the realm of technology and specialties but also of defensive medicine. Puerto Rican doctors on the whole became defensive about their intentions and practice and began addressing a breakdown in the rapport between their profession and their clientele.

Childbirth was no longer centered exclusively on the mother. Medicine and its machines, had unveiled the once elusive patient inside the mother, the fetus. Obstetrics became deeply engaged in the construction of the fetal personhood. This construction of fetal personhood occurred mostly separate from the mother in a context of technological obstetric management interested in reducing clinical pathologies. Therefore the fetus was viewed as fragile, at risk, in need of defense and sometimes a victim of the mother's own physiology. Clinical pathology dominated the medical scene in larger hospitals and medical education.

Between 1966 and 1977 childbirth became medicalized in Puerto Rico. By the end of this period, midwives fell into disuse and women in Puerto Rico turned to doctors and other medical specialists to deliver their babies. Birth was no longer a private, domestic event involving the mother and her midwife or family doctor. It had become an institutional procedure, actively managed by experts with claims to scientific knowledge and technology that could be called upon to control, monitor, predict, and appear to reduce risk.

Motherhood was no longer to be trusted and left to instinct, nor was it built in with womanhood. Women and their bodies needed assistance and bringing babies into the world required expert and institutional support.

CHAPTER FIVE

STAGE FIVE- A TECHNOCRATIC MODEL OF BIRTH AND FUTURE ALTERNATIVES, 1980-1990s⁴⁶⁷

Isabel's Story

I was almost thirty years old and had been married for several years to Luis, a general practitioner trained in Ecuador and with a Master's degree in Public Health from Cuba. Having earned a degree in International Studies from Macalester College in Minnesota, I was teaching in the Puerto Rican public school system. I planned my pregnancy carefully, aiming to give birth at the end of the school year so that I would not miss classes and so I could be a home with my baby for a few months before returning to work.

I had moved to Puerto Rico a couple of years after graduating from college. Seven years later, I still had not found a gynecologist with whom I felt comfortable. A few whom I consulted asked me what was wrong, since I had not yet had children. Most were bothered that I asked questions, knew a bit about my own body and health, and requested information. I came away from my visits feeling disrespected and disillusioned.

⁴⁶⁷ As stated in the introduction, I am borrowing Robbie Davis Floyd's definition of technocratic birth as one that results from a technocratic society's core values. It conceives the mother's body as a defective machine as it assumes the inherent superiority of technologies used to correct and counteract deficiencies and improve their performance. Robbie Davis Floyd, *Birth as an American Rite of Passage*, 92.

I had never pursued radical alternative health care options, but I was skeptical of institutional medicine. Some of my skepticism had been nurtured by my mother, who was a registered nurse and trained as a nurse-midwife, though she had never practiced midwifery and worked in a community clinic instead. Before I started teaching in Puerto Rico, I had worked with the Native American and Latino community in Minnesota as an HIV-AIDS case manager and was committed to health issues and advocacy. This work expanded my appreciation of the value of traditional medicine. Luis, too, believed in incorporating alternative medicine in his practice.

When I realized I was pregnant in 1996, I started to search for options for my prenatal care and delivery. I had read a lot about pregnancy, labor and delivery and talked to many mothers about their experiences. I had already made several decisions about some things that were important to me, like breastfeeding, having family with me during my childbirth, and avoiding a "preventive" episiotomy. Luis researched the topic and found overwhelming medical evidence against routine episiotomies. Luis took this evidence to his friends and colleagues to explore their reactions and opinions. He searched far and wide for an obstetrician who would agree not to perform a routine episiotomy, for example, with no luck.

I soon realized that I would have very little, if anything, to say regarding my own labor in a hospital setting. I would not be allowed to eat, drink or move about during labor, I would not be able to have both my mother and my partner present, and I would have to fight to keep my baby in the room and breastfeed at will. It was 1996, and virtually no women nursed their babies at that time in Puerto Rico. At some point my mother mentioned the possibility of a home birth. At the time I had never heard of

anyone who had birthed at home. I began researching and reading about the home birth option and the more I read, the more I liked the idea.

I began to make phone calls and talk to women who I knew were involved with alternative health and women's issues and discovered that there were women who had birthed at home with midwives in Puerto Rico over the previous decade. After a few more phone calls I was able to get in touch with a local midwife and arranged to meet her at my house.

After meeting Debbie, a Puerto Rican woman licensed as a midwife in the United States, I had no doubt that a home birth would be the best option for me. Luis also agreed to the home birth option. Debbie met with me for over an hour, made me feel comfortable, answered my questions and set up a prenatal plan that covered diet, exercise, keeping me comfortable, and even seeing an obstetrician simultaneously. She even referred me to a few obstetricians who might be open to providing parallel care for me.

I did not feel comfortable lying about my birth plan to my doctor, so I chose a doctor about forty minutes away from my home, with whom I could share my decision to birth at home. This middle-aged Puerto Rican obstetrician agreed to monitor my prenatal care, order my lab tests, (Debbie was not legally authorized to do so) and take me as a patient if I needed to be transported to the hospital at any point during my labor. He did not know Debbie in person, but had worked with her clients before and had come to respect her practice.

I met with Debbie once a month at my home. We would discuss my diet, go over my lab tests, and talk about how I had been feeling and the kinds of things I could do to feel more comfortable or to sleep better. She would ask questions about my health, keep

track of my weight, blood pressure, pulse, water retention, and belly size. Sometimes she would do a vaginal tactile exam to check for any irregularities or infections. She put me in contact with other mothers and midwives and provided information about all kinds of topics related to pregnancy. She also helped me find a place to take prenatal classes, although she did let me know that she did not believe women needed to learn or practice breathing and control skills for labor and delivery.

My pregnancy seemed healthy and I had not run into any complications. I continued teaching until a week before my due date. My mother was staying at my home by then in preparation for the birth and my midwife was on call.

About five days after my due date, I woke up to use the restroom. My water broke as I was returning to bed. I woke up my mother and Luis and informed them. I could feel mild contractions, but they did not bother me. I called my midwife, who after some conversation on the telephone, told me to try to go back to sleep and have a good breakfast after waking up, and that she would be over later during the day, unless I felt things had progressed enough for her to change her plans. I did just that.

When I woke up again I was feeling mild contractions but was able to continue my morning routine. At lunchtime I had some spaghetti, then I covered my bed in plastic and new sheets, and made sure I was well stocked with popsicles and Gatorade, as Debbie had suggested. Later in the afternoon, I took a long walk in my neighborhood. From time to time I needed to stop walking to breathe through a contraction. My contractions were getting stronger and closer together but their spacing was irregular. I kept in communication with Debbie over the telephone and she came over in the evening, shortly after my walk.

In the late evening, after my labor had gotten more intense, I decided to retire to my bedroom. The baby was facing backward (posterior) and I was feeling pain in the lower back. Debbie, my mother, Luis, and a friend stayed with me. Debbie took my vital signs and listened to the fetal heartbeats with a fetoscope (similar to a stethoscope) every hour. She performed a few vaginal checks to follow my dilation progress. I was effacing and dilating at the same time. We sat on my bed watching a ballet on television. I concentrated all my efforts on breathing through my contractions, which were now coming every three to ten minutes. Debbie and Luis gave me hard massages on my lower back to relieve some of the back pain and pressure during my contractions. I had been in labor for a long time by then and I was getting worn out.

When I entered transition, the most intense yet shortest stage of labor during the final centimeters of dilation, I was vomiting with every contraction and my body was shaking. Debbie informed us all that I needed liquids and that I was losing strength. Debbie considered applying an IV in order to hydrate me. My mother gave me Gatorade and had me take some bites from a popsicle instead. Exhausted, I informed everyone that I wanted to go to the hospital and have a cesarean. They all looked at each other and both Debbie and Luis explained that I was already fully dilated and effaced, that all my vital signs and the baby's vital signs were fine, and that even in a hospital I would probably not get a cesarean at this point.

There was no doubt that I would have had a cesarean earlier in a hospital for several reasons. My water broke at the onset of labor and I was taking too long to deliver by medical standards. Both of these would be reason enough to order a cesarean. Most of my birthing process fell out of normative medical parameters: my contractions were

never a perfect five minutes apart, I had dilated and effaced simultaneously, and my baby was facing backward (posterior).

When I finally stopped vomiting and was ready to push, my muscles were worn out and I could barely hold myself up. I did not feel any sensation to push. Everyone decided I should try to walk to re-stimulate my labor. Debbie and Luis supported me on either side and helped me walk a bit. It seemed to do nothing. Then Debbie suggested I squat, sit on the toilet, and go on all fours, yet still I felt nothing. Somehow, I gathered some strength, stood up, held on to the bathroom wall with my right hand and the sink with my left hand and I finally felt the need to push. Debbie and Luis followed suit and crouched down on the floor under me. By then I was making noise with every pushing sensation I felt. My contractions had turned the baby and he was in the ideal birthing position (anterior).

My father, his wife, my grandmother and several aunts and uncles were all downstairs early in the morning of May 23rd praying for me and waiting anxiously. They could hear my grunts as I pushed. They were worried for us, knowing it had been a long labor. None of them had birthed at home and probably wondered why I would choose to do so.

My baby was finally crowning and Debbie let me know. She looked up at me, and for the first time, spoke in a serious tone and instructed me to muster my strength and push. I felt scared for the first time and gathered what I had left in me to push with all my might. I pushed too hard and too quickly for my own good but Diego was out in one single push. Luis received him and after the cord stopped pulsing, cut it. I had been in labor for thirty-one hours.

I sat on the ground and realized there was blood all over the bathroom. I am unsure of the exact order of things after that moment. Debbie had me get in the bathtub and told me I was hemorrhaging and that she would have to give me an injection of pitocin to stop the bleeding. She injected my thigh and all was well. Later, I sat on the bathroom floor, looked at Diego in my arms, saw that he was whole, had wide-open eyes, and was big and beautiful. My mother was busy cleaning the bathroom as other members of my family started streaming in the bathroom to look at my baby and me quietly. People left soon thereafter and Luis took baby Diego in the other room where he was cleaned and dressed.

Debbie then turned to me and said I still had to expulse the placenta. When she saw my face of disbelief, she said, "I do not normally do this, but I will give it a tug." She did, it came out, and she took it. Debbie lifted the placenta and inspected it carefully to make sure it was complete and that nothing was left inside. Luis took the placenta and buried it by a small lemon tree that we planned on giving Diego when he was older.

Before I knew it, I was in my pajamas and resting in my bed. Debbie weighed and measured Diego, checked his reflexes, and assigned him an Apgar score of nine and later a perfect ten.⁴⁶⁸ Diego was almost eight and a half pounds and looked extremely healthy. Debbie helped me breast-feed him and all seemed well.

Debbie said she needed to check my pelvic floor and that she was afraid I had some rupturing. I had ruptured vessels in my eyes and face (petequia) when I pushed Diego out and Debbie knew that my perineum was intact right before the expulsion, but she suspected that there had been some rupturing in that final push. She had only had one

⁴⁶⁸ Apgar score is an evaluation of a newborn's heart rate, breathing effort, muscle tone, color and response to stimulation.

other mother tear during a delivery, a professional ballet dancer. I had danced ballet for eight years and planned on becoming a professional dancer when I was young. Ballet dancers develop very thick and hard pelvic floors.

Debbie had Luis come over to examine me along with her. I had third degree tears and several hematomas. Debbie recommended suturing but I could not stand the thought of it and complained. I knew that most minor tears repaired themselves, but Debbie explained that these were not minor. I also knew that Luis was particularly good at stitches, so I asked if Luis could do it and agreed to getting three stitches. Debbie sprayed some local anesthetic and disinfectant and Luis took the three stitches as I quietly hummed to myself. The truth is that I did not even feel the stitches. I was finally left to rest.

Debbie stopped by the next day and checked on Diego and me, asked us how the breastfeeding was going, if I had gotten rest and eaten, and if I felt ok. Debbie stopped by the following week as well and called me from regularly for a couple months after birthing. I continued to talk to Debbie from time to time and in 2000, when I was doing my Master's research on the history of midwifery at the University of Puerto Rico, Debbie was the person who gave me the documents produced by the novoparteras (new group of midwives) and who referred me to other practicing midwives for my interviews.

Introduction and Chapter Overview

This final chapter addresses three issues that are fundamental to the history of birthing for different reasons: the legal climate that enveloped obstetrics; the explosion of surgical births; and the resurgence of home births as new alternative for women in Puerto

Rico in the 1980s. Accordingly, this chapter contains three main sections. In the first, I address the legal climate around obstetric practice because of the tremendous impact it has had. During my archival research as well as my interviews with doctors, I was impressed by the persistence of fears of malpractice suits expressed by doctors. Given the sharp rise in insurance premiums and the dissemination of high profile law suits in the media, it is not surprising that the threatening legal climate in which obstetricians work influenced their practice. Secondly, I examine the process by which cesarean section rates in Puerto Rico became among the highest in the world.⁴⁶⁹ This phenomenon, I argue, emerged from the same process of the medicalization of birth that resulted in the elimination of midwifery.

Finally, after midwifery practice disappeared in the late 1970s, a very small group of five midwives, whom I call *novoparteras* (new-midwives), began attending births at home once again after the 1980s. The number of women choosing home births, like I did, has slowly grown both in Puerto Rico and in the United States. Considering this and the recent lull in obstetric practice and new residencies, as well as the international pressures against the over-use and abuse of technocratic birthing methods and in favor the incorporation of nurse-midwives, another shift with regard to birth attendants in the decades to come is likely. The number of obstetricians has recently diminished in both the United States and Puerto Rico. The Puerto Rican Department of Health has once

⁴⁶⁹ Centro de Investigaciones Demográficas y José Vazquez Calzada, *El Matrimonio Legal, Las Madres Solteras, Los Partos por Cesárea y el Cuido Prenatal*, San Juan, Escuela Graduada de Salud Pública y Demografía de la Universidad de Puerto Rico, Number XVII, December 1993, 16.

again sanctioned the use of nurse-midwives in rural areas with limited access to near-by physicians.⁴⁷⁰

The population these new midwives served changed significantly from that of the 1950s-1970s. Women delivering their babies at home during the 1960s tended to come from less social privilege and had less formal schooling than those delivering in hospitals. They were not making a conscious effort to seek health care alternatives and more control in their lives. In contrast, the women choosing home births in the 1980s and 1990s were middle class and highly educated women who sought a central role in their birthing experiences. This home birth option, though marginal, allows us to challenge many of the assumptions that our medicalized contemporary culture has built around birthing and represents a small form of resistance to mainstream birthing practices and options.

Civil Rights, Patients, Doctors, and the Medico-Legal Climate

The Popular Democratic Party's campaigns following the 1940s to bring the population around the entire island under its plans for social equality and development were later picked up by Puerto Rico's other major parties: the New Progressive Party, which was pro-statehood and more conservative, and the third most influential party of the time, the Independence Party, which participated in more progressive grassroots efforts. All political leaders after the 1950s were conscious of the fact that Puerto Ricans came to expect access to basic needs --education, food, housing, employment, and health-- as part of their civil rights. This was true regardless of where people's allegiances were on the political spectrum. And even though Puerto Ricans were participating in

⁴⁷⁰ José Fernandez, "A parir en las casas," *El Nuevo Día*, Tuesday, 16 October 2007.

enormously diverse political organizations around the island as well as in places like New York and Chicago, there were never any powerful or broad new health movements that were able to influence health care in Puerto Rico after the 1970s, as there were in the United States.⁴⁷¹

By the 1980s there were several important efforts by activist and non-profit organizations to address some specific health-related issues, but their impact on general health reform and patient rights was limited. There were very few voices in Puerto Rico, for example, calling for the demedicalization of critical life events such as birthing. The critics who focused on controversial issues such as the overwhelming numbers of sterilized Puerto Rican women were mostly based in the United States, while in Puerto Rico an ever-increasing number of women was seeking out this permanent surgical solution to family planning. This was true despite the history of abuse Puerto Rican women had endured in early experimentation efforts with the contraceptive pill, Emko cream, the IUD, Depo Provera and coerced sterilizations.⁴⁷²

There was grassroots activism around women's issues during the 1980s and 90s and some organizations, like Grupo Pro Derechos Reproductivos (1990s), Taller Salud (1979), Asociación Puertorriqueña Pro-Familia, and El Frente Socialista (1980s), among others, were concerned with issues like domestic violence, abortion rights, family planning, sex education, maternity leave, and fertility control.⁴⁷³ There were also efforts to expand health food options and different forms of natural medicine, but all of these

⁴⁷¹ For information on 1970s U.S. women's healthcare activism see Starr, *The Social Transformation*, 391-393; Morgen, *Into Our Own Hands*.

⁴⁷² Alice Colón-Warren and Idsa Alegría Ortega, "Shattering the Illusion of Development: The Changing Status of Women and Challenge for the Feminist Movement in Puerto Rico," *Feminist Review*, no. 59 (Summer 1998) 105, 109-110.

⁴⁷³ *Ibid.*, 108.

remained marginal alternatives to biomedicine. Many women were attracted to prenatal classes influenced by the Bradley method or Lamaze and a few obstetricians began allowing husband-coaches and using breathing techniques in their delivery rooms. Everyone from insular and federal government representatives to radical feminists had been so focused on family planning, often for different reasons, that they have had little need or energy to include birthing rights on their agendas.

The consequence of the civil rights movements and the pressures of all the different health rights movements in the United States reached Puerto Rico in the form of new laws and protocols incorporating patient rights. Perhaps most importantly, courts were, by the 1980s, more inclined to "view the doctor-patient relationship as a partnership in decision making rather than a doctor's monopoly."⁴⁷⁴ Patients had the right to informed consent, to see their medical records and to enjoy equal access to care.⁴⁷⁵ The way that this often played out was that patients realized that they could appeal to the justice system in reprisal for negligent or harmful medicine. Patients did not gain a sense of entitlement or equal footing when they were under the actual care of the physician or in a hospital setting. In turn, doctors knew that they were vulnerable to patient litigation in the courts and this led doctors and hospitals to practice defensive medicine. And defensive medicine did not mean "better" medicine. Medical practice had to conform to local standards of practice, which now included high rates of cesareans, were not always supported by research, and constantly weighed risks in accordance to many different forces of power with conflicting interests.

⁴⁷⁴ Starr, *The Social Transformation*, 389.

⁴⁷⁵ *Ibid.*

Health care in the 1980s was managed by a complicated set of corporate interests. Medical administrator Ivan Colón published an article in the Puerto Rican Medical Association's journal in 1987 on the modern concept of medical risk management. He explained that modern medicine involves a dependency on biomedical technology and complex administrative processes that regulate medical practice.⁴⁷⁶ According to Colón risk management is the relationship between insurance and quality control.⁴⁷⁷ The motors that drive technocratic medicine and create a demand for risk management include an array of paradoxical elements. These include: medical technologies that usually increase the complexity and risks of medical practice⁴⁷⁸ as well as the costs, while becoming a necessity for documentation and diagnostic purposes; cost control, which limits interventions doctors and hospitals may perform; quality of patient care, which requires more guarantees all the time as patients become more frustrated and demanding with their care; and the stipulations of regulatory agencies such as Medicare, the Health Department and the Joint Commission.⁴⁷⁹ Risk management needs to juggle all of these issues and administrators like Colón are well aware that medical practices need to operate within all of these parameters and avoid crossing pre-established protocol.⁴⁸⁰ The autonomy of the individual physician as well as the patient is constrained within this

⁴⁷⁶ Ivan Colón, "La práctica de la medicina moderna y el concepto de administración de riesgos," *Boletín de la Asociación Médica de Puerto Rico* 79, no. 10 (October 1987) 423.

⁴⁷⁷ *Ibid.*, 424.

⁴⁷⁸ As medical interventions increase, the subset of possible reactions, errors, and reactions increase as well. Many medical interventions set off a chain reaction of physiological responses in the patient, each requiring monitoring techniques to offset side effects. For example, slow labor is stimulated by the drug pitocin, which could artificially increase contractions, thereby increasing pain and the possibilities of a ruptured uterus. Pain medication is then provided for the intense contractions and the mother might get nauseous. Also medical staff will be more attentive to the electronic fetal monitor and be more prone to alert the obstetrician to any possible signs of fetal distress. The level of tension in general increases, adversely affecting labor and calling on an ever-expanding menu of medical technologies.

⁴⁷⁹ *Ibid.*, 423.

⁴⁸⁰ *Ibid.*, 424.

context, which is ironic as many of the reasons for these constraints stemmed from efforts for increased professional autonomy and patient rights.

Medical historian Paul Starr explains how the factors described by Colón have a snowball effect on one another, transforming medical practice into the complex web of technocratic medicine it has become today in his influential book, *The Social Transformation of American Medicine*.

The dynamics of the [corporate medical] system in everyday life are simple to follow. Patients want the best medical services available. Providers know the more services they give and the more complex the services are, the more they earn and the more they are likely to please their clients. Besides, physicians are trained to practice medicine at the highest level of technical quality without regard to cost...No limits were placed on the number or variety of medical specialties, while specialists received higher insurance reimbursements than general practitioners. Almost every conceivable encouragement was given to hospitals to grow. Most insurance covered hospital care; doctor's services, if given in hospitals, were more likely to be covered and paid at a higher rate.⁴⁸¹

Though Starr is referring to the United States after the 1960 turn toward high cost, exaggerated medical interventions and hospitalizations, he also provides us with some insight as to how Puerto Rican childbirth practices were prone to similar dynamics.

The Puerto Rican Department of Health confirmed these same tendencies in the medical system in its 1980 report, "Health Facility Statistics." The Health Department explained that Puerto Rican health services had experienced a proliferation of insurance companies subsidized by the public and private sectors, and a tendency to increase the number of services and specialized referrals given to each patient per symptom. The 1980 report stated that hospitals often charged insurance companies excessively for

⁴⁸¹ Starr, *The Social Transformation*, 386-387.

incurred expenses.⁴⁸² By the mid-eighties hospital admissions for obstetrics and gynecology composed just over 27 per cent of all admission, second only to internal medicine (29%).⁴⁸³ The corporatization of medicine described above and technocratic models of birth that facilitate the over-use of medical interventions probably contributed to excessive cesarean operations in birthing as well.

The inertia of contemporary institutional medicine juxtaposed with efforts to protect patient rights produced stresses which lent themselves to a dynamic of legal animosities. Obstetricians have been among the most sued of all medical specialists, and there were an increasing number of lawsuits through the 1990s, but there were also many misconceptions that fed the state of fear in which obstetricians live and exaggerate the actual threat of a lawsuit. Obstetricians have been acutely affected by the exorbitant premiums of required malpractice insurance and are under the impression that the high prices resulted from the number of settlements and payments companies have had to give plaintiffs and lawyers. Obstetricians feel they have been victimized and have suffered disproportionately and unjustly in a culture that favors patient rights and powerful lawyers. Many even view insurance companies as victims of the overuse of the legal system. This legal climate and the exorbitant cost of insurance premiums with which obstetricians live are cited by obstetricians as the main reasons why they abandon their practice and why others have chosen not to specialize in obstetrics.

A medical litigation lawyer, José Velázquez, in his book, *Crisis de Impericia Médica*, challenges these ideas. He claims that there is no malpractice crisis and that

⁴⁸² Puerto Rican Department of Health, *Statistics on Health Facilities, 1980*, San Juan, Puerto Rico, 1980, 11.

⁴⁸³ Puerto Rican Department of Health, *Annual Report on Health Facilities Statistics, 1985-86*, San Juan, Puerto Rico, 59.

very few cases make it to court unjustly. In those cases that did progress and were proven in the year 2000 in Puerto Rico, an average of 27,750 dollars were paid to the plaintiff as compensatory payments, whereas in the United States it was 125,000 dollars.⁴⁸⁴ Velázquez argues that the impressive cost of malpractice insurance premiums or the lack of availability of coverage is not due to the number of lawsuits or the money paid in legal settlements.

According to Velázquez, the first crisis in medical malpractice coverage occurred in the United States in the early 1970s as a result of the low returns and losses that insurance companies faced on their investments due to the crisis in the stock market and low interest rates.⁴⁸⁵ This crisis affected Puerto Rico, but never reached crisis proportions, despite the media frenzy and reactions it provoked within the medical community on the island. Velázquez makes a good argument that this, just as the three crises that followed, was imported from the United States and manipulated by medical leadership, insurance companies, and the media. During the 1970s crisis, many insurance companies providing medical malpractice coverage to hospitals and doctors either ceased providing services or raised their premiums significantly in the United States.⁴⁸⁶ In Puerto Rico, however, the first insurance companies dedicated exclusively to medical malpractice were coming to life.⁴⁸⁷

⁴⁸⁴ Velázquez estimates that only one of every twenty people who are victims of malpractice decide to take legal action in Puerto Rico (page 24) and 65 per cent receive compensation, but less than 2 per cent actually make it through the judicial system, where decision are divided 50/50 in favor or doctors or patients (page 70). Velázquez, *Crisis de Impericia Médica. ¿Mito o Realidad?* (Buenos Aires, Ediciones Sítum, 2003) 156.

⁴⁸⁵ *Ibid.*, 23-25.

⁴⁸⁶ *Ibid.*, 24.

⁴⁸⁷ *Ibid.*, 35.

Velázquez claims that after the publicity generated in the United States and in Puerto Rico about the crisis in malpractice insurance, the rise in premiums, doctors without coverage, the increase in lawsuits, and the exaggerated compensation payments to patient-victims, the Puerto Rican public became more prone to sue for malpractice. A "litigation consciousness" was born in the late 1970s in Puerto Rico, about at the same time Velázquez was beginning his law career. By the 1980s most of the island was urbanized and accustomed to seeking specialized medical care in institutional spaces.

The breakdown of the doctor patient relationship in the 1960s and 1970s, in large part, was due to this urbanization and professional specialization, when medical care moved out of the domestic sphere and the doctor was no longer a member of the local community and connected to the family. While the post-industrial culture had deemed doctors with a newfound scientific authority, which the state sanctioned, it also identified doctors as strangers and part of the corporate, institutionalized world. Once patients learned that the hand that healed was also capable of harm and that patients could demand compensation for any wrong doing, litigation increased. By generating public concern over malpractice, doctors unknowingly rendered themselves more vulnerable to malpractice claims.⁴⁸⁸

As a result of the financial crisis of the insurance companies in the U.S. in the late 1970s, the medical community in both the U.S. and Puerto Rico have given a great deal of attention to legal actions taken against them. In 1982, the Puerto Rican Medical Association's publication, *The Bulletin*, began including a new section titled "Medicolegal Decisions" which provided summaries of recent court cases related to medical malpractice cases from all over the United States. There are no cases from

⁴⁸⁸ Ibid., 39.

Puerto Rico listed in this section from 1982 to the present. This coincides with Velázquez' point about the importation of the United States' legal crisis to Puerto Rican shores.

Even the United States Army cashed in on doctors' the legal fears in a full page advertisement in the Puerto Rican Medical Association's Bulletin.⁴⁸⁹ The headline boldly stated, "Dr. Collins isn't paying his medical malpractice premium this year." The advertisement goes on to explain that the army would do the worrying for any physicians so that they could dedicate their time and energy to the practice of medicine instead of paperwork and medical suits. Army doctors could count on a good benefit package and would have their malpractice insurance covered by the government.

A series of medico-legal reforms were passed in the 1980s in response to a second perceived crisis in the area of medical malpractice coverage and lawsuits. Several laws were passed to set limits to the amount of compensation awards to victims of malpractice in government institutions and to require all hospitals and doctors to provide annual proof of insurance coverage or a personal fund of 300,000 dollars per individual physician.⁴⁹⁰ High risk specializations, such as obstetrics and neurosurgery, were required to take out more substantive policies. During the early 1980s there were few insurance companies offering malpractice coverage in Puerto Rico and almost all were United States companies. In response to the call for help and the growing concerns of doctors, the government created a medical insurance union in 1986. The union, called Simed, would provide insurance policies to medical practitioners and would be comprised of all the authorized insurance companies operating in Puerto Rico.

⁴⁸⁹ *Boletín de la Asociación Médica de Puerto Rico* 75, no. 4 (April 1983).

⁴⁹⁰ Velázquez, 47-52.

Doctors have not been the only practitioners affected by their relationship to the law. The history of legislation pertaining to birth attendants provides insight into the position of the state regarding the appropriate care and standards required during childbirth. We have covered this legal history through the 1970s in previous chapters, but had yet to carry it into the 1980s. The history of birthing would take a new direction in the 1980s.

Final Stage of Laws Related to Birth Attendants

The final change related to legislation directly affecting midwives was law 112 of 1980 (amending law 22 of 1931 which regulated midwifery and birth attendant licenses). Professional associations were permitted to nominate candidates and submit them to the Governor for consideration, demonstrating the potential power of organized labor representation.⁴⁹¹ The most noteworthy change related to midwives in this law was that the word “midwife” disappeared and the power of professional associations expanded. This is a sign that the only people who were presumed to be attending births were doctors in hospitals. Legal documents no longer mentioned home births and midwives (including the Department of Health Annual Reports). With this law, midwifery became deregulated, opening the path, ironically, to greater independence, yet pushing them into anonymity. The midwife was not recognized legally just as she was not specifically marked as illegal. According to this law, however, one is required to have a license in order to assist a delivery. Since there was no means of acquiring a license to practice in Puerto Rico, midwives could only assist a delivery illegally. As far as the law and the

⁴⁹¹ Law 112 of 1980, 2.

Department of Health were concerned, midwives no longer played a part in Puerto Rican society.

One group that was able to react to the deregulation of midwives within the new legal and cultural parameters was the Nursing Association. In 1985 the Board of Nursing Examiners authorized a register for obstetric nurses under the 1965 Law 121, which regulated nursing. Nurse midwives have graduated in the last decades on occasion in Puerto Rico, but found it very difficult to find work as midwives within the biomedical system in the 1980s and 1990s.

Powerful medical institutions could have feasibly trained midwives to fulfill new technical and scientific expectations. Yet this did not occur. Instead, midwives could only achieve a “legitimate” status by placing themselves within officially recognized biomedical power structures. Legal recognition, however, World have altered practice. Even though it brings status, visibility, and privileges, the professionals involved are less inclined to contradict imposed standards and might self-censor their behavior in order to avoid penalties and to maintain their license, making innovations or change difficult. In the case of midwives, and especially novoparteras (about whom I elaborate below), this could have serious implications, since their practices did not necessarily follow dominant medical patterns. Midwives and obstetricians have often had differing understandings of what the birthing process is and how it should be handled.

Some nurse-midwives joined obstetrical teams, thus giving up their independence and putting themselves under authoritative, interventionist, and predominantly male medical supervision. Midwives therefore situated themselves in inferior roles in a context where all decisions and supervision was to be done by people outside of their profession. One could even argue that in this scenario they no longer acted as midwives,

but rather as nurses, and, in this way, disappeared. The law thus suppressed midwifery and redefined it under the medical domain. Midwives did not participate in these procedures of supervision and legal decision-making concerning their practice.

In the penal code of 1974 there was a reference to obstetric nurses.⁴⁹² It described the requirements for obtaining a license to practice. It required nurses to be of legal age and in good mental and physical health, have good moral standing, have a diploma from a recognized high school, have conducted 25 normal births under medical supervision in a recognized clinic and to have passed a written exam. Surprisingly, in section 1191 of the 1974 penal code, midwives (not obstetric nurses) were briefly mentioned in a regulation that requires them to register with the local district registry, which should then submit the registration to the Secretary of Health. The text refers only to this process of registration and nothing else. In the eighties, one of the few new Puerto Rican midwives (novoparteras) attempted to follow this registration procedure.⁴⁹³ She wrote a personal letter to the Secretary of Health inquiring about the midwife registry and the auxiliary midwife exam, which she knew had fallen into disuse. She had met the Secretary, Izquierdo Mora when she, as a paramedic, attended his mother during an emergency. Izquierdo Mora responded and promised to look into her inquiry. A second letter was sent, but the midwife never received an answer. Midwifery had fallen into legal limbo.

The local history of birthing regulations and licensing exposes the links between the law, culture, and social power structures. These elements affect each other constantly in ever-changing reciprocal ways. Because midwives have no legal standing in Puerto Rico, medical practitioners and institutions protect themselves by avoiding them. There

⁴⁹² See chapter three, in the section about the Medical Board of Examiners, section 49, of the current Penal Code. The Penal Code I refer to was in place from 1974-2004.

⁴⁹³ Isabel Córdova, *Interview with Rita*, 19 February 2002, 26.

are physicians on the island who would be open to collaborating with midwives but their malpractice insurance and licensing regulations do not permit it. Midwives' lack of legal standing generates hostility between them and other medical practitioners. The same schisms develop between any sort of alternative medicine and institutional, mainstream practice. The possibilities of sharing knowledge and experience are severely limited. Patients are forced to choose between obstetricians and midwives. The pregnant woman must choose either to work with a midwife, with no access to existing medical structures or health insurance, on the margins of the law, or with an obstetrician, who is legally regulated and therefore restricted and bound to accepted protocols.

There are a few obstetricians, who novoparteras (new-midwives) such as the one who attended my son's birth, have identified as allies. These physicians have agreed to attend pregnant women who hope to birth at home with a midwife. Some women, such as myself, are able to make longer trips to visit these obstetricians while they are under the care of midwives and elaborate a birth plan with both birth attendants. Other women, who plan home births, choose not to disclose their birth plans to their obstetricians. Doctors who might otherwise be willing to attend a home birth cannot do so for the same reasons they cannot work with midwives.

The legal and administrative context in which birthing practices developed after 1980 placed birthing in a tense relationship with doctors, insurance companies, and technology. New options, medical insurance coverage, more hospitals and access to the latest technologies did not always work to benefit the health of the mother and infant. In other words, despite the rising costs and availability of options, the post 1980s technocratic model of birth did not necessarily provide superior healthcare. Analyzing

the rise in cesarean section deliveries allows us to explore some of the reasons for this counter-intuitive outcome.

Cesarean Sections

After the 1970s, when birthing in Puerto Rico had adapted a technocratic model, deliveries by cesarean section skyrocketed and, in some hospitals, became as common as vaginal deliveries. In 1989 a new category was included on Puerto Rican birth certificates, in order to track the methods of birth. Since then, Puerto Rican birth certificates have informed whether the birth was by cesarean section. Half of all 1989 births in private hospitals were by cesarean sections.⁴⁹⁴

Table 5.1: Selected Cesarean Rates in Western World, 1985

Brazil	32%
Puerto Rico	29%
United States	23%
Uruguay	17%
England	10%
Spain	10%
Czechoslovakia	7%
Netherlands	7%

Source: Turner, "Cesarean Section Rates, Reason for Operations Vary Between Countries," *Family Planning Perspectives*, 22:6 (Nov-Dec 1990) 281.

⁴⁹⁴ Instituto JTPA del Caribe, *Puerto Rico: Los Recursos Humanos en Cifras*, [unknown date], 29. The trend of higher cesareans in private hospitals is significant and worldwide. In Brazil by 2002 cesareans reached 70 percent. See Mukherjee, "Rising Cesarean Section Rate," *Journal of Obstetrics Gynecology of India* 56, no. 4 (July/August 2006) 298.

Table 5.2: Selected Cesarean Rates in Western World, 2002

Puerto Rico	45%
Mexico	39%
Brazil	37%
Italy	36%
United States	26%
England*	22%
Czech Republic	14%
Netherlands*	10%
<u>Honduras</u>	<u>8%</u>

Source: Betrán AP, Merialdi M, Lauer JA, Bing-Shun W, Thomas J, Van Look P, et al. "Rates of Caesarean Section: Analysis of Global, Regional and National Estimates." *Paediatric Perinatal Epidemiology*. 21 (2007) 98–113. S N *Mukherjee, "Rising Cesarean Section Rate," *Journal of Obstetrics Gynecology of India* 56: No. 4 (July/August 2006) 298

Since the 1980s, Puerto Rico has maintained its rank among the countries with the highest rates of cesarean deliveries. The United States also has ranked among the top five, but always under Puerto Rico.⁴⁹⁵ United States and Puerto Rican cesarean rates were similar in the 1980s but while rates in the United States remained relatively steady, they doubled in Puerto Rico in the next two decades. Doctors in Puerto Rico are much less likely than doctors in the United States to allow a woman who has had a previous cesarean to deliver vaginally.⁴⁹⁶ This partly explains the higher cesarean rates on the island. Interestingly, the rates of cesareans increase with the age and levels of schooling of the mother. This is true throughout the world. This links the trend toward surgical deliveries to social class.

The public health sector served the majority of pregnant women in Puerto Rico, just as it had in previous years. Yet by the early 1990s a third of the Puerto Rican population had some sort of private health insurance, almost always through employers.

⁴⁹⁵ R. Turner, "Cesarean Section Rates, Reason for Operations Vary Between Countries," *Family Planning Perspectives* 22, no.6 (November-December 1990) 281.

⁴⁹⁶ In 1989 repeat c-sections in the U.S. were 28 per cent and in P.R. 42 per cent. Vázquez Calzada, *El Matrimonio Legal*, 4.

Accordingly, 62 per cent of mothers delivered their children in government hospitals and only 38 per cent delivered in private hospitals.⁴⁹⁷ The differences in obstetric practices and definitions in these two sectors are worth noting.

Private hospitals and hospitals serving women from higher social classes performed cesarean sections more frequently. At the same time, women from higher social sectors tend to receive better prenatal care and have better health outcomes than women from less privileged social sectors. Yet obstetricians from private hospitals in 1991 reported many more complications and risk factors during their deliveries. As an example, encephalo-pelvic disproportions were reported at 12 per cent in private hospital deliveries compared to 2 per cent in public hospitals.⁴⁹⁸ Private hospitals were consistently performing cesareans in 27 to 73 per cent of their deliveries.⁴⁹⁹ During the same year, in the University District Hospital, among Puerto Rico's leading medical institutions, where the most complicated cases from across the island were referred, the cesarean rate was 27 per cent.⁵⁰⁰

Further clues that surgical births were largely motivated by socio-cultural factors and not solely by medical need are found in the widely varied rates among regions and public and private sectors. Table 5.3 lays out some of these disparities. During the same year and in the same region one can observe that cesarean rates can be over twice as high in private hospitals than in public hospitals. This is not always true, and there are regions where the differences are less dramatic, and cesarean rates vary greatly from hospital to hospital as well.

⁴⁹⁷ Ibid., 13.

⁴⁹⁸ Ibid., 14.

⁴⁹⁹ Ibid.

⁵⁰⁰ Ibid., 15.

Table 5.3: Cesarean Section Rates by Region and Sector

REGION	C-SEC p/1000 live births 1980*			C-SEC p/1000 live births 1984**		
	Public	Private	% more	Public	Private	% more
North	152	307	102%	132	338	156%
Northeast	268	416	55%	224	512	130%
East	219	293	34%	211	378	80%
West	138	325	136%	227	426	88%
South	112	190	70%	165	354	115%
Metropolitan	212	395	86%	229	502	119%

*Puerto Rico Department of Health, *Health Facilities Statistics*, 1981-83, San Juan, p. 64. ** Puerto Rico Department of Health, Annual Report of *Health Facilities Statistics*, 1984-85, San Juan, p.82

According to medical standards, cesarean sections should be performed when the well-being of the mother or baby is at stake. If these standards have been followed in Puerto Rico, doctors have found between one fourth and half of all deliveries to be abnormal or problematic. The physiology of almost half of all laboring mothers are therefore directly dangerous to themselves or their offspring. How does this affect contemporary definitions of motherhood and the female body? What does it mean that nearly half of all mothers in Puerto Rico have come to believe that they were unable to rely on their capacity to deliver their babies safely?

Is it true that birth was more dangerous for babies in the 1980s and 1990s than the previous thirty years? Is the high incidence of cesareans related to improved rates of maternal and infant mortality and morbidity? How do we explain that countries like the Netherlands and Czech Republic, ranked among the best for infant and maternal mortality and morbidity rates, are also ranked as having among the lowest cesarean section rates? Why did the midwives delivering babies at home in Puerto Rico in the

1980s and 1990s find themselves able to deliver a minimum of 95 per cent of their clients' babies without cesareans, medications, or episiotomies, without provoking lawsuits or poor neonatal and maternal outcomes, as we will see further on in this chapter? We know there are no easy answers to these questions, but it would be no stretch of the imagination to accept that among the array of factors that might form part of the discussion is that changes in birthing practices related to cesareans did not merely rely on "objective" scientific evidence, but included shifts in the socio-political and cultural environment.

Whereas in 1950 a pregnant woman could safely assume that she would be birthing vaginally, by the 1990s women were well aware that their babies had a good chance of being taken out of their wombs surgically. In 1950, medical standards classified doctors with rates of cesarean deliveries higher than 10 per cent as incompetent. In the early 1960s cesarean rates constituted just over 5 per cent of all deliveries on the island. They went up to 27 per cent by 1980, around 33 per cent by 1990, and over 40 per cent by 1996.⁵⁰¹ In the 1950s cesarean sections were surgical, life-saving procedures and not precautionary or preventative. They were to be performed only as a last resort, when the mother's life, and in rarer cases the newborn's life, was in danger because they posed more danger to the mother in 1950, than they do today. As has been stated in previous chapters, doctors strived to maintain low cesarean rates because a high rate could have a negative impact on their medical practice. In the 1990s birth by cesarean was cast in a new light by doctors and patients. Cesareans came to be associated

⁵⁰¹ Vazquez Calzada, *El Matrimonio Legal*, 2, 4; and Center for Disease Control and Prevention: Morbidity and Mortality Weekly Report, "Rates of Cesarean Delivery Among Puerto Rican Women-Puerto Rico and the U.S. Mainland, 1992-2202," *JAMA* 295, no. 12 (March 2006) 1369-1371.

with good obstetric practice and could even protect doctors from possible lawsuits, while leaving recent mothers feeling more grateful and reassured that she had been served by a highly qualified specialist.

Doctor Ramírez, who has practiced medicine since the 1950s, offered his reasoning behind the rise in cesarean section deliveries over the course of his experience as an obstetrician. Ramírez graduated from medical school in 1956 in Philadelphia and later returned to do his specialization in obstetrics and gynecology in the late 1960s. In the interim, he spent several years in Germany with the United States military as a military doctor in maternity services. Later, after years of practice in Puerto Rico, he dedicated much of his time to the education and training of future obstetricians. Ramírez does not allow partners to enter the delivery room, holds rather conservative positions regarding women, labor and delivery, and was probably the first and only doctor to administer epidurals to his own patients in 1969 without the help of an anesthesiologist.⁵⁰² He practices episiotomies in 98 per cent of his deliveries.⁵⁰³ I say this to establish that he is a proponent of medicalized births and does not favor alternative birthing practices. During his practice in Germany, the cesarean rate there was 3 per cent whereas in his current practice in the San Juan Municipal Hospital, it is 30 per cent.⁵⁰⁴ Ramírez explained that, "a single baby born with damages (condiciones)...costs millions" and that the fear of lawsuits drove up the cesarean rates.⁵⁰⁵ Ramirez insisted that many doctors resort to cesareans as a pre-emptive strategy to defray potential malpractice suits. Doctors do this under the premise that if anything goes wrong during the delivery or with

⁵⁰² Córdova, *Interview with Ramírez*.

⁵⁰³ *Ibid.*, 23.

⁵⁰⁴ *Ibid.*, 10.

⁵⁰⁵ *Ibid.*, 10-13.

the future of the child's development down the road, women and the legal system will not have the doctor to blame if a cesarean was performed. A cesarean is evidence that the medical team did all it could for the mother and child, according to this line of thought.⁵⁰⁶

Doctor Carmona, another obstetrician whom I interviewed during my research for this project, elaborated on his views concerning the rise in cesareans. All doctors mentioned the rise in cesareans as one of the changes birthing has undergone over the past several decades. Carmona argued that obstetricians have ceased resorting to interuterine maneuvers and no longer deliver babies in any position that is not the ideal, vertex presentation.⁵⁰⁷ He went on to say that doctors are no longer trained to deliver a breech baby, nor do they know how to assist when an infant's shoulder is delaying a delivery, for example. Furthermore, doctors refuse to perform less invasive manual maneuvers because they fear that if anything goes wrong they could confront accusations of malpractice.⁵⁰⁸ Obstetricians such as Carmona act on the premise that problems that occur in the course of a vaginal delivery are the doctor's fault whereas a cesarean delivery will free a doctor of responsibility.⁵⁰⁹

Another reason for the increase in cesareans, according to the doctors interviewed, was the substitution of forcep deliveries with cesareans. Despite the evidence against forcep deliveries, which resulted in the elimination of forcep training in obstetric curriculum both in Puerto Rico and the United States by the 1980s, the obstetricians I interviewed were not critical of forceps use, though they voiced their awareness of this shift. Many implied that if doctors could resort more often to forceps

⁵⁰⁶ Ibid.

⁵⁰⁷ Córdova, *Interview with Carmona*, September 27, 2005, 20.

⁵⁰⁸ Ibid., 22.

⁵⁰⁹ Ibid., 21.

deliveries, they could prevent many of the cesarean operations. This was a perplexing argument that I suggest is born from the effort to respond to current concerns about the high cesarean rates while ignoring previous medical research and controversies because they no longer form part of current conversations and concerns.

The trend toward specialization and increasing reliance on new technologies and expert assistants is another explanation for the rise in cesarean sections, according to several obstetricians. Doctor Mulero spoke of a marked improvement in medical facilities and the access to a variety of specialists, making for safer operative options, in addition to the fact that these surgical options became more accessible and familiar than before.⁵¹⁰ Despite the overall recognition that cesareans carry a higher risk of complications and increase in recovery time, doctors are comfortable and familiar with the procedure, which only in rare cases threatens the mother's life. If we add the fact that the specialized medical industrial complex also supports and pays for operative procedures carried out in hospital settings by experts, then this makes for a convincing component of the argument explaining the rise in cesareans. We should also add that cesareans are more predictable and can be scheduled better than labor and the post-industrial Puerto Rican society lives under stricter time planning than during the 1950s.

According to Ramirez, in the San Juan Municipal Hospital, cesarean rates for first time mothers are only 12 per cent, but if those with a previous cesarean are included, it rises to 30 per cent. This tendency is similar all over the island and is due to the fears surrounding vaginal births after cesareans, known as "VBACs." Every doctor I spoke to in Puerto Rico, whether in formal interviews or informally, expressed a strong fear and quick reaction to VBAC, with the exception of those doctors (and midwives) such as Dr.

⁵¹⁰ Córdova, *Interview with Mulero*, 25.

García, whose story opened chapter four, who do not ascribe to common local medical conventions. Doctors in many countries around the world practice VBACs successfully. The VBAC rate in the United States is higher than in Puerto Rico. Doctors in Puerto Rico cite a couple of very rare, yet dramatic cases in which mothers with previous cesareans ruptured their uteruses during labor, as the reason they are not willing to perform a VBAC. So in Puerto Rico, with rare exceptions, the saying, "once a cesarean, always a cesarean," has held true. Modern western medicine classifies vaginal deliveries as the normal, preferred, and safest form of birthing. Most women are aware that a cesarean involves surgery and carries some risk, but also know that there are risks attached to pregnancy, labor and delivery.

Table 5.4: Cesarean Complications

CONDITIONS PLACING A PATIENT UNDERGOING CESAREAN DELIVERY AT INCREASED RISK FOR COMPLICATIONS
Cesarean delivery on a pre-term pregnancy
Grand multipara
Placenta previa
Placenta accreta
Repeat cesarean on a patient with extensive adhesions
Morbidly obese patient
Fetal anomalies
Transverse fetal lie
Maternal coagulopathy
Large uterine fibroids
Any maternal medical problem that would make anesthesia hazardous
COMPLICATIONS OF CESAREAN DELIVERY
Injury to maternal bladder
Injury to maternal bowel
Extension of uterine incision into uterine arteries
Extension of uterine incision into the cervix or vagina
Uterine atony
Dense adhesions from previous surgery
Hemorrhage from placental implantation site
Uterine rupture
Wound hematoma
Endomyometritis
Wound infection

With the advent of blood transfusions, improved anesthesia, and antibiotics, many of the more common and fatal risks related with cesarean operations were greatly reduced.

What many doctors were aware of, but very few women know, however are the complications that have accompanied cesareans in the last three decades, risks that risesignificantly after a second and third cesarean, which in Puerto Rico is almost guaranteed if a woman has an additional child or children.

Obstetricians claim that more than one cesarean delivery is high risk and multiple cesarean deliveries entail so much risk, that they recommend avoiding further pregnancies all together. Therefore, according to medical guidelines, making the decision to perform a cesarean, is simultaneously making the decision of either avoiding future children or putting the mother's wellbeing at considerable risk.⁵¹¹

International, Federal, and National Goals for Maternal Health and Midwifery

Important health organizations have issued many statements of concern over the rising rates of surgical births since the 1980s. The World Health Organization urges countries to maintain their cesarean rates below 15 per cent and the American College of Obstetrics and Gynecology also recommends maintaining cesareans below 15 per cent, but only for first time mothers.⁵¹² Often, international health organizations promote midwifery as a solution to high health costs, poor birth outcomes, and high cesarean rates.

⁵¹¹ Renate M. E. Hager, Anne K. Daltveit, Dag Hofoss, Stein T. Nilsen, Toril Kolaas, Pal Oian, Tore Henriksen, "Complications of Cesarean Deliveries: Rates and Risk Factors," *American Journal of Obstetrics and Gynecology* 190, no. 2 (February 2004): 428-434.

⁵¹² Mary Lou Moore, "Reducing the Rate of Cesarean Birth," *The Journal of Perinatal Education* 11, no. 2 (2002) 41-2.

There are many international health organizations that promote and support midwifery. This would probably come to a surprise to many in Puerto Rico. These groups establish guidelines and suggestions that influence hospital staff, nurses and obstetricians around the globe. In 1985, for example, the World Health Organization held several important conferences in Brazil and in California to establish appropriate birthing technologies. The routine use of medical interventions such as episiotomies, cesarean sections, electronic fetal monitoring, shaving, enemas, induction, rupturing membranes and the use of analgesics and anesthesia were analyzed and criticized.⁵¹³

Many of these international pressures and concerns have been adopted by the United States government. In the U.S. health objectives for 1990, the United States concluded that it wished to reduce neonatal and maternal mortality and lower the low birth baby rates.⁵¹⁴

The few midwives assisting homebirths in Puerto Rico since the 1980s have significantly higher breast-feeding rates. They have lower cesarean, maternal and infant mortality rates, and deliver fewer underweight babies than the national averages. In fact, they have always surpassed the goals set by the United States Department of Health for 2010. According to a study done by Debbie Díaz and Merixa Cabrera of the University of Puerto Rico's School of Public Health, completed in 1999, the percentage of babies

⁵¹³ Díaz and Cabrera, "El servicio," 33.

⁵¹⁴ The United States concluded that it wished to reduce neonatal mortality (in Puerto Rico it was fifteen in 1980) to 6.5 for every 1,000 births and reduce maternal mortality rates from 9.6 in 1978 (in Puerto Rico it was around ten in 1980) to five per every 100,000 births. The United States wished to lower the low birth baby rates from 7 per cent in 1978 to below 5 per cent. José Rigau, "La salud durante el embarazo y el primer año de vida en Puerto Rico: progreso hacia los objetivos nacionales de salud para 1990," *Boletín de la Asociación Médica de Puerto Rico* 78, no. 6 (June 1986) 246-7. The number of low birth weight babies born in Puerto Rico is particularly high, floating at about 10 per cent during the 1980s and 1990s. In 1994, Puerto Rico had an infant mortality rate of 11.5 of every 1,000 live births, maternal mortality was at eight per 100,000, and only 4 per cent of new mothers breast-fed their babies. Díaz y Cabrera, "El servicio de las parteras," 96.

born underweight under the care of midwives on the island was 1.7, cesarean sections never surpassed 4 per cent, 98 per cent of mothers breast fed their infants and 89 per cent of all their clients were able to successfully deliver at home as planned without compromising the well being of the mother or child.⁵¹⁵

Novoparteras (new-midwives)

The late 1970s and 1980s were periods of reformulation and transformation for midwifery. Midwifery practices died out to be born again under a new guise. These were not the same auxiliary midwives⁵¹⁶ from the 1950s who did not manage to defend or adapt their practices during the overwhelming changes of colonial industrialization. The very small group of midwives of the post-industrial period came imbued with new knowledge and the intention to sustain their principles and autonomy. They are the bridge between the ancient legacy of midwives and the demands of modernity.

I will refer to this post 1977 group of women midwives as *novoparteras* and those pertaining to the initial group of government-licensed midwives between the 1930s and 1970s as *comadronas auxiliares*. I use two distinct terms for several reasons. The terms *parteras*, *comadronas* and *matronas* have been used interchangeably in Puerto Rico and can lead to confusion. Even so, there are periodic preferences and titles carrying determined meanings in particular historical moments that I try to maintain. It also serves us better to distinguish between the midwives who worked from 1946-1977 and those who began working after the 1980s. Though they are kin to the *comadronas auxiliares*,

⁵¹⁵ Ibid., 95.

⁵¹⁶ Midwives that were officially recognized and licensed before the 1970s were identified as auxiliary midwives. See legal history and explanation in chapter one for more information.

the *novoparteras* are clearly distinct. The post 1980 midwives refer to themselves in their documentation and international presentation as, “*grupo de parteras puertorriqueñas*” (Group of Puerto Rican Midwives). *Partera* is the Spanish word for midwife stemming from *parto*, meaning birth. This term is used more frequently today. *Comadrona*, meaning with the mother, is another way of naming the midwife in Spanish. Although this is also used regularly, it tends to be utilized more often in relation to midwives previous to the 1970s. The Department of Health referred to their licensed midwives as *comadronas auxiliares* through the 1970s.

Novoparteras: Definitions and Statutes of Practice

The novoparteras met formally for the first time in 1997 to put together what they titled as the *Special Documents of the Midwives of Puerto Rico*.⁵¹⁷ In these documents, they defined their profession and established their statutes of practice, among other things. The definition for midwife (*partera*) that the group adopted was elaborated in accordance with the International Confederation of Midwives (ICM) and the Federation of Gynecology and Obstetrics (FGO) and adopted by the World Health Organization (WHO).

A matron is someone who, after being regularly admitted to an educational midwifery program, duly recognized in the country in which it pertains, has completed successfully the required courses and acquired the competence required of her in order to be authorized to practice as a midwife. She should be able to offer supervision, care and advice to women during their pregnancy, birth and postpartum stages: to direct births under her own responsibility and bestow care to newborns and/or the nursing child. This care includes preventive measures, the detection of

⁵¹⁷ These documents were revised in 1998.

abnormal conditions of the mother or child, attaining medical assistance and the performance of emergency medical care in the absence of medical assistance. She has an important task of advising and educating in areas of health, not only for the women, but also within the family and the community. The work should include prenatal education and preparation for maternity and extends to areas of gynecology, family planning and infant care. It may be practiced in a hospital, private practice, health center, at home or in any other service.⁵¹⁸

The requirements that the novoparteras suggest in their documents for midwifery practice include a High School diploma, the completion of midwifery courses, university level classes in anatomy, physiology, microbiology, embryology, pathology, genetics, psychology and botany, and licensure in cardiopulmonary resuscitation for adults and infants. Additional recommendations include requiring midwives to have attended twenty births supervised by certified midwives, and ten births outside of a hospital setting, to have carried out seventy-five prenatal examinations (twenty of which should be intakes prior to prenatal care), twenty newborn exams, and forty postpartum exams, and to have obtained a midwifery certificate and follow up with continued education.

The novopartera documents include a brief section on the history of midwifery from biblical times, a definition of the profession, statutes for practice, the health criteria they require of their patients, their declaration of values for infant and maternal care as well as their vision of the maternal cycle and health in general, and finally their professional requirements. The documents reflect profound knowledge of international standards and public health issues. The documents reflect the novoparteras' concern with securing autonomy and respect for their profession. This intellectual effort to organize and document their practice is one of the first clear differences between the comadrona

⁵¹⁸ Parteras de Puerto Rico, "La Ciencia de Partear: Documentos Especiales de las Parteras de Puerto Rico." 1997. My translation.

auxiliar and the novopartera. The novoparteras are organized, informed about all aspects of midwifery, and determined to remain as an alternative to mainstream maternal health institutions. They are willing to confront the challenges of the modern industrial world and have formed ties with other midwives on a local as well as international level. Their educational requirements are high and they are trained in several health related fields. Their “values are born from the respect toward life, scientific knowledge and the necessary empirical understandings to manage the gestation, puerperal and birthing processes of the human being.”⁵¹⁹

The Novoparteras and International Organizations

Unlike previous Puerto Rican midwives, the novoparteras sought a niche within the worldwide midwifery network. The contacts and international affiliations gave them significant strength. One of these groups is the International Confederation of Midwives. In 1919 the International Confederation of Midwives (ICM) was founded in Belgium. The ICM is recognized by the World Health Organization (WHO) and the United Nations Children’s Emergency Fund (UNICEF). The definition of midwifery that was drawn up by the ICM, together with the International Federation of Gynecology and Obstetrics (1972), was ratified by the WHO.⁵²⁰ This is the same definition that the novoparteras of Puerto Rico used. In 1982 the Midwife Alliance of North America was created (MANA).⁵²¹ This organization grouped midwives from the United States, Canada and Mexico. Puerto Rico is included in MANA due to its status as U.S. territory. The

⁵¹⁹ Parteras de Puerto Rico, “Declaración de valores,” *Documentos especiales de la parteras de Puerto Rico*, 1998.

⁵²⁰ Díaz and Cabrera, “El servicio de las parteras,” 23.

⁵²¹ *Ibid.*, 48.

MANA is a member of the ICM.⁵²² Several of the novoparteras are United States Certified Professional Midwives (CPM) and members of MANA.

Who Are the Novoparteras?

The midwife resurfaced in Puerto Rico at the end of the 1970's, reflecting a shift in expectations and culture from the earlier comadrona's social reality. In 1978 there were two women who began attending home births. One worked in the area around *Rincón* (western side of the island) and the other in *Luquillo* (eastern side).⁵²³ The *Rincón* midwife was North American; the *Luquillo* midwife Puerto Rican. Another woman, born and raised in San Juan, studied midwifery in the United States from around 1980-1982. Between 1983 and 2002 she attended over 400 births successfully.⁵²⁴ A fourth woman, after meeting with the other two still in Puerto Rico, began attending prenatal exams in 1986 with the second midwife in the area of *Luquillo* and, in 1991, studied midwifery in Texas.⁵²⁵ She too returned to Puerto Rico to work as a midwife. Another United States midwife came to the island to work for two years around 1997-99.⁵²⁶ In 1998, a final Puerto Rican midwife joined the group.⁵²⁷ The latter two midwives are not specifically included in this study because they started their practice after the 1990s. Each of these novoparteras had formal training in several health-related fields.

⁵²² Ibid., 29.

⁵²³ Isabel Córdova, *Interview with Ruth*, June 18, 2000.

⁵²⁴ Isabel Córdova, *Interview with Rita*.

⁵²⁵ Isabel Córdova, *Interview with Debbie*, December 6, 2001, Santurce.

⁵²⁶ Isabel Córdova, Follow-up Telephone Interview with Debbie, March 26, 2002.

⁵²⁷ Ibid.

Although these five women attended an insignificant percentage of births in the country compared to obstetricians, they have made a disproportionate impact in the local media. They have been featured on television programs⁵²⁸ and were covered several times a year in the printed press.⁵²⁹ They offer an alternative for pregnant women, represent Puerto Rico in international forums, publish articles in external midwifery publications,⁵³⁰ and form a part of the coordination of the RELACAHUPAN, Latin American and Caribbean Network for the Humanization of Childbirth.⁵³¹

Ruth: The Bridge Between the Past and the Present

Ruth, mother of six, was born in Santurce, Puerto Rico in 1938. Her father was a *quincallero* (street vendor) and her mother a seamstress. Ruth's postsecondary education was originally in secretarial work. She was accepted to the University of Puerto Rico in Biology, but she never actually attended the University for personal reasons. She trained with the first group of naturopathic physicians that was formed on the island.⁵³²

⁵²⁸ Cordova, Interview with Ruth, 44. There have been a couple more women entering the practice of midwifery after the 1990s.

⁵²⁹ Marilyn Vincens, "La comadrona, una especie que no esta extinta," *El Nuevo Día*, Monday, 9 September 1996, 46-7; Janirah Figueroa, "El oficio divino de las parteras," *El Vocero*, Monday, 8 May 2000, 58-9; Teresita Heydrich Blanco, "Al Natural . . .," *El Nuevo Día*, Monday, 6 May 2002, 60; Lymari Vélez Sepúlveda, "Parteras del nuevo siglo," *Buena Vida*, September, 2002, 82; "Parto en el Hogar," *El Nuevo Día*, 2 September 2007; Sara del Valle Hernández, "La Guía Natural Hacia La Luz," *El Nuevo Día*, Friday 6 July 2007, 28-29; Libni Sanjurjo Melendez, "El Control del Alumbramiento," *Primera Hora*, Monday, 22 October 2007; Libni Sanjurjo Melendez, "El Derecho de Dar a Luz en la Casa," *Primera Hora*, 22 October 2007.

⁵³⁰ Debbie Díaz, "Part of a Distant Past; Tracing the History of Midwifery in Puerto Rico," *International Midwife* (Summer 1995) 17-18.

⁵³¹ See web page, www.relacahupan.org/lared.html.

⁵³² She was a colleague of Carmen Martínez, Ivan Martínez, Mariano Otero and Rubén Marchand, all recognized in Puerto Rico and the United States as distinguished naturopathic doctors. Naturopathy is an accessible and well known alternative medical field in Puerto Rico, but operates at the margins of institutional biomedicine.

According to Ruth, naturopathy is an extension of her upbringing.⁵³³ Without being trained formally in naturopathy, her mother practiced it. Naturopathic medicine treats health conditions by utilizing the body's inherent ability to heal. Naturopathic physicians aid the healing process by incorporating a variety of alternative methods based on the patient's individual needs - nutrition, herbal medicine, and homeopathic medicine, among others. Diet, lifestyle, work and personal history are all considered. As a young adult, while living for a brief period in California, Ruth trained as a Home Health Aid, a sort of home nurse. She later studied kinesiology and also trained in reflexology, natural childbirth methods, acupuncture, and Cardio Pulmonary Resuscitation. She has studied these different techniques throughout her life in Puerto Rico, Pennsylvania and California. Besides naturopathy she has been practicing midwifery since 1978. In contrast to the other novoparteras, Ruth has not had formal training in midwifery.

In Ruth's words: "I am a midwife simply because life led me without me realizing it...I love it."⁵³⁴ She interprets her role as a midwife as being "an instrument of God."⁵³⁵ She attended her first birth unexpectedly. In the late 1970s, while she was working in a health food store in the east coast of Puerto Rico, a couple came in to solicit her help in the birth of their first child. They were determined not to go to the hospital and decided to solicit Ruth's assistance because she had six children of her own and was trained in natural medicine. At that time Ruth had never witnessed a birth in her life. Yet when she realized that the couple would otherwise birth alone, she agreed to assist them. Ruth thought that if anything happened, she could at least send for help. Even so, she insisted that they first visit an old midwife from the area who was retired from practice.

⁵³³ Córdova, *Interview with Ruth*, 7.

⁵³⁴ *Ibid.*, 25.

⁵³⁵ *Ibid.*, 30.

The former midwife gave them instructions, which Ruth followed when she received the baby. A year had not gone by when a second mother, a psychologist, came looking again for her services. Ruth explained that she was not a midwife, but finally agreed to study together with the expectant mother in order to prepare for the birth. They consulted with doctors, read many books and took CPR courses. In time, Ruth continued consulting with other older midwives and educating herself about pregnancy and labor. From then on, mothers have continued to seek her help.

Ruth has attended over 230 pregnancies and deliveries and has the most impressive statistics among the novoparteras. Of the 230, 228 have given birth with her. She explained during her interview that she has never turned a woman down for any reason including complications or risks because she has been able to control diabetes. All women and babies under her care have concluded pregnancy and postpartum in optimal health. She transported two women to the hospital in very stable condition.⁵³⁶ One of the transports resulted in a cesarean section. She has never had the need to use stitches because her mothers have never experienced noticeable perineal tears. Ruth reported that she has never been confronted with any medical complications in any of the 230 birthing experiences that she assisted.

Mothers receive scrupulous prenatal care with Ruth. Some see a gynecologist as well. Ruth visits the pregnant women at home on a monthly basis. She reviews and asks about their diets, emotional health, hours of sleep, television consumption and exercises in a detailed manner. Toward the end of gestation, visits increase to every two weeks. She monitors the mother's diet, water consumption and exercises, teaches about proper

⁵³⁶ These women were taken to the hospital because of what Ruth explains were fears and insecurities that arose in these women during labor, coupled with long labors.

nutrition and, if necessary, provides instruction for cooking alternatives and recipes. On occasion, Ruth performs pelvic examinations and checks for infections or irregularities.

For the actual birth, Ruth takes her herbs, teas, natural antibiotics, a thermometer, stethoscope, fetoscope, clamps, pitocin, scissors and gloves. She checks the mother and the baby's vital signs regularly. Ruth provides birthing mothers with perineal massages with olive oil and when it comes time to push the baby out, she manually protects and supports the perineum. A mother is never left alone. Generally Ruth works alone, but, on occasion, one of her family members accompanies her. She, in turn, occasionally accompanies other midwives and might also invite a midwife to her births. The father, who is usually present during labor and delivery, cuts the umbilical cord, unless he declines. Whomever the mother wishes to have present may be there, but Ruth does ask for silence during the contractions. Pain is controlled with breathing techniques that are taught in the prenatal care phase, as well as reflexology and acupressure.

During postpartum, Ruth inspects the baby and the mother carefully. She weighs and measures the newborn, takes its vital signs several times and makes sure that everything is in order before leaving. Golden Seal is applied to the baby's eyes as well at this time. Golden Seal is a natural disinfectant and antimicrobial herb with several medicinal uses. During the following days, Ruth visits the family several times, keeping records on each mother. Before meeting with the other novoparteras, Ruth would leave the decision of payment to the family's discretion. This changed when the Group of Puerto Rican Midwives made the decision to standardize costs so that the clientele would not be swayed by economic factors at the moment of making birthing choices among

them. The novoparteras did not want economic matters to affect their relations with clients.⁵³⁷

Ruth describes her "mothers" (clients) as marvelous and particularly intelligent. Ruth claims that her mothers are brave and adamant about birthing at home. They are willing to adapt their lives in order to achieve better health and bring their babies to the world in the best possible manner. They do not want outside intervention and trust Ruth. Her clients come from all religions and beliefs and have different nationalities.

Rita: Naturalist and Emergency Medical Technician

Rita was born in 1955 in Old San Juan, where she grew up. She is the daughter of a military enlisted man/postal worker and a housewife. Rita studied to be a secretary and accountant in a vocational school and later enrolled in the Interamerican University during the late 1970s. She majored in psychology and anthropology. Later, she completed courses in pre-medicine and natural medicine in Puerto Rico and on occasion in Oregon in the early eighties. Rita went to Santa Fe, New Mexico to study midwifery at a center for midwifery and natural medicine called Santa Fe Midwifery and Healing Arts. During her time there, midwifery and natural medicine separated into separate schools in order to become accredited. Rita obtained her certification in midwifery but needed to find a place to fulfill her practice requirements in order to be licensed. Instead, she returned to Puerto Rico to study Emergency Medicine in the University of Puerto Rico Medical Sciences Campus. Her paramedic license (EMT) was put to good use for

⁵³⁷ Costs for services in 1996 were broken down as follows: \$300.00 for prenatal care, \$300.00 for the birth (if transported this cost is eliminated) and \$100 for postpartum care.

the following ten years as she worked as a paramedic or EMT instructor. Not satisfied with her training she went back to the U.S. to study midwifery again in El Paso, Texas at the Maternity Center La Luz, but this time it included clinical practice in a birthing center. She trained there for a year and two months. Concerned about not having enough practical experience and too much theoretical preparation, Rita decided to join a Mexican obstetrician, Dr. Matarita, whom she met at the clinic, and his Cuban wife in a mobile medical unit that traveled through northern Mexico providing ambulatory medical services to women. Upon returning to Puerto Rico, Rita needed to find a steady job and was unsure as to how to begin working as a midwife. Therefore, she worked and taught emergency medicine with the Puerto Rican Department of Health. Eventually she made contacts with the La Leche League and began attending births after 1983. It was then that Rita came into contact with Ruth. By this time Rita was married and chose to move to the United States one more time, this time in order for her husband to pursue graduate studies. Rita returned to Puerto Rico when her husband was offered a job in Puerto Rico in the tropical rainforest of *El Yunque* after the 1989 devastation of Hurricane Hugo. She has lived and worked as a midwife in Puerto Rico ever since.

Rita has attended over 400 births outside of the hospital setting. She has transported 2% of her mothers to hospitals. These transports mostly resulted in a cesarean section. Of her total births, she recalls two emergencies that were transported to the hospital where they were handled without further repercussions. She has resorted four or five times to the episiotomy. Rita reported maternal and fetal death rates of zero among her clients.

Rita requires an initial interview with all the women who seek her services. There she makes sure that the mother is clear about what a homebirth entails. They discuss

what their expectations are and determine whether they would work well together. No one is accepted until the first laboratory results are obtained indicating normal levels of sugar and hemoglobin. Rita does not take clients with uncontrolled high blood pressure nor does she do premature deliveries. She does a medical and personal history, monitors the gestational development of the mother and baby and develops a birthing plan with the mother. She never attempts to persuade a mother to birth at home. This decision must come from the mother. Rita is very clear and insistent about this. The woman must be willing to learn, be open and honest, and enter in an intimate relationship with her midwife. Rita prefers beginning prenatal care in the very early stage of pregnancy. If during the pregnancy a health condition develops that could put the mother or baby at risk, the mother is dropped as a homebirth client.

Rita takes four bags with her the day of the actual birth. She has equipment for medical emergencies, oxygen, pitocin, and herbs and homeopathic plants. Rita assists the mother with massages and suggests positions for the different stages and circumstances that might arise. Rita is very comfortable with the use of herbs and alternative medicine. The atmosphere and place of the birth are up to the mother. She varies and adapts her strategies in accordance with each woman. After the birth, Rita stays with the family for four or five hours. Before leaving, she makes sure that breastfeeding is established, the mother is bathed, has gone to the bathroom, has the necessary assistance she requires and that she is properly fed.

Though the costs of Rita's services for her labor are predetermined, she has only received payment for a third of her jobs. It is clear to her that one cannot make a living as a midwife this way. Like other novoparteras, Rita does not possess a business spirit nor does she have the mechanisms to follow up with charges and debts owed to her for

her services. The practice would have to be restructured, midwives would have to work in teams and prices would have to increase in order for midwifery to be a realistic or attractive professional alternative. If health insurance in Puerto Rico would cover birthing expenses with midwives, as it does in other countries, midwifery could be a feasible career alternative as well.

Rita's clientele exceeds average levels of education. Her clients have an inclination toward alternative medicine and liberal ideals, according to Rita. They are almost without exception women "who feel affectionate toward everything having to do with the family."⁵³⁸ They are mothers who want a lot of control over their bodies and birthing experiences.

Debbie: Organizer and Unifying Force

Debbie was born in 1964 and was raised between Hato Rey, Isla Verde and the United States. Her father worked in casinos his entire life and was an athlete. Her mother was a secretary. Debbie finished her high school diploma through a program similar to the GED option in the United States. She studied at both the University of the Sacred Heart and the Interamerican University, receiving a B.A. in History. Before completing her B.A. she began reading about midwifery.

In 1990, Debbie graduated and decided to go to Texas to train as a midwife in the clinic Maternidad La Luz. This school was led and staffed completely by direct entry midwives.⁵³⁹ It is located in El Paso and its clinic serves mostly Mexican women and

⁵³⁸ Córdova, *Interview with Rita*, 54.

⁵³⁹ Direct entry midwives are those who have trained exclusively with midwives without having gone through medical institutions

United States women of Mexican decent. The school is state certified to train midwives. The curriculum included neonatal resuscitation, physiology, pathology, breastfeeding, pharmacy, herbs, homeopathy, and emergency procedures. Students are required to attend births for seven months intensively on a daily basis. After returning to Puerto Rico, Debbie took 30 more credits in natural science and successfully completed a course for paramedics. In 1997 she began graduate studies in the University of Puerto Rico's Medical Science Campus in the School of Public Health, where she completed a Masters degree.

A decade earlier, when Debbie learned that her neighbor had delivered her baby at home under Ruth's care, she immediately sought contact with Ruth. In 1986, Debbie initiated conversations with Ruth and began accompanying her to her prenatal appointments. Debbie relates her roots in midwifery to her grandmother who was a healer and *espiritista*.⁵⁴⁰ One of the values among the novoparteras is the recognition of their ancestral roots of their profession. Debbie explains stating, "I feel as if a thick silver [umbilical] cord connects me to the midwives from before."⁵⁴¹ Coming from a matrifocal family, raised among strong women, who were educated feminists who supported each other always, Debbie feels that midwifery is a way of adding to and participating in the physiological and intuitive power of women. To her, midwifery is a way of working in an atmosphere of profound respect for and in collaboration with other women.

After ten years of work as a midwife and over 100 deliveries, Debbie has seen 89 per cent of her mothers deliver full term at home. The women whom she transports the most frequently are first time mothers. She had one case in which the fetal heartbeat was

⁵⁴⁰ Espiritistas communicate and work with the spirit world. There is a longstanding tradition among women in *espiritismo* in Puerto Rico.

⁵⁴¹ Córdova, *Interview with Debbie*,10.

so erratic that she decided to transfer the mother to a hospital. She has never had a complication or emergency situation that was not handled adequately. She does not practice episiotomies, and though she is prepared to suture (she has done so three times), put in an IV, and use oxygen or pitocin, she rarely has to resort to any of these measures.

According to Debbie, “ a midwife is an expert in keeping health balanced.”⁵⁴²

The novopartera believes in collaborating with other professionals. She makes all necessary referrals. During pregnancy, the mother will probably visit a gynecologist and complete a battery of tests that will allow risks to be identified or ruled out.

The clients are told that if at any time during the pregnancy, delivery, or postpartum a complication is detected they will be referred to a hospital or placed under a physician’s care. In the prenatal stages the midwife does what she can to prevent or revert anomalies such as preeclampsia. This is almost always achieved and care can continue as planned, but in the case that health cannot be restored or maintained, the client will not remain under Debbie’s care. Visits with Debbie take place once a month in the mother’s home until the thirtieth or thirty-second week of gestation, when visits increase to every two weeks. In the thirty-sixth week, Debbie begins to see the mother on a weekly basis and she goes on alert.

In a prenatal visit the physical and emotional status of the mother is discussed, questions are addressed, and the blood pressure is taken, as is the maternal temperature and pulse. The most basic element in the care of the mother and fetus is to follow a proper diet. Debbie measures the fetus, listens to heartbeats of both mother and child, and checks for symptoms of preeclampsia, urine infections and toxemia. Visits last at least 45 minutes.

⁵⁴² Ibid., 16.

The mother is responsible for providing impermeable bed pads, cotton, rubbing alcohol, oxygen peroxide, baby hats, clean sheets, and Gatorade (to maintain maternal levels of hydration) for the delivery. Debbie stays with the mother for the duration of the labor. She takes vital signs regularly during the contractions with her fetoscope and stethoscope. If Debbie needs to resort to extra help, she depends on her herbs and tinctures and also biomedical drugs, such as the pitocin that she used after my delivery (in case of slow contractions or hemorrhaging, for example). To intervene with the savvy of the woman's body is not prudent in Debbie's opinion. Although Debbie believes that there are women who do not listen to their body signals and sometimes panic, thus requiring more intervention than others, for the most part women know instinctively what to do. Without instructing the birthing mothers, Debbie has found that they, on their own, situate the best movements and positions in order to work through their needs. Normally Debbie finds that she does not have to suggest what would be best or most comfortable. "The best mothers that birth are those who are in tune to the signals that their body gives."⁵⁴³ The father who is willing receives the baby. The protocols that determine when someone should be transported are discussed clearly and established ahead of time between the family and the midwife.

For the postpartum period, Debbie thoroughly verifies that the entire placenta was expelled. She observes the health of the woman and newborn (checks bleeding, ruptures, heart rates, etc). The baby is inspected from head to toe. She checks the height and weight of the child, the intestines, heart, lungs, and testicles, among other things. During the first hour following the delivery, the mother lactates to stimulate the involution of the

⁵⁴³ Ibid., 33.

uterus, reduce bleeding and bond with the newborn. This postpartum care takes from four to six hours. Then on the following, fifth, twelfth and thirtieth day Debbie returns.

Debbie describes her clientele as women interested in alternative medicine, who are open to exploring new approaches to health. They are educated and demanding mothers. Most are concerned with being well balanced emotionally and physically and follow good diets. Debbie informs us that women approach her at different stages of their pregnancy, though most frequently during their sixth month. Debbie's relationship with her clients is very close. Mothers choose their midwife, but midwives also choose their clients, according to Debbie. The relationship between the mother-to-be and her midwife develops in an intimate process in which they interact and connect on an emotional level.

In the same study mentioned earlier from the University of Puerto Rico's School of Public Health, Díaz and Cabrera drew from a randomized sample of 53 mothers who birthed at home with the novoparteras. These mothers were all asked the same questions regarding the services that they had received from the novoparteras.⁵⁴⁴ The age range of the mothers was between twenty-five and thirty-nine at the time of their homebirth. Most were married and had no particular religious affiliation. Sixty per cent of the women had obtained a college degree and 30 per cent had done some form of graduate studies. Twenty percent of these women were from the United States, representing an unusually high amount and 68 per cent were Puerto Rican. The income of clients varied from between 1,000 to 2,000 dollars a month for 43 per cent of the mothers to over 2,000 dollars a month for 42 per cent, making for a predominantly middle class clientele.⁵⁴⁵

⁵⁴⁴ Ibid., 105.

⁵⁴⁵ Ibid., 108-122.

Every mother interviewed classified the services rendered by the novoparteras as excellent or very good and reported that they would have their next baby in the same fashion.

Though the novopateras have not had much of an effect on obstetrics, the success of their practice challenges many of the premises of mainstream obstetrics. They challenge the assumption that the only safe and proper place to deliver a baby is in the hospital with episiotomies, electronic fetal monitors, IVs, and epidurals. At the same time, they remind us that home births are not for everyone and that these novoparteras have not yet presented their career as economically feasible within the current system. They know that they cannot make a living wage to support a family by practicing midwifery as they have thus far on the island. The practice of the novoparteras has been one influenced and reinforced by transnational forces. Novoparteras have responded to international tendencies and represented Puerto Rico at international forums. In addition, they have exposed their practice in the local media to such an extent that most people I spoke to in Puerto Rico have heard of them, and when I mention them to obstetricians now in the new millennium, they are less likely to react quickly with a condemning comment as often did in the 1990s.

Conclusions

By the 1980s improvement in childbirth outcome statistics had peaked. Medical practice and the autonomy of physicians were constrained by new and powerful players who represented corporate interests such as insurance companies as well as hospital and government administration and management. Risk management strategies attempted to

straddle patient rights and corporate interests, which often played out in detrimental ways for both mothers and obstetricians. Doctors began incorporating defensive practices out of fear of facing malpractice litigation instead of acting solely according to their best medical judgment. As a result, cesarean rates in Puerto Rico were among the highest in the world, becoming nearly as common as vaginal deliveries in some hospitals by the 1990s.

Though few grassroots efforts existed to curtail the technocratic approaches to birth or offer more birthing alternatives, and even though mainstream culture and legislation had eliminated the options of homebirths and midwifery, five midwives have kept the profession alive in Puerto Rico. These midwives attended the homebirths of over a thousand women over the 1980s and 1990s, but remained a marginalized option. The projection of this handful of midwives, however, far surpasses their numbers and the numbers of their clients.

CONCLUSION AND EPILOGUE

The first eight years of the new millennium have been ridden with controversy and new directions in the area of childbirth practices and practitioners. The Puerto Rican press has questioned the very survival of obstetric practice in Puerto Rico and a new government-sanctioned public health initiative to incorporate and extend the services of nurse midwives has begun. There is good reason to suspect that the next twenty years will witness another important shift in birthing practices. Changes will probably be characterized by extremes and reflect growing social disparities. Before discussing some of the recent controversies surrounding childbirth providers, we will take a moment to review key factors in the history of birthing that brought us to the new millennium of technocratic childbirth.

The history of birthing in Puerto Rico from 1948 to the 1970s was one of extremes as well. It would be a challenge to find a country, regardless of its size, where you could document such rapid changes in birthing practices. In a period of less than two decades, birthing ceased being a predominantly domestic, mother centered event, with little intervention, and midwives as the most common attendants. In mid-century Puerto Rico most women lived relatively isolated lives in rural areas and had limited resources and education levels, although this varied according to class. Rural and poorer women almost exclusively birthed at home behind closed doors in the presence of their midwives. By the 1970s midwives had disappeared and over 98 per cent of women in

Puerto Rico birthed in hospitals with doctors. Births were monitored and almost all women experienced childbirth with pain medication and episiotomies, and were connected to electronic fetal monitors and IVs. A little later, between a fourth to half of all women delivered their babies by cesarean operations and surrounded by medical health care specialists moving about the maternity ward. Birth itself was redefined by the medical establishment within preset parameters and it became the responsibility of medicine to intervene with any behavior that fell outside of these parameters.

I have argued that these extreme changes in birthing practices were a result of rapid and wide-sweeping changes happening in Puerto Rico on an economic, political, social and ultimately cultural level. There is no evidence pointing toward a concerted effort put forward by any one government or private interest sector aimed at campaigning against or in defense of midwifery, as there had been in the United States or in England, for example. No powerful institution ever had to invest any major time or resources into convincing Puerto Rican families to specifically leave their homes and bring their babies into the world in the hospital setting. Instead, as families ventured out of their more isolated, rural, home-based daily lives to access basic needs, became active in public, urbanized spaces, and bought into a system based on colonial state planning, led by scientifically trained experts and organized by bureaucratic institutions, they also restructured their birthing practices. So too did the practitioners that served them.

The history of birthing in twentieth century Puerto Rico sheds light on how cultural change can happen at astounding speed and become hegemonic in all regions without the need for explicit, outright campaigns or efforts. It is, in fact, an example of how most change occurs. Change often comes in quiet yet powerful and decided steps unbeknownst to those both experiencing and securing it.

This is a history of how modernization, technology, science and democratization can increase access to health care and appear to increase choices and opportunities but also how these choices and opportunities are limited and sometimes actually work to reduce the quality of care and opportunities.

The history of birthing in Puerto Rico after the mid-twentieth century led nicely toward what Robbie Davis Floyd describes as the basic tenets of the technocratic model of birth. Davis-Floyd, like myself, explain how biomedical authoritative knowledge moved into the hands of obstetricians, relied on technology, was distributed through large institutions, treated the female body as inherently defective and stressed standardized practice over individual difference.

There were many factors that facilitated these changes, which were part and parcel of an entire system transforming and reinventing itself under the colonial projects of state-led industrialization, occasionally pushed or constrained by particular individuals or interest groups. The existence of a local, federally accredited, four-year medical school after 1950 influenced health care practice on the island. It also provided Puerto Rican doctors with more opportunities to project themselves as legitimate researchers and contributors to medical production and international medical networks. A larger number of people could aspire to studying a medical profession, as they no longer had to leave the island to get a degree in the medical sciences. Though the University of Puerto Rico Medical School always struggled to acquire sufficient funding, space and resources, by the 1960s it grew at astounding levels and expanded into and in combination with a state of the art medical center (*Centro Médico*).

The School of Medicine was as much a product as a catalyst of the rise of bio-institutional medicine. The Medical Association of Puerto Rico preceded the School by

several decades and had always been an axis of power able to propel the medical profession forward. The leaders of the Medical Association tended to be traditionally minded men who were resistant to change. This conservative tendency permeated the medical school as well. At the same time, because of the dire economic conditions and the lack of adequate infrastructure, doctors had not managed to influence the average everyday home until the second half of the twentieth century. Through organizations such as the Medical Association, however, physicians were able to unite and project themselves as a professional front and defend their best interests.

One of the ways the Association secured its power was by building partnerships and lobbying within the governmental legal bodies. The Medical Association managed to communicate its interests and present itself as one of the few legitimate body of experts in matter of health and medical practice. These interests and the socio-political tendencies of the time were reflected in the laws and licensing controls related to medical practitioners and birth attendants. Because of this, legal regulation favored biomedicine and physicians and recognized them as the only qualified childbirth supervisor and ultimate figure of authority, thereby pushing childbirth into the realm of the medical world.

However, despite the fact that we may fall prey to our own cultural assumptions, which we have naturalized, we should remember that pregnancy, labor and delivery need not be considered a medical condition. One sees a doctor when one is in need of combating a health threat. Therefore, by medicalizing birth, or moving birth into the hands of specialized, hospital based physicians one is associating pregnancy with danger, risk or disease; as a pathological physiological state in need of monitoring and intervention to maintain or "correct" deviance.

The idea of making Puerto Rico a place of greater production and efficiency, one of the premises behind Operation Bootstrap, the state-led industrialization project initiated by the Puerto Rican Progressive Party leadership in the 1940s, also played its role in redefining childbirth practices. Social Science experts, supervised mostly by those educated in the United States, carried out studies all over the island in order to better understand poverty and a variety of other social issues. These experts disseminated the belief that by collecting data, one could identify a problem and propose rational ways to improve or resolve anything. Science and technology were their key allies.

Physicians began operating under similar paradigms. They classified childbirth into stages, set parameters within which the stages were to progress, and intervened with the pregnant or laboring body that would wander from the pre-established behaviors. In this way the medical and lay community eventually came to believe that women not only should not be left to "nature" to deliver their babies but that their bodies were potentially dangerous to their babies and more often than not faulty.

Complex, modern societies set standards and regulate services, usually with the intention of democratizing and raising levels of consistency and consumer guarantees. They seek to save time, produce more with less effort, and reduce risks. It should come as no surprise then, that birthing and obstetric practice moved in the same direction. Ironically, despite the best intentions behind the measures of standardization, individual difference was overlooked and innovation or alternatives that might improve services were stunted.

The Puerto Rican Department of Health, which was the principal healthcare provider on the island during the years from 1948 until the 1990s, promoted reforms with the intention of improving health and social services. The *Regionalization Plan* of the

1950s and 1960s centralized all health and welfare services around the major regional hospitals of the island. The goal was to improve the coordination of public services and assistance for families. The hospital became the center of information and services, further emphasizing its power as a point of encounter for service providers, professionals, bureaucrats, administrators, and consumers. Women and families were drawn to the hospital and institutional setting to take care of their needs. The hospital became a familiar place of possibility where the government would coordinate and distribute welfare services. The expansion of the welfare state was a determinant factor in the medicalization of birthing in Puerto Rico.

After the 1960s, once the industrial project seemed to run out of steam, the colonial government began taking on an ever growing paternalistic role and expanding its welfare services in order to appease a people living under a stagnant economy and a government that no longer could deliver on its promises. By the 1970s most of the population lived in urban areas and unemployment had reached record levels of almost 25 per cent. Over half of the population fell below the locally defined poverty line, which was lower than the line set for the mainland United States. The population had become regular consumers of public services and expected to have their basic education, health, housing and nutritional needs met.

Family life in Puerto Rico had been turned inside out. It went from occupying a closed, private, rural space, where most basic needs would be met within the home to an urban, consumer-oriented nucleus greatly dependent on the state, which occupied public spaces. Those who had the economic means were consumers of health services in the privatized sphere. They sent their children to private schools, had private health insurance, and could pay mortgages. Childbirth practices also developed within these

dynamics. As people were drawn into public spaces of consumption and the institutional world of specialists and standardized norms, they also began to see those spaces as the acceptable place for birthing and for acquiring various resources offered by the state.

Services in hospitals and larger institutional spaces allowed consumers and providers to gain access to expensive forms of technologies, which changed the relationship among them and transformed childbirth practices. Access to blood transfusions and anesthesiologists made cesareans safer and doctors more likely to rely on them. Electronic fetal monitors and sonograms in the 1970s presented the fetus as an independent being from the mother and generated false alarms about fetal distress, instigating heightened emergency measures and further interventions. These new machines also helped to separate the mother and fetus' well being and coincided with medical theories that described the mother's physiology as potentially dangerous and violent toward the innocent fetus.

Medical technologies, used to monitor and diagnose in accurate and objective ways, were not infallible. Many, like the electronic fetal monitor, are known to be rather misleading, yet they were incorporated into medical practice with little previous research and rarely problematized. They have served to distance providers from patients and to compartmentalize health and the body. Instead of a practitioner observing, touching, and talking to the woman in labor, a team of experts awaits in separate stations and reacts to the sounds and ink markings coming from a machine to indicate whether to call upon an obstetrician during crucial moments, like in emergencies or to catch the baby.

The use of machines to track, record, diagnose and monitor, the urbanization and democratization of society, the institutionalization and medicalization of health, and new concepts of risk management all coalesced in Puerto Rico after the 1970s, and along with

the oil crisis and economic recession, spurred a climate of legal litigation. The tense legal climate, where doctors and hospitals became fearful of lawsuits, put physicians on the defensive and altered medical practice. One of the major consequences of defensive medicine has been the rise of cesarean sections. Cesarean sections have made patients feel they were provided with the best medical care possible and, oddly enough, left doctors at ease that they would be less liable. Cesareans are not safer than vaginal deliveries for most first time mothers, yet between one fourth and half of all women in Puerto Rico by the 1990s were birthing by cesarean operations.

In contrast to the hyper-medicalization of childbirth in Puerto Rico, I was able to document a very small form of resistance, represented by the *novoparteras* and their clients, who chose to deliver babies at home, beginning in the 1980s. Home births can be viewed as a counter hegemonic force to the technocratic model of birth, but since they have been so few, it is difficult to argue that they have altered the mainstream birthing practices in Puerto Rico. The *novoparteras* are women trained in both naturalist and biomedical settings, who, for the most part, have been certified to be midwives within the United States, but who do not have the legal authorization to attend births in Puerto Rico. They have carved a small space for themselves and have managed to slowly present themselves as an alternative for roughly two thousand women in Puerto Rico.

Midwives have gone from being one of the only birth attendant choices in the early twentieth century, to disappearing altogether, and yet in the 1980s a very minute group of women turned to midwives and home births once again. After the year 2000, with the enormous rates of cesareans attracting international criticism and obstetricians feeling the pressures of malpractice premiums and lawsuits, the history of birthing might

take another rapid veer away from obstetrics and once again call on nurses and midwives to be by the side of birthing women.

Big business and institutional obstetrics dominates maternity, yet local doctors and the American College of Obstetrics and Gynecology (ACOG) argue that this system is in crisis due to malpractice insurance premium costs and the threat of lawsuits, which deter new students from specializing in obstetrics and pushes current obstetricians to abandon their practice.⁵⁴⁶ The reaction to this alleged crisis in Puerto Rican obstetrics shook the island on the onset of the new millennium. But for the first time in Puerto Rican history, the victims of malpractice responded, sending their own tremors throughout the island and breaking down previous alliances among physicians, legislators, and the press.

In April 2001 Puerto Rican medical malpractice insurance premiums rose by 60 per cent for private doctors and 85 per cent for hospitals, after being approved by the New Progressive Party during the previous leadership of Pedro Rosello, which set off a chain of events around the island, capturing the attention of many different groups including the popular press.⁵⁴⁷ The College of Physicians and Surgeons of Puerto Rico focused its energy on strategies to combat this increase, which it claimed took them by surprise.

In the meantime, several articles were published in the *Nuevo Día*, the daily newspaper with the widest distribution in Puerto Rico, covering the Puerto Rican government's oversight of malpractice and insufficient data collection regarding

⁵⁴⁶ ACOG designated thirteen states in 2003 as having a crisis: DC, FL, GA, MS, NV, NJ, NY, OH, OR, PA, TX, VA, and WA and six other states as having a crisis brewing: AL, CT, IL, KY, MO, and UT. American College of Obstetrics and Gynecology. *News Release: ACOG Response to GAO Report on Liability Crisis*, September 25, 2003.

⁵⁴⁷ Velázquez, 74.

malpractice suits. The newspaper published several cases of medical malpractice as well.⁵⁴⁸ Concern with medical malpractice was not limited to Puerto Rico. In the United States, the Joint Commission on Accreditation of Hospitals warned the United States medical community in early December of 2001 about the alarming increase in medical errors transpiring in the operating rooms.⁵⁴⁹

In 2002, the same journalist who had investigated malpractice issues the previous year for the *El Nuevo Día* published an article covering the possible exodus of obstetricians and gynecologists because of the onerous costs of malpractice premiums. Doctors were quoted as claiming that specialists were leaving the island in order to work in the United States.⁵⁵⁰ What they weren't reporting was that premiums, litigation compensations, and frequency of malpractice claims were more than twice as high in the United States than in Puerto Rico.

Simed, Puerto Rico's only medical insurance provider, explained to the College of Physicians, the government, and the local press that the increased premiums resulted from the company's deficit. Simed admitted, however, that this deficit was generated in large part by only 3 per cent of its clients. In other words, there was a small group of doctors on the island who had been found guilty of medical malpractice, many on more than one occasion.⁵⁵¹ These doctors were never called into question by the Medical Examiners Tribunal, nor did they face any sort of admonishment from medical

⁵⁴⁸ Omayá Sosa Pascual, "Posible un pleito por paciente cambiado," *El Nuevo Día*, 12 April 2001, 26; Omayá Sosa Pascual, "Rullán confirma la falta de datos sobre impericia," *El Nuevo Día*, 15 July 2001, 26; Omayá Sosa Pascual, "Entre las primeras causas de muertes," *El Nuevo Día*, 15 July 2001, 24; Miguel Díaz Román, "Investigarán aumento en la prima por impericia médica," *El Nuevo Día*, 11 September 2001.

⁵⁴⁹ Velázquez, 77; Lindsey Tanner, "Toman medidas para evitar errores," *El Vocero*, 7 December 2001, 46.

⁵⁵⁰ Omayá Sosa Pascual, "Previsible un éxodo de ginecólogos," *El Nuevo Día*, 22 May 2002, 10.

⁵⁵¹ Velázquez, 80.

authorities. To make matters worse, the list of doctors who had malpractice records was not released to the public. In sum, a small group of doctors was costing the insurance companies a lot of money and subsequently driving premiums up for physicians with clean records, and patients had no way of knowing which doctors had incurred legally proven medical malpractice.

In a press conference following this report, the Tribunal of Medical Examiners admitted that it had never suspended the privilege to practice medicine to any doctor because of malpractice, even though it had a legal responsibility to do so. Tribunal spokespeople claimed that they lacked the resources to fulfill this duty.⁵⁵² In the end, Puerto Rico's Governor, Sila Calderón, recommended that the members composing the Tribunal step down. When they resisted, she stripped them of their posts in December 2002.⁵⁵³

Between 2001 and 2002 doctors in both the United States and Puerto Rico mobilized their forces to lobby and introduce legislative reforms to restrict malpractice litigation and payments and control legal fees. Physicians did not stop there. They also held press conferences, generated a publicity campaign that presented images of doctors leaving the island or closing their practices because of the insurance crisis, and threatened to withhold their services to the public if the situation did not improve.⁵⁵⁴ One of the most active groups involved in these campaigns were obstetricians and gynecologists, who along with surgeons and orthopedists, paid among the highest premiums which ranged anywhere from 8,000 dollars to 35,000 thousand dollars a year.

⁵⁵² Omayá Sosa Pascual, "Se lavan las manos el organismo rector de los médicos," *El Nuevo Día*, 24 September 2002. Also see Velázquez, 85.

⁵⁵³ Velázquez, p. 108

⁵⁵⁴ *Ibid.*, 81-86.

The Puerto Rican branch of the American College of Obstetricians and Gynecologists voiced its outrage in its own press conference.⁵⁵⁵ This group announced that forty obstetricians in the Ponce area had decided not to renew their insurance after the premium increases and were forced to abandon thousands of pregnant women who needed their services. Several newspaper articles circulated, stemming from the same calls of alarm from Ponce.⁵⁵⁶ Weeks later the campaign continued and the press circulated descriptions of overflowing delivery rooms due to the diminishing numbers of obstetricians available.⁵⁵⁷

The chaos generated around malpractice and the efforts of medical organizations paid off in August, when Puerto Rican congressional Representative, Rafael García Colón presented two bills that would cap malpractice compensation payments and limit patient's rights to sue their doctors for malpractice.⁵⁵⁸ This generated heated debate in the Puerto Rican Legislature, where many different opinions were heard, but where doctors seemed to be dominating with their point of view, at least until September eleven, when a new force arrived onto the scene.

The newly created Association of Medical Malpractice Victims made its first public appearance on the steps of the island capitol building during one of the many legislative hearings on medical malpractice reforms. There, the Association's representatives informed the press that they would present their case during the public hearings and appeal to the conscience of the Governor and the legislators. The news

⁵⁵⁵ "Ginecólogos alzan voz de protesta," *Primera Hora*, 17 August 2002.

⁵⁵⁶ José Fernández Colón, "El sur quedará sin servicios ginecológicos y de cirujanos," *El Nuevo Día*, 16 August 2002; Sandra Caquíás Cruz, "Protestan con bisturí en manos," *El Nuevo Día*, 17 August 2002.

⁵⁵⁷ Marga Parés Arroyo, "Desbordadas las salas de parto públicas," *El Nuevo Día*, 4 September 2002, 4.

⁵⁵⁸ Velázquez, 87-93.

made it into every major newspaper on the island.⁵⁵⁹ Victims of medical malpractice and their families took the stand and were able to move almost everyone with their stories of horror, hardships, and deep loss due to the negligence of some members of the medical community. This proved to be a turning point and many legislators, as well as the public at large, realized that they needed better information. The testimonies of members of the Association of Victims of Medical Malpractice were so effective that the legislator García Colón withdrew the bills he had proposed, which had spurred this series of debates.⁵⁶⁰

In desperation, obstetricians escalated their previous threats. This time, San Juan obstetricians in both public and private hospitals informed the press that they would no longer attend new patients. In late November the island woke up to a front page spread in the newspaper *El Vocero*, sold at newsstands and traffic light intersections throughout the island, that described Puerto Rican obstetrics as a profession in crisis, but more importantly, that proclaimed that pregnant women would have to wait four months to see a doctor and that prenatal care was in danger all together.⁵⁶¹ This report referred specifically to the University Hospital in Río Piedras, affiliated with the University of Puerto Rico Medical School. A month earlier a similar situation occurred in the Auxilio Mutuo Hospital, a private, prestigious institution, also in the metropolitan area of San

⁵⁵⁹ Antonio Gómez, "Victimas de impericia se dejan sentir," *Primera Hora*, 12 September 2002; Jorge Luis Medina, "Reclamos en Capitolio por impericia médica," *El Vocero*, 12 September 2002, 23; Camile Roldán Soto, "Protesta contra el limite a la compensación por impericia," *El Nuevo Día*, 12 September 2002, 28; José Alvarado Vega, "Plaintiffs Protest Effort to Limit Malpractice Lawsuits," *San Juan Star*, 12 September 2002, 37.

⁵⁶⁰ Istra Pacheco, "Autor de medida sobre impericia médica dice que retirará el proyecto," *El Nuevo Día*, 17 September 2002.

⁵⁶¹ Ivonne Rosario, "Regrese en cuatro meses," *El Vocero*, 29 November 2002, 3.

Juan.⁵⁶² The decision of obstetricians to carry out a labor stoppage was unprecedented. The threat to limit obstetric services was successful in pressuring the legislature to hold an extraordinary session on December 2, 2002. This time, interest groups on all sides of the debate presented their cases from the onset of the sessions.⁵⁶³ The new proposals presented in the interest of obstetricians, however, died on the legislative floor just before the Christmas holidays, and the New Year arrived with these issues unresolved.

While doing my research interviews in late 2005, it was clear that the issues regarding medical malpractice lingered like a dark cloud over the lives of obstetricians. Without exception, obstetricians expressed tremendous frustration and described their situation as one of great injustice, citing cases in which the lives of one or another innocent doctor and his or her family had been forever ruined by a bad lawsuit. They explained that new doctors entering the profession could no longer afford to start their own practice and had to go through undue economic hardships. They seemed convinced that for the first time in almost a century, the number of obstetricians and residents was in decline. “The brightest students are not dedicating themselves to maternity and gynecology...out of fear of litigation. Students are terrified now adays,” declared doctor Castillo.⁵⁶⁴ According to doctor Cordero, who is an active local leader in the American College of Obstetricians and Gynecologists, in recent years now barely over 65 per cent of all residency positions in the United States were filled by United States citizens, when

⁵⁶² Camile Roldán Soto, “Obstetras del Auxilio Mutio le dicen adios a los partos,” 15 October 2002, 16.

⁵⁶³ Velázquez, 110.

⁵⁶⁴ Córdova, Interview with Castillo, 45.

in previous decades almost all had been occupied. Now these remaining residencies are filled by foreigners and sixty were left unclaimed in the year 2005.⁵⁶⁵

In 2007, the Puerto Rican Department of Health announced a new initiative to send nurse-midwives to more remote areas of the island where women have less access to obstetricians.⁵⁶⁶ These nurses are to provide prenatal care and even attend uncomplicated births if necessary. Is this a sign of new things to come or is it yet another health initiative that will pass unnoticed and never progress, like so many others? Will there be new choices for women, or are these new possibilities merely a result of dwindling resources and ways to address a crisis? Will it mean that women of less economic means and from more remote areas will receive substandard maternity services or will it improve maternal services? Is it true that there are fewer doctors practicing obstetrics? There are many reasons to believe that childbirth in Puerto Rico, as well as the United States, is reaching a turning point. It will be interesting to see the twist and turns it will take.

⁵⁶⁵ Córdova, Interview with Cordero.

⁵⁶⁶ José Fernandez, "A partir en las casas," *El Nuevo Día*, Tuesday, 16 October 2007.

BIBLIOGRAPHY

Books

- Acosta, Ivonne. *La Mordaza: Puerto Rico 1948-1957*. Puerto Rico: Editorial Edil, 1998.
- Alvarez-Curbelo, Silvia, and María Elena Rodríguez-Castro. *Del Nacionalismo al Populismo: Cultura y Política en Puerto Rico*. 1 ed. Río Piedras, P.R.: Decanato de Estudios Graduados e Investigación, Recinto de Río Piedras Ediciones Huracán, 1993.
- Apple, Rima. *Perfect Motherhood: Science and Childbearing in America*. New Brunswick: Rutgers University Press, 2006.
- Arana-Soto, S. *Historia de la Medicina Puertorriqueña Hasta 1898*. España: Medinaceli, 1974.
- Armus, Diego. *Entre médicos y curanderos: cultura, historia y enfermedad en la América Latina moderna*. Buenos Aires: Grupo Editorial Norma, 2002.
- Arney, William Ray. *Power and the Profession of Obstetrics*. Chicago: University of Chicago Press, 1982.
- Benoit, Cecilia. *Midwives in Passage: The Modernisation of Maternity Care*. St. John's: Institute of Social and Economic Research, Memorial University of Newfoundland, 1991.
- Borst, Charlotte G. *Catching Babies: The Professionalization of Childbirth, 1870-1920*. Cambridge, Massachusetts: Harvard University Press, 1995.
- Bourdillon, Hilary. *Women as Healers: A History of Women and Medicine*, Women in History. Cambridge: Cambridge University Press, 1988.
- Braverman, Harry. *Labor and Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press, 1974.
- Briggs, Laura. *Reproducing Empire: Race, Sex, Science, and U.S. Imperialism in Puerto Rico*. Berkeley: University of California Press, 2002.
- Buss, Fran Leeper. *La Partera: Story of a Midwife*. Ann Arbor: University of Michigan Press, 1980.
- Butter, Irene H. *Sex and Status: Hierarchies in the Health Workforce*, Public Health Policy

- Series. Washington, D.C.: American Public Health Association, 1985.
- Canguilhem, Georges. *Lo Normal y lo Patológico*. México: Siglo XXI, 1978.
- Colón, Alice, Ana Luisa Dávila, María Dolores Frenos, and Esther Vicente. *Políticas, Visiones y Voces en Torno al Aborto en Puerto Rico*. Puerto Rico: Centro de Investigaciones Sociales de la Universidad de Puerto Rico, 1999.
- Comelles, Joseph, and Angel Martínez Hernández. *Enfermedad, Cultura y Sociedad*. Madrid: EUDEMA, 1993.
- Costa Mandry, O. *Apuntes Para la Historia de la Medicina En Puerto Rico*. San Juan: Departamento de Salud de Puerto Rico, 1971.
- Davis-Floyd, Robbie. *Birth as an American Rite of Passage*. Berkeley: University of California Press, 1992.
- Davis-Floyd, R, and C. F. Sargent. *Childbirth and Authoritative Knowledge Cross-Cultural Perspectives*. Berkeley, California: University of California Press, 1997.
- Davis-Floyd, Robbie, and Gloria St. John. *From Doctor to Healer; the Transformative Journey*. New Brunswick: Rutgers University Press, 1998.
- De Vries, Raymond G. *Regulating Birth: Midwives, Medicine, & the Law, Health, Society, and Policy*. Philadelphia: Temple University Press, 1985.
- Dietz, James. *Historia Económica de Puerto Rico*. Río Piedras: Ediciones Huracán, 1989.
- Donnison, Jean. *Midwives and Medical Men: A History of Inter-Professional Rivalries and Women's Rights*. New York: Schocklen Books, 1977.
- Duden, Barbara. *Disembodying Women: Perspectives on Pregnancy and the Unborn*, 1993.
- Ehrenreich, Barbara, and Deirdre English. *Witches, Midwives, and Nurses; a History of Women Healers*. Old Westbury, N.Y.: The Feminist Press, 1973.
- Ettinger, Laura. *Nurse-Midwifery: The Birth of an American Profession*. Columbus: Ohio State University Press, 2006.
- Foucault, Michel. *The Birth of the Clinic; an Archaeology of Medical Perception*. New York: Vintage Books, 1975.
- . *Discipline and Punishment: The Birth of a Prison*. New York: Vintage Books, 1995.
- . *Historia de la Sexualidad*. México: Siglo XXI, 1977.
- Fraser, Gertrude Jacinta. *African American Midwifery in the South: Dialogues of Birth, Race,*

- and Memory*. Cambridge, Massachusetts: Harvard University Press, 1998.
- García, Gervasio. *Historia Crítica, Historia sin Coartadas: Algunos Problemas de la Historia De Puerto Rico*. Río Piedras: Ediciones Huracán, 1989.
- Garza, Hedda. *Women in Medicine*. New York: Franklin Watts, 1994.
- Ginsburg, Faye D., and Rayna Rapp. *Conceiving the New World Order: The Global Politics of Reproduction*. Edited by Berkeley. California: University of California Press, 1995.
- Goer, Henci. *Obstetric Myths Versus Research Realities: A Guide to Medical Literature*. Edited by Westport. Westport: Greenwood Publishing Group, 1995.
- González Díaz, Emilio *El Partido Popular Democrático y el Fin de Siglo: ¿Qué Queda del Populismo?* Río Piedras: Centro de investigaciones Sociales de la Universidad de Puerto Rico, 1999.
- Gordon, David M., Richard Edwards, and Michael Reich. *Segmented Work, Divided Workers: The Historical Transformation of Labor in the United States*. Cambridge: Cambridge University Press, 1982.
- Gordon, Linda. *The Moral Property of Women: A History of Birth Control Politics in America*. 3rd ed. Urbana and Chicago: University of Illinois Press, 2002.
- Gorton, David Allyn. *The History of Medicine, Philosophical and Critical, from Its Origin to 20th Century*. New York: G.P. Putnam's Sons, 1910.
- Gramsci, Antonio. *La Política y el Estado Moderno*. Barcelona: Ediciones Península, 1971.
- Grundy, Fred. *The New Public Health: An Introduction to Personal Health and the Welfare Services for Health Visitors, Social Workers and Midwives*. London: H.K. Lewis, 1968.
- Guardiola Ortiz, Dagmar. *El Trabajo Social en Puerto Rico: ¿Asistencia o Desarrollo?* Puerto Rico: Decanato de estudios graduados e investigaciones, Recinto de Río Piedras, 1998.
- Habermas, Jurgen. *Teoría de la Acción Comunicativa: Crítica de la Razón Funcionalista*. Vol. 2. Madrid: Taurus, 1999.
- Hernández-Angueira, Luisa. *Mujeres Puertorriqueñas, Welfare y Globalización: Desconstruyendo el Estigma*. Puerto Rico: Publicaciones Puertorriqueñas, 2001.
- Hunt, Nancy. *A Colonial Lexicon of Birth: Ritual, Medicalization and the Mobility in the Congo*. Durham: Durham University Press, 1999.
- Jordan, Brigitte. *Birth in Four Cultures: A Crosscultural Investigation of Childbirth in Yucatan, Holland, Sweden, and the United States*. St. Albans: Eden Press Women's Publications, 1978.

- Justiniano, Carmen Luisa. *Con Valor y Como de Lugar; Memorias de una Jibara Puertorriqueña*. San Juan: Editorial de la Universidad de Puerto Rico, 1999.
- Kay, Margarita Artschwager. *Anthropology of Human Birth*. Philadelphia: F.A. Davis Company, 1982.
- Kuhn McGregor, Deborah. *From Midwives to Medicine: The Birth of American Gynecology*. New Jersey: Rutgers University Press, 1998.
- Latour, Bruno. *The Pasteurization of France*. Cambridge: Harvard University Press, 1988.
- Lay, Mary M. *The Rhetoric of Midwifery: Gender, Knowledge, and Power*. New Brunswick, N.J.: Rutgers University Press, 2000.
- Leap, Nicky, and Billie Hunter. *The Midwife's Tale: An Oral History from Handywoman to Professional Midwife*. London: Scarlet Press, 1993.
- Leavitt, Judith Walzer. *Brought to Bed: Childbearing in America, 1750 to 1950*. New York: Oxford University Press, 1986.
- Lefèber, Yvonne. *Midwives without Training: Practices and Beliefs of Traditional Birth Attendants in Africa, Asia and Latin America*. Netherlands: Van Gorcum Assen, 1994.
- Macry, Paolo. *La Sociedad Contemporánea: Una Introducción Histórica*. Barcelona: Editorial Ariel, 1997.
- Martin, Emily. *The Woman in the Body: A Cultural Analysis of Reproduction*. Boston: Beacon Press, 1992 [1987].
- McMillen, Sally Gregory. *Motherhood in the Old South: Pregnancy, Childbirth, and Infant Rearing*. Baton Rouge: Louisiana State University Press, 1990.
- Mintz, Sidney Wilfred. *Worker in the Cane: A Puerto Rican Life History*. New York: Norton, 1974.
- Morgen, Sandra. *Into Our Own Hands: The Women's Health Movement in the United States, 1960-1990*. New Jersey: Rutgers University Press, 2002.
- Murphy-Lawless, Jo. *Reading Birth and Death: A History of Obstetric Thinking*. Bloomington: Indiana University Press, 1998.
- Navas, Gerardo. *La Dialéctica del Desarrollo Nacional: El Caso de Puerto Rico*. Río Piedras: Editorial Universitaria de la Universidad de Puerto Rico, 1978.
- Nelson, Jennifer. *Women of Color and the Reproductive Rights Movement*. New York: New York University Press, 2003.

- Newman, Karen. *Fetal Positions: Individualism, Science, Visuality*. Stanford: Stanford University Press, 1996.
- Nowotny, Helga, Peter Scott, and Michael Gibbons. *Rethinking Science: Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity Press, 2001.
- Oakley, Ann. *The Captured Womb: A History of the Medical Care of Pregnant Women*. Oxford: B. Blackwell, 1984.
- Oaks, Laury. *Smoking and Pregnancy: The Politics of Fetal Protection*. New Brunswick, NJ: Rutgers University Press, 2001.
- Palmer, Steven Paul. *From Popular Medicine to Medical Populism: Doctors, Healers, and Public Power in Costa Rica, 1800-1940*. Durham: Duke University Press, 2003.
- Peard, Julyan G. *Race, Place, and Medicine: The Idea of the Tropics in Nineteenth-Century Brazilian Medicine*. Durham, NC: Duke University Press, 1999.
- Pérez, Lydia, and Mildred Rivera. *Enfermería en Puerto Rico desde los Precolombinos Hasta el Siglo XX*. Mayagüez: Universidad de Puerto Rico, 1997.
- Pernick, Martin. *A Calculus of Suffering. Pain, Professionalism, and Anesthesia in Nineteenth-Century America*. New York: Columbia University Press, 1985.
- Portelli, Hugues. *Gramsci y el Bloque Histórico*. Buenos Aires: Siglo XXI, 1973.
- Porter, Roy. *Blood and Guts: A Short History of Medicine*. 1st American ed. New York: Norton, 2003.
- Quevedo Báez, Manuel. *Historia de la Medicina y Cirugía en Puerto Rico*. Vol. 1. Puerto Rico: Asociación Médica de Puerto Rico 1946.
- . *Historia de la Medicina y Cirugía en Puerto Rico*. Vol. 2. Puerto Rico: Asociación Médica de Puerto Rico 1949.
- Ramírez de Arellano, Annette B., and Conrad Seipp. *Colonialism, Catholicism, and Contraception: A History of Birth Control in Puerto Rico*. Chapel Hill: University of North Carolina Press, 1983.
- Rapp, Rayna. *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America*, Anthropology of Everyday Life. New York: Routledge, 1999.
- Riska, Elianne, and Katarina Wegar. *Gender, Work, and Medicine: Women and the Medical Division of Labour*, Sage Studies in International Sociology. London: Sage Publications, 1993.
- Roberts, Dorothy E. *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*.

- 1st ed. New York: Pantheon Books, 1997.
- Roberts, Lydia Jane, and Rosa Luisa Stefani. *Patterns of Living in Puerto Rican Families*. Rio Piedras: University of Puerto Rico, 1949.
- Román de Jesus, José. *El Desarrollo de las Ciencias Médicas y los Servicios de Salud en Puerto Rico Durante el Siglo de Dominación de Los Estados Unidos*. Mayagüez: Publicaciones Puertorriqueñas, 2002.
- Rothman, Sheila. *Woman's Proper Place: A History of Changing Ideals and Practices 1870-to the Present*. New York: Basic Books, 1978.
- Sandelowski, Margarete. *Pain, Pleasure, and American Childbirth: From Twilight Sleep to the Read Method, 1914-1960*. Westport: Greenwood Press, 1984.
- Salaverry García, Oswaldo, and Gustavo Delgado Matallana. *Historia de la Medicina Peruana en el Siglo XX*. Universidad Nacional Mayor de San Marcos Fondo Editorial ed. Lima: Asociación de Historia de la Medicina Peruana, 2000.
- Smith, Susan. *Japanese-American Midwives: Culture, Community, and Health Politics, 1880-1950*. Urbana: University of Illinois Press, 2005.
- Sotomayor, Orlando J. *Poverty and Income Inequality in Puerto Rico, 1970-1990*. San Juan: Centro de Investigaciones Sociales, Universidad de Puerto Rico, 1998.
- Starr, Paul. *The Social Transformation of American Medicine*. New York: Basic Books, 1982.
- Stepan, Nancy. *The Hour of Eugenics: Race, Gender, and Nation in Latin America*. Ithaca: Cornell University Press, 1991.
- Stern, Alfred. *Problemas Filosóficos de la Ciencia*. Puerto Rico: Editorial Universitaria, 1976.
- Suárez Findlay, Eileen. *Imposing Decency: The Politics of Sexuality and Race in Puerto Rico, 1870-1920*, American Encounters/Global Interactions. Durham, NC: Duke University Press, 1999.
- Tomes, Nancy. *The Gospel of Germs: Men, Women, and the Microbe in American Life*. Cambridge: Harvard University Press, 1998.
- Tone, Andrea. *Devices and Desires: A History of Contraceptives in America*. 1st ed. New York: Hill and Wang, 2001.
- Towler, Jean, and Joan Bramall. *Midwives in History and Society*. London; Dover, N.H.: Croom Helm, 1986.
- Trigo, Benigno. *Subjects of Crisis*. Hanover and London: Wesleyan University Press, 2000.

- Vargas, Rosana. *Allá, las Antiguas Abuelas Eran Parteras*. Lima: Terra Nova, 1995.
- Vazquez Calzada, José, and Centro de Investigaciones Demográficas. *El Matrimonio Legal, Las Madres Solteras, los Partos por Cesárea y el Cuidado Prenatal*. Vol. 17. San Juan: Escuela Graduada de Salud Pública y Demografía de la Universidad de Puerto Rico, 1993.
- Velázquez, José Fernando. *Crisis de Impericia Médica. Mito o Realidad?* Buenos Aires: Ediciones Sítum, 2003.
- Viisainen, Kirsi. *Nicaraguan Midwives: The Integration of Indigenous Practitioners into Official Health Care*. Helsinki: University of Helsinki, 1992.
- Weinbaum, Elys. *Wayward Reproductions: Genealogies of Race and Nation in Transatlantic Modern Thought*. Durham: Duke University Press, 2005.
- Wertz, Richard W., and Dorothy C. Wertz. *Lying-In: A History of Childbirth in America*. New Haven: Yale University Press, 1989 [1977].

Book Section

- Baron, Ava. "Gender and Labor History: Learning from the Past, Looking to the Future." In *Work Engendered: Towards a New History of American Labor*, edited by Ava Baron, 1-46. New York: Cornell University Press, 1991.
- Burke, Peter. "Conceptos Generales." In *Historia y Teoría Social*, 57-122. México: Instituto Mora, 1992.
- Colen, Shellee. "Like a Mother to Them: Stratified Reproduction and West Indian Childcare Workers in New York." In *Conceiving a New World Order: The Global Politics of Reproduction*, edited by Faye Ginsburg and Rayna Rapp. California: University of California Press, 1995.
- Gilly, Adolfo. "La Historia Como Crítica o Como Discurso del Poder." In *Historia ¿Para Qué?*, 197-225. México: Siglo XXI, 1997.
- Radkau, Verena. "Los Médicos (Se) Crean una Imagen: Mujeres y Médicos en la Prensa Médica Mexicana del Siglo XIX." In *Género, Familia y Mentalidades en América Latina*, edited by Pilar Gonzalbo Aizpura. Puerto Rico: Editorial Universidad de Puerto Rico, 1997.
- Scott, Joan. "El Género: Una Categoría Útil para el Análisis Histórico." In *El Género: La Construcción Cultural de la Diferencia Sexual*, edited by Marta Lamas. México: Programa de Estudios del Género, UNAM, 1997.

Edited Books

- Abram, Ruth J., ed. *"Send Us a Lady Physician": Women Doctors in America, 1835-1920*. 1st ed. New York: W.W. Norton & Company, 1985.
- Acosta-Belén, Edna, ed. *The Puerto Rican Woman: Perspectives on Culture, History, and Society*. 2nd ed. New York: Praeger, 1986.
- Adamson, Karlis, ed. *Diagnosis and Treatment of Fetal Disorders: Proceedings of the International Symposium on Diagnosis and Treatment of Disorders Affecting the Intrauterine Patient*. New York: Springer-Verlag, 1968.
- Azize, Yamila, ed. *La Mujer en Puerto Rico; Ensayos de Investigación*. Río Piedras: Ediciones Huracán, 1987.
- Cancel, Mario, ed. *Historia y Género; Vidas y Relatos de Mujeres en el Caribe*. Asociación puertorriqueña de historiadores ed. San Juan: Posdata, 1997.
- Cueto, Marcos, ed. *Missionaries of Science: The Rockefeller Foundation and Latin America*. Bloomington: Indiana University Press, 1994.
- _____, ed. *Salud, sociedad y cultura en América Latina: Nuevas perspectivas históricas*. Lima: Instituto de Estudios Peruanos, 1996.
- Figueroa Perea, Juan Guillermo, ed. *La Condición de la Mujer en el Espacio de la Salud*. México: El colegio de México, 1998.
- Marland, Hilary, ed. *The Art of Midwifery: Early Modern Midwives in Europe*, The Wellcome Institute Series in the History of Medicine. London; New York: Routledge, 1993.
- Marland, Hilary, and Anne Marie Rafferty, eds. *Midwives, Society, and Childbirth: Debates and Controversies in the Modern Period*, Studies in the Social History of Medicine. London; New York: Routledge, 1997.
- Matos Rodríguez, Félix V., and Linda C. Delgado, eds. *Puerto Rican Women's History: New Perspectives*, Perspectives on Latin America and the Caribbean. Armonk, N.Y.: M.E. Sharpe, 1998.
- Roe Smith, Merritt, and Leo Marx, eds. *Historia y Determinismo Tecnológico*. Madrid: Alianza Editorial, 1996.
- Sargent, Carolyn, and Caroline Brettell, eds. *Gender and Health: An International Perspective*. New Jersey: Prentice Hall, 1996.
- Shepherd, Verene, ed. *Women in Caribbean History*. Jamaica: University of West Indies, 1999.
- Shepherd, Verene, Bridget Brereton, and Barbara Bailey, eds. *Engendering History: Caribbean*

Women in Historical Perspective. New York: St. Martin's Press, 1995.

Journal Articles

Boletín de la Asociación Médica de Puerto Rico (1946).

"Puerto Rican Mds Fear Socialism." *American Medical Association News* 6, no. 2 (1963).
Boletín de la Asociación Médica de Puerto Rico (1992).

"News Release: ACOG Response to GAO Report on Liability Crisis." *American College of Obstetrics and Gynecology* (2003).

Allende de Rivera, C. "Women Health and Public Policy: Practices and Strategies in Puerto Rico." *Puerto Rican Health and Science Journal* 9, no. 1 (1990): 105-10.

Araujo de Carvalho, Islene. "Midwives of the Sertao." *International Midwife* (1995): 11-12.

Arbona, Guillermo. "Present Facilities [for a Medical School in Puerto Rico]." *Boletín de la Asociación Médica de Puerto Rico* 41, no. 1 (1949): 18-20.

———. "Present Facilities." *Boletín de la Asociación Médica de Puerto Rico* 41, no. 1 (1949): 18-20.

Barceló Miller, María. "Estrenando Togas: La Profesionalización de la Mujer en Puerto Rico, 1900-1930." *Revista del Instituto de Cultura Puertorriqueña* 99 (1990): 14-16.

Barranco Lagunas, Isabel. "Partera Empírica." *Fem*, no. 64 (1988): 18-20.

Bassett, Ken. "Anthropology, Clinical Pathology and the Electronic Fetal Monitor: Lessons from the Heart." *Social Science and Medicine* 42, no. 2 (1996): 283.

Bassett, Ken, Nitya Yiyer and Arminee Kazanjian. "Defensive Medicine During Obstetrical Care: A by-Product of the Technological Age." *Social Science and Medicine* 51 (2000): 530.

Benitez, Jaime. "The Position of the University of Puerto Rico." *Boletín de la Asociación Médica de Puerto Rico* 41, no. 1 (1949): 25.

Betrán AP, Merialdi M, Bing-Shun W Lauer JA, and Van look P Thomas J. " Rates of Caesarean Section: Analysis of Global, Regional and National Estimates." *Pediatric Perinatal Epidemiology* 21 (2007): 98-113.

Bertrán, "Informe del Presidente", *Boletín de la Asociación Médica de Puerto Rico* 56, no. 12 (1964) 124-125.

Cabrera, Fernando. "En Busca de Quijotes Médicos." *Boletín de la Asociación Médica de Puerto*

- Rico* 63, no. 12 (1971): 327.
- Canning, Kathleen. "The Body as a Method? Reflections on the Place of the Body in Gender History." *History* 11, no. 3 (1999).
- Carrillo, Ana María. "Parteras y Ginecólogos: El Hombre Dijo, Háganse las Salas de Parto." *Fem*, no. 64 (1988): 10-18.
- Center for Disease Control and Prevention. "Morbidity and Mortality Weekly Report." 55, no. 3 (2006): 68-71.
- Center for Disease Control and Prevention: Morbidity and Mortality Weekly Report. "Rates of Cesarean Delivery among Puerto Rican Women-Puerto Rico and the U.S. Mainland 1992-2202." *JAMA* 295, no. 12 (2006): 1369-71.
- Chester, Martin. "Electronic Fetal Monitoring: A Brief Summary of Its Development, Problems and Prospects." *European Journal of Obstetrics and Gynecology and Reproductive Biology* 78 (1998): 136.
- Colón, Ivan. "La Práctica de la Medicina Moderna y el Concepto de Administración de Riesgos." *Boletín de la Asociación Médica de Puerto Rico* 79, no. 10 (1987): 423-25.
- Colón-Warren, Alice, and Idsa Alegría Ortega. "Shattering the Illusion of Development: The Changing Status of Women and Challenge for the Feminist Movement in Puerto Rico." *Feminist Review* 59 (1998): 101-17.
- Córdova, Isabel. "Setting Them Straight: Social Services, Youth, Sexuality, and Modernization in Postwar (WWII) Puerto Rico." *Centro Journal* 19, no. 1 (Spring 2007): 26-49.
- Correa, Alejandra. "De Nodrizas y Parteras." *Todo es Historia* 30, no. 355 (1997): 76-92.
- Costa Mandry, O. "Endeavors to Establish a Medical School in Puerto Rico." *Boletín de la Asociación Médica de Puerto Rico* 41, no. 1 (1949): 14-17.
- Cueto, Marcos. "The Rockefeller Foundation's Medical Policy and Scientific Research in Latin America: The Case of Physiology." *Social Studies of Science* 20, no. 2 (1990): 229-54.
- Davis-Floyd, Robbie. "The Technocratic, Humanistic and Holistic Paradigms of Childbirth." *International Journal of Gynecology and Obstetrics* 75, no. 1 (2001): S5-S23.
- Davis-Floyd, Robbie, and Carolyn Sargent. "The Social Production of Authoritative Knowledge in Pregnancy and Childbirth." *Medical Anthropology Quarterly New Series*, 10, no. 2 (1996): 111-20.
- Deschamps Chapeaux, Pedro. "El Negro en la Economía Habanera del Siglo XIX: Las Comadronas o Parteras." *Revista de la Biblioteca Nacional José Martí* 12, no. 3 (1970): 49-62e.

- Diamond, Irene, and Lee Quinby. "American Feminism in the Age of the Body." *Signs* 10, no. 1 (1984): 119-25.
- Díaz Ortiz, Debbie A. "Part of a Distant Past: Tracing the History of Midwifery in Puerto Rico." *International Midwife* (1995): 17-18.
- Dye, Nancy Schrom. "History of Childbirth in America." *Signs* 6, no. 1 (1980): 97-108.
- Edmunds, Judy. "Conspiracy of Silence." *Midwifery Today* (1998): 11.
- Elinson, Jack. "The Physician's Dilemma in Puerto Rico." *Journal of Health and Human Behavior* 3, no. 1 (1962): 14-20.
- Finn, William. "Induction and Stimulation of Labor." *Boletín de la Asociación Médica de Puerto Rico* 48, no. 9 (1956): 360-71.
- Floyd, Robbie Davis, and Carolyn Sargent. "The Social Production of Authoritative Knowledge in Pregnancy and Childbirth." *Medical Anthropology Quarterly* 10, no. 2 (1996): 111-20.
- Ginzburg, Carlo, Freud Morelli, and Sherlock Holmes. "Clues and Scientific Method." *The History Workshop Journal* 9 (1980): 5-36.
- Hager, Renate M. E., Anne K. Daltveit, Dag Hofoss, Stein T. Nilsen, Toril Kolaas, Pal Oian, Tore Henriksen. "Complications of Cesarean Deliveries: Rates and Risk Factors." *American Journal of Obstetrics and Gynecology* 190, no. 2 (February 2004): 428-434.
- Hahn, Robert. "Divisions of Labor: Obstetrician, Woman, and Society in Williams Obstetrics, 1903-1985." *Medical Anthropology Quarterly* 1, no. 3 (1987): 256-82.
- Hays, Bethany. "Authority and Authoritative Knowledge in American Birth." *Medical Anthropology Quarterly* 10, no. 2 (1996): 291-94.
- Hindle, Christine. "International Credentialing of Midwives." *International Midwife* (1995): 9-10.
- Hiriart, Berta. "Parteras y Salud Reproductiva." *Fem* 19, no. 143 (1995): 18-19.
- Holmes Chaffey, David. "Review of Major Gynecological Surgery." *Boletín de la Asociación Médica de Puerto Rico* 48, no. 11 (1956): 451-57.
- Inclán Perea, María Isabel. "La Partera: Figura Obsoleta." *Fem*, no. 64 (1988): 14-15.
- Izquierda Mora, Luis. "La Época de Oro de la Medicina." *Boletín de la Asociación Médica de Puerto Rico* 59, no. 2 (1967).

- Katz Rothman, Barbara. "The Daughters of Time on the Path to Midwifery." no. *Midwifery Today* (2000): 8 pages.
- Lent, M. "The Medical Legal Risks of the Electronic Fetal Monitor." *Stanford Law Review* 51, no. 4 (1999): 807-37.
- Lessing, Jeffery. "Carta al Editor." *Boletín de la Asociación Médica de Puerto Rico* 65, no. 8 (1973): 200.
- Marsden, Wagner. "The Politics of Birth." *Midwifery Today* (1998): 53.
- Martin, Chester. "Electronic Fetal Monitoring: A Brief Summary of Its Development, Problems and Prospects." *European Journal of Obstetrics and Gynecology and Reproductive Biology* 78 (1998): 133-40.
- Martin, Emily. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles." *Signs* 16, no. 3 (1991): 485-501.
- Moore, Mary Lou. "Reducing the Rate of Cesarean Birth." *The Journal of Perinatal Education* 11, no. 2 (2002): 41-43.
- Mukherjee. "Journal of Obstetrics Gynecology of India." *Rising Cesarean Section Rate* 56, no. 4 (2006): 298-300.
- Parvin, Niknafs, and John Sibbad. "Mama: The Iranian Midwife." *Midwifery Today* (1998): 50.
- Pernick. "Eugenics and Public Health in America History." *American Journal of Public Health* 87 (1997): 1767-72.
- Pons, Juan. "Why a Medical School for Puerto Rico." *Boletín de la Asociación Médica de Puerto Rico* 41, no. 1 (1949): 6-13.
- Price, Charles. "Malpractice Insurance- Past, Present and the Uncertain Future." *Boletín de la Asociación Médica de Puerto Rico* 63, no. 2 (1971): 31-33.
- Quinquilla, Rafael. "Thorazine in Obstetric Analgesia." *Boletín de la Asociación Médica de Puerto Rico* 48, no. 6 (1956).
- Ramírez de Arellano, Annette. "El Mercado de los Servicios Médicos." *Boletín de la Asociación Médica de Puerto Rico* 68, no. 7 (1976): 167-70.
- Ramirez de Arellano, A.B. "Pink Collar Medicine: Implications of the Feminization of the Profession." *Puerto Rican Health and Science Journal* (1990): 21-40.
- Reinhard, Edward. "Medicine and the Crisis in Confidence." *Boletín de la Asociación Médica de Puerto Rico* 68, no. 5 (1976): 111.

- Rifkinson, Nathan. "Obstetrical Practices and Brain Damage of the Newborn." *Boletín de la Asociación Médica de Puerto Rico* 49, no. 1 (1957): 37-40.
- Rigau-Pérez, José. "La Salud Durante el Embarazo y el Primer Año de Vida en Puerto Rico: Progreso Hacia los Objetivos Nacionales de Salud para 1990." *Boletín de la Asociación Médica de Puerto Rico* 78, no. 6 (June 1986) 246-7.
- . "Historia De La Medicina; La Salud En Puerto Rico En El Siglo XX." *Puerto Rico Health and Sciences Journal* (2000): 357-68.
- Rodríguez Olmo, J. "Inducción del Parto." *Boletín de la Asociación Médica de Puerto Rico* 47, no. 2 (1955): 65-69.
- Rose, Hilary. "Hand Brain and Heart: A Feminist Epistemology for the Natural Sciences." *Signs* 9, no. 1 (1983): 73-90.
- Sargent, Carolyn, and Grace Bascope. "Ways of Knowing About Birth in Three Cultures." *Medical Anthropology Quarterly* 10, no. 2 (1996): 213-36.
- Scheper-Hughes, Nancy, and Margaret M. Lock. "The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology." *Medical Anthropology Quarterly* 1, no. 1 (1987): 6-41.
- Schrom Dye, Nancy. "History of Childbirth in America." *Signs* 6, no. 1 (1980): 97-108.
- Shy, K., Larson and Luthy "Evaluating a New Technology: The Effectiveness of the Electronic Fetal Heart Rate Monitor." *Annual Review of Public Health* 8 (1987): 165-90.
- Simpson, Zimmerman. "Routine Extraperitoneal Approach for Cesarean Section." *Boletín de la Asociación Médica de Puerto Rico* 42, no. 8 (1950): 490-94.
- Southern, Joel. "On Trial: Women Healers." *Midwifery Today* (1998): 35.
- Stallings, Therese, and Mansfield Marge. "A Working Relationship." *International Midwife* (1995): 15-16.
- Theriot, Nancy. "Women's Voices in Nineteenth-Century Medical Discourse: A Step toward Deconstructing Science." *Signs* 19, no. 1 (1993): 1-31.
- Toepke, Marion. "Midwives, Doctors and Power." *Midwifery Today* (1998): 9.
- Torres Pineda, Ramón. "¿Hacia una Medicina Más Científica? ." *Boletín de la Asociación Médica de Puerto Rico* 58, no. 11 (1966): 561.
- Trueba, Guadalupe. "Birth in Pre-Hispanic Mexico." *Midwifery Today* (1997): 45-47.
- . "Women's Reproductive Health: A Global Perspective." *Midwifery Today* (1998): 43.

Turner, R. "Cesarean Section Rates, Reason for Operations Vary between Countries." *Family Planning Perspectives* 22, no. 6 (1990): 281-82.

———. "Cesarean Section Rates, Reason for Operations Vary between Countries." *Family Planning Perspectives* 22, no. 6 (1990).

Walsh, Frank. "Analgesia and Anesthesia in Obsterics." *Boletín de la Asociación Médica de Puerto Rico* 42 (1950): 294-98.

Wolf, Jacqueline H. "Mighty Glad to Gasp in the Gas': Perceptions of Pain and the Traditional Timing of Obstetric Anesthesia." *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, no. 6 (2002): 365-87.

Newspaper Articles

"Doctor Astor Denuncia los Daños Causados por los Curanderos." *El Mundo*, 11 May 1948.

"Inauguran Hoy Centro Médico en San Sebastián." *El Mundo*, 9 October 1964.

"Ginecólogos Alzan Voz de Protesta." *Primera Hora*, 17 August 2002.

"Parto en el Hogar." *El Nuevo Día*, 2 September 2007.

"Up by the Bootstraps", *Time*, Friday, 29 October 1965.

Alvarado Vega, José. "Plaintiffs Protest Effort to Limit Malpractice Lawsuits." *San Juan Star*, 12 September 2002, 37.

Caquías Cruz, Sandra. "Protestan con Bisturí en Manos." *El Nuevo Día*, 17 August 2002.

del Valle Hernández, Sara. "La Guía Natural Hacia la Luz." *El Nuevo Día*, 6 July 2007.

Díaz Román, Miguel. "Investigarán Aumento en la Prima por Impericia Médica." *El Nuevo Día*, 11 September 2001.

Fernández Colón, José. "El Sur Quedará sin Servicios Ginecológicos y de Cirujanos." *El Nuevo Día*, 16 August 2002.

Fernandez, José. "A Parir en las Casas." *El Nuevo Día*, 16 October 2007.

Figueroa, Janirah. "El Oficio Divino de las Parteras." *El Vocero*, 8 May 2000, 58-59.

García, Carmen. "Inauguran Abril 18 Centro Médico Dr. Enrique Koppisch." *El Mundo*, 9 April 1964.

Gómez, Antonio. "Victimas de Impericia Se Dejan Sentir." *Primera Hora*, 12 September 2002.

- Heydrich Blanco, Teresita. "Al Natural...." *El Nuevo Dia*, 6 May 2002.
- Irizarry, Samuel. "Piden Orientación Comadronas Se Quejan Gobierno ELA las Tiene Abandonadas." *El Mundo*, 10 March 1966, 37.
- Medina, Jorge Luis. "Reclamos en Capitolio por Impericia Médica." *El Vocero*, 12 September 2002, 23.
- Mitila Lora, Ana. "Nosotras Aguantando y los Hombres..." *Memorias del Siglo del Listin Digital*.
- Mullen, Karen. "Midwives' Crusade Labor Intensive." *Chicago Tribune*, 2 April 2001.
- Ortiz, Bienvenido. "Ven Médicos Locales Envueltos Denuncian Raquet Internacional Abortos." *El Mundo*, 2 May 1963.
- Pacheco, Istra. "Autor de Medida Sobre Impericia Médica Dice Que Retirá el Proyecto." *El Nuevo Día*, 17 September 2002.
- Parés Arroyo, Marga. "Desbordadas las Salas de Parto Públicas." *El Nuevo Día*, 4 September 2002.
- Pellicier, Miguel Angel "Inauguran Hospital Menonita." *El Mundo*, 19 October 1965.
- Rojas Daporta, Malén. "Descubridor Píldora Contraceptiva Asegura Es Infalible; No Causa Cáncer." *El Mundo*, 30 November 1959.
- Roldán Soto, Camile. "Protesta Contra el Limite a la Compensación por Impericia." *El Nuevo Día*, 12 September 2002, 28.
- . "Obstetras del Auxilio Mutuo le Dicen Adios a los Partos." 15 October 2002, 16.
- Rosario, Ivonne. "Regrese en Cuatro Meses." *El Vocero*, 29 November 2002, 3.
- Sanjurjo Meléndez, Libni. "El Control del Alumbramiento." *Primera Hora*, 22 October 2007.
- . "El Derecho de Dar a Luz en La Casa." *Primera Hora*, 22 October 2007.
- Sosa Pascual, Omayá. "Posible un Pleito por Paciente Cambiado." *El Nuevo Día*, 12 April 2001, 26.
- . "Rullán Confirma la Falta de Datos Sobre Impericia." *El Nuevo Día*, 15 July 2001, 26.
- . "Entre Las Primeras Causas de Muertes." *El Nuevo Día*, 15 July 2001, 24.
- . "Previsible Un Éxodo de Ginecólogos." *El Nuevo Día*, 22 May 2002, 24.

———. "Se Lavan las Manos el Organismo Rector de los Médicos." *El Nuevo Día*, 24 September 2002.

Tanner, Lindsey. "Toman Medidas para Evitar Errores." *El Vocero*, 7 December 2001, 46.

Valdivia, Yadira. "Aumentan los Nacimientos por Cesárea." *El Nuevo Día*, 7 February 2000.

Vda Pont, Julia. "Expanden Hospital." *El Mundo*, 12 October 1965.

Vincens, Marilyn. "La Comadrona, una Especie Que No Esta Extinta." *El Nuevo Dia*, 9 September 1996, 46-47.

Conference Papers

Guémez Pineda, Miguel. "Imagen Social de la Partera Indígena Yucateca a Través de la Historia." Miami: LASA, 2000.

Pons, Juan. "Informe del ELA a la XIV Conferencia Sanitaria Panamericana." 1954.

Rude, Anna. "The Midwife Problem in the United States." In *74th Annual Session of the American Medical Association*. San Francisco, 1923.

Theses

Colón, Nayda Berríos. "Análisis de la Estructura Organizacional del Departamento de Salud: La Necesidad de un Nuevo Modelo de Servicio." Universidad de Puerto Rico de La Escuela Graduada de Administración Pública, 1990.

Díaz Ortíz, Debbie Ann , and Merixa Cabrera Mont. "El Servicio de las Parteras en Puerto Rico: Historia de la Profesión y Análisis del Servicio a Través del Nivel de Satisfacción de las Madres Atendidas Durante la Gestación, Alumbramiento y Puerperio en las Décadas del 1980-1990." Universidad de Puerto Rico Recinto de Ciencias Médicas, 1999.

Ducret Ramu, Carmen Rita. "La Comadrona Puertorriqueña: Colaboradora en el Proceso de Parir." Universidad Interamericana de Puerto Rico, 1989.

Flores Ramos, José Enrique. "Mujer, Familia y Prostitución: La Construcción Del Geenero Bajo la Hegemonía del Partido Popular Democrático." University of Puerto Rico, 2002.

Ferguson, Richard Brian. "Class Transformations in Puerto Rico." Colombia University, 1988.

Godreau, Isar Pilar. "Missing the Mix; San Antón and the Racial Dynamics of 'Nationalism' in Puerto Rico." University of California, 1999.

Trujillo-Pagán, Nicole E. "Health Beyond Prescription: A Post-Colonial History of Puerto Rican Medicine at the Turn of the Twentieth Century." University of Michigan, 2003.

Government Documents

"Informe Anual del Departamento de Salud." Puerto Rico, 1946-1992.

Archivo de la Asociación Médica de Puerto Rico. "Informe Anual de la Asociación Médica de Puerto Rico." Santurce, Puerto Rico, 1946-1975.

Departamento de Salud. "Material Informativo Sobre el Programa de Comadronas Auxiliares de 1955." Santurce, Puerto Rico.

———. "Informe Anual de Estadísticas Vitales de 1985." Oficina de Planificación, 1987.

Departamento de Salud de Puerto Rico. "Reglamento para Comadronas Auxiliares." 1961.

División de Educación a la Comunidad. "Nuestros Hijos." 1966.

Office of Disease Prevention and Health Promotion. "Developing Objectives for Healthy People 2010." United States Department of Health and Human Service, 1996.

School of Public Health and Administrative Medicine of Columbia University and the Puerto Rican Department of Health. "La Asistencia Medico-Hospitalaria en Puerto Rico: Resumen y Recomendaciones del Informe Rendido al Honorable Gobernador y la Legislatura del Estado Libre Asociado." 1960.

Laws

Leyes de Puerto Rico. "73." 1923.

———. "15." 1924.

———. "22." 1931.

———. "22." 1931 amended 1969.

———. "390." 1947.

———. "390." 1947.

———. "97." 1961.

———. "Código Penal." 1974-2004.

———. "112." 1980.

———. "112." 1980.

———. "Proyecto de la Cámara, No. 2944." 1999.

Interviews

Ana. Interview by author, 1 December 2005.
Astor. Interview by author, 12 September 2005.
Carmenchi. Interview by author, 29 November 2005.
Carmona. Interview by author, 27 September 2005.
Castillo. Interview by author, 8 September 2005.
Castro de Casteñeda, Miriam. Interview by author, 27 September 2005.
Cordero. Interview by author, 10 August 2005.
Cuestionario sobre partos por comadrona Antonia. Interview by Ayabarreno, L. 2001.
Debbie. Interview by author, 6 December 2005.
Edna. Interview by author, 18 August 2005.
Entrevista a Comadrona Rosa. Interview by Lago, Y. 2001.
García. Interview by author, 13 September 2005.
Ingrid. Interview by author, 27 December 2005.
María. Interview by author, 5 December 2005.
Mulero. Interview by author, 13 October 2005.
Nilsa. Interview by author, 22 October 2005.
Onis. Interview by author, 6 September 2005.
Patricia. Interview by author, 23 December 2005.
Penchi. Interview by author, 24 July 2007.
Pérez. Interview by author, 12 September 2005.
Ramírez. Interview by author, 3 October 2005.
Rita. Interview by author, 19 February 2005.
Ruth. Interview by author, 18 June 2005.
Tomás. Interview by author, 15 December 2005.
Tomasita. Interview by author, 19 October 2005.
Vanesa. Interview by author, 26 November 2005.
Victoria. Interview by author, 16 September 2005.
Villamil. Interview by author, 17 October 2005.

Government Documents

"University of Puerto Rico School of Medicine Annual Report 1950-1985."

"Puerto Rico: Los Recursos Humanos en Cifras." Job Training Partnership Act.

"Informe Anual del Departamento de Salud de San Juan." Puerto Rico, 1946-1992.

"Puerto Rico: Los Recursos Humanos en Cifras." edited by Instituto JTPA del Caribe, 29, unknown date.

Archivo de la Asociación Médica de Puerto Rico. "Informe Anual de la Asociación Médica de Puerto Rico." Santurce, Puerto Rico, 1946-1975.

Departamento de Salud. "Material Informativo sobre el Programa de Comadronas Auxiliares de 1955." Santurce, Puerto Rico.

———. "Informe Anual de Estadísticas Vitales de 1985." Oficina de Planificación, 1987.

Departamento de Salud de Puerto Rico. "Reglamento para Comadronas Auxiliares." 1961.

División de Educación a la Comunidad. "Nuestros Hijos." 1966.

Office of Disease Prevention and Health Promotion. "Developing Objectives for Healthy People 2010." United States Department of Health and Human Service, 1996.

School of Medicine and School of Tropical Medicine of the University of Puerto Rico. "Four Year Progress Report." 1956.

School of Medicine and Tropical Medicine of the University of Puerto Rico. "Educational Development and Program Objective." 1958.

School of Public Health and Administrative Medicine of Columbia University and the Puerto Rican Department of Health. "La Asistencia Médico-Hospitalaria en Puerto Rico: Resumen y Recomendaciones del Informe Rendido al Honorable Gobernador y la Legislatura del Estado Libre Asociado." 1960.

University of Puerto Rico Medical Sciences Campus, School of Medicine, Department of Preventative Medicine and Public Health, Maternal and Child Health Section, Antonio Medina, MD, MPH Director,. "The Utilization of Prenatal Services in Puerto Rico." 1965-1966.

Unpublished Work

Miriam Castro de Castañeda, "Nurse Midwifery in Puerto Rico."

International Confederation of Midwives. "International Code of Ethics for Midwives." Vancouver, 1993.

Parteras de Puerto Rico. "La Ciencia de Partear: Documentos Especiales de las Parteras de Puerto Rico." 1997.

Websites

Jacobson, Kate. "A Short History of Midwifery in America."
<http://www.frognet.net/~midwife/campaign.html>.

Jasanada, Alicia. "Partos Más Seguros, Pero Menos Humanos."
<http://www.ciencia.vanguardia.es/ciencia/portada/p531.html>.