Home Birth Emergencies in the U.S. and Mexico: The Trouble with Transport

Robbie Davis-Floyd Ph.D.

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Abstract: Proponents of the global Safe Motherhood Initiative stress that primary keys to safe home birth include transport to the hospital in cases of need and effective care on arrival. In this article, which is based on interviews with American direct-entry midwives and Mexican traditional midwives, I examine what happens when transport occurs, how the outcomes of prior transports affect future decision-making, and how the lessons derived from the transport experiences of birthing women and midwives in the U.S. and Mexico could be translated into improvements in maternity care. My focus is on home birth in urban areas in Mexico and the US. In both countries, biomedicine and home-birth midwifery exist in separate cultural domains and are based on distinctively different knowledge systems. When a midwife transports a client to the hospital, she brings specific prior knowledge that can be vital to the mother's successful treatment by the hospital system. But the culture of biomedicine in general tends not to understand or recognize as valid the knowledge of midwifery. The tensions and dysfunctions that often result are displayed in midwives' transport stories, which I identify as a narrative genre and analyze to show how reproduction can go unnecessarily awry when domains of knowledge conflict and existing power structures ensure that only one kind of knowledge counts. This article describes: (1) *dis-articulations* that occur when there is no correspondence of information or action between the midwife and the hospital staff; and (2) *fractured articulations* of biomedical and midwifery knowledge systems that result from partial and incomplete correspondences; contrasts these two kinds of disjuncture with the *smooth articulation* of systems that results when mutual accommodation characterizes the interactions between midwife and medical personnel; and links these American and Mexican transport stories to their international context, describing how they index crosscultural markers, and suggest solutions, for "the trouble with transport."

Key Words: Childbirth, home birth, midwives, hospital, transport, US, Mexico

Introduction

In Mexico, home birth, while diminishing in frequency, still exists as a vital tradition and viable cultural option for many women; in the US, it was almost obliterated by the 1950s but in recent decades has formed the focus of a social movement of midwives, mothers, and childbirth activists dedicated to maintaining home birth as a viable option. As proponents of the global Safe Motherhood Initiative have long stressed, in both the developing world where home birth is often a necessity, and the developed world where it is a choice, primary keys to safe home birth include transport to the hospital in cases of need and effective care on arrival (Fullerton, 2000*)*. In this article, I examine what happens when transport occurs, how the outcomes of prior transports affect future decision-making, and how the lessons derived from the transport experiences of birthing women and midwives in the U.S. and Mexico could be translated into improvements in maternity care. Two aspects are critical to the viability of transport: (1) Can the mother get there? In other words, is there a hospital within reach and can a vehicle be found? (2) What happens when she arrives? The first, availability of transport, is a major issue in rural Mexico and elsewhere in the developing world and deserves separate and thorough attention. Here my focus is on home birth in urban areas in Mexico and the US, where the trouble with transport is not its lack but rather what happens when transport places the mother who had planned to give birth at home, and the midwife attending her, in interaction with biomedical personnel.

In both countries, biomedicine and home-birth midwifery exist in separate cultural domains and are based on overlapping but distinctively different knowledge systems. When a home-birth midwife arrives in the hospital with her client, she brings with her the general ways of knowing and style of practice that characterize her cultural domain, and her specific prior knowledge about the woman's overall health, personality, desires, and labor process. This knowledge can be vital to the mother's

successful treatment by the hospital system. But the culture of biomedicine in general tends not to understand or recognize as valid the knowledge of midwifery. Thus in the hospital, the midwife may have no authoritative status. Yet she must interface with medical personnel if she is to communicate information the hospital staff may need to provide appropriate and effective care for her client. Smooth articulation of the medical and midwifery knowledge systems facilitates the safest transition for the woman and her baby, but all too often, disjuncture and dis-articulation occur. The tensions and dysfunctions that result are displayed in midwives' transport stories, which I here identify as a narrative genre. In this article, I will seek to unpack these stories for the collision of worlds they encapsulate and the points of fracture and permeability in the crusts of those worlds that they reveal.

I will focus specifically on the transport stories told by two groups of midwives with whom I have conducted extensive interviews: American direct-entry (non-nurse) midwives who attend home births, and a small group of traditional Mexican midwives who practice in and around the large urban city of Cuernavaca in the state of Morelos, just south of Mexico City. After describing these two groups of midwives and the national contexts within which they learn and practice, I will narrate some of their stories, analyzing them as cultural terrains that reveal how reproduction can go unnecessarily awry when domains of knowledge conflict and existing power structures ensure that only one kind of knowledge counts. I will describe such encounters as (1) *dis-articulations* that occur when there is no correspondence of information or action between the midwife and the hospital staff; and (2) *fractured articulations* of biomedical and midwifery knowledge systems that result from partial and incomplete correspondences. I will contrast these two kinds of disjuncture with the *smooth articulation* of systems that results when "mutual accommodation" (Jordan, 1993) characterizes the interactions between midwife and medical personnel. In the Conclusion, I will link these American and Mexican transport stories to their international context, describing how they index some of the crosscultural markers for "the trouble with transport."

Articulation and Authoritative Knowledge: Biopower Meets the Home-Birth Midwife

> **ar.ti.cu.late** *vt.* (1) to put together by joints; (2) to arrange in connected sequence, fit together, correlate. *vi.* to be jointed or connected. *n.* a joint in a stem or between two separable parts, as a branch and leaf [or] a node or space between two nodes
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> --Webster's New World Dictionary, 2000

My use of the term *articulation* at various points in this article comes from Gramsci through Lawrence Grossberg. In *We Gotta Get Outa This Place: Popular Conservatism and Postmodern Culture* (1992, p. 54), Grossberg notes that the concept of articulation "provides a useful starting place for describing the process of forging connections between practices and effects." His starting place will be my ending place, as most of the stories I recount below illustrate connections that could potentially have been forged but instead were either never made or only partially constituted. These disjunctures in what could have been functional, smoothly bending joints stem from the dominance of biomedicine—a hierarchical system that has sought, in general, not to articulate with home-birth midwifery but rather to eliminate it through discounting its practices and knowledge base. *In Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*, Brigitte Jordan (1997, p. 56) noted that

> for any particular domain several knowledge systems exist, some of which, by consensus, come to carry more weight than others, either because they explain the state of the world better for the purposes at hand (efficacy) or because they are associated with a stronger power base (structural superiority), and usually both. In many situations, equally legitimate parallel knowledge systems exist and people move easily between them, using them sequentially or in parallel fashion for particular purposes. But frequently, one kind of knowledge gains ascendance and legitimacy. A consequence of the legitimation of one kind of knowing as authoritative is the devaluation, often the dismissal of all other kinds of knowing.

Jordan maps out what happens when one kind of knowing does gain ascendancy, thus opening up the possibility of asking what happens when an ascendant knowledge system and a devalued one must interface. Why do adherents of a dominant knowledge system sometimes dismiss what adherents of a devalued system have to say, sometimes give them partial credence, and other times honor them, act promptly on their recommendations, and include them in the process? The stories I analyze below illustrate all of these possible scenarios.

In the process of describing how Western biomedicine gained its cultural ascendancy, Michel Foucault identified the cultural authority it carries as a form of "biopower," which he defined as "disciplines of the body," used as "numerous and diverse techniques for achieving the subjugation of bodies and the control of populations" (1978, p. 140). This subjugation and control include the biomedicalization of bodily processes like childbirth and the development of institutions within which such processes are supposed to take place, along with formalized structures for managing them. Jordan augments Foucault's notion of biopower with her focus on the status of particular knowledge systems:

> It is important to realize that to identify a body of knowledge as authoritative speaks, for us as analysts, in no way to the correctness of that knowledge. Rather, the label "authoritative" is intended to draw attention to its status within a particular social group and to the work it does in maintaining the group's definition of morality and rationality. The power of authoritative knowledge is not that it is correct but that it counts. (Jordan, 1997, p. 57)

Although the midwives in the US and Mexico whom I have studied treat their own knowledge system as authoritative in the home context, they are acutely conscious of the larger and higher authority carried by biomedicine not only inside the hospital but also in the culture at large. As we will see, much of the time these midwives do not accept biomedical knowledge as truth or fact; many of their practices and much of their midwifery knowledge system constitute a radical critique of obstetrics, challenging its claims to the authority of fact and truth. But these midwives also understand that in the hospital as in the wider culture, including in courts of law, their radical critique goes largely unheard and their ways of knowing do not count. Faced with this formalized system of biopower that discounts their individualized approach to maternity care, during transport midwives nevertheless often seek to communicate what they know, in the interests of securing the care for which they brought the woman to the hospital, which they deem to be necessary for their client's safety and well-being. So as they enter the hospital, they extend into that system what I will identify as *fingers of articulation* in an effort to generate a productive interface. The following detailed examination of midwives' transport stories intends to illuminate what happens along a spectrum of possibilities from dis- to smooth articulation, from the dismissal of these outreaching fingers to their clasping by a biomedical hand. Through examining this spectrum of articulations between knowledge systems, I hope to augment Jordan's explanations of what happens when one system of knowledge discounts another with a more nuanced consideration of how, in specific situations, the dominant system can come to take the subaltern system into partial or fully accommodative account.

Methodology

> Articulation is a continuous struggle to reposition practices wihtin a shifting field of forces.
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> --Lawrence Grossberg (1992, p. 54)

This article is based on my continuing research on American midwives (begun in 1995) and in Mexico (begun in 1997). The focus of this research is midwifery politics in relation to the process of professionalization that American direct-entry midwives (Davis-Floyd, 1998b, 2002a, 2003), Mexican professional midwives (Davis-Floyd, 2001a), and a small and unique group of Mexican traditional midwives (Davis-Floyd, 2001b) are undergoing.[1] This research did not specifically focus on transport stories as a genre or on transport as a salient issue. But during its course (which involved hours of

formal interviewing and even more hours of “hanging out” with midwives), I heard many transport stories told, only some of which ended up on tape by luck or circumstance. Thus this article in no way pretends to constitute a comprehensive exploration of transport stories, a task I suggest to future ethnographers.[2] For even though they had not constituted a specific research focus, over time these transport stories began to emerge for me as a narrative genre that richly encapsulates clashes of power and ideology between the biomedical and midwifery systems and their potentially devastating consequences for mother and baby, constituting salient cathexes for the trope of “reproduction gone awry.” The particular stories I present here, told by American direct-entry midwives and Mexican traditional midwives, were chosen both for their representative nature and for the transnational similarities they index. These similarities include exclusively out-of-hospital practice and concomitant marginalization vis-à-vis the biomedical system, and thus embody the collision of worlds I seek to analyze.[3] In both countries, there are a few nurse-midwives who attend both home and hospital births; their transport experiences are somewhat different, especially when they practice and carry authoritative status in both domains. I suggest them as potential subjects of a future study.[4] The following section will describe the two groups of midwives on whom I focus here, and the larger national and transnational contexts within which they work.

Backgound and Context: Obstetrics and Midwifery in the US and Mexico

> The effects of any practice are always the product of its position within a context.
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> --Lawrence Grossberg (1992, p. 54)

In the US in 1999, obstetricians, together with some family practice physicians, attended approximately 92% of all births. Their discourse around childbirth centers on “managing risk”—from an obstetrical point of view, every birth is a potential disaster and must be managed authoritatively and preventively to ensure the best possible outcome. Thus most women laboring in American hospitals today are routinely hooked up to IV lines and electronic fetal monitors throughout labor. Their labors are often induced or augmented with a variety of pharmacologic agents, including pitocin and cytotec. Epidural anesthesia is commonly used to eliminate pain. Just under half of birthing women receive an episiotomy to enlarge the vaginal opening and speed delivery. Just under 30 percent of all babies in the US are pulled out with forceps, vacuum extractors, or via Cesarean section (Ventura, Martin, Curtin, Menacker & Hamilton, 2001). As I and others have previously described (Davis-Floyd, 1992, 1994, 1998a; Martin, 1987; Rothman, 1982, 1989), the performance of birth in American hospitals tells a cultural story about the female body as a defective machine in need of assistance by technical experts and other more perfect machines. It also enacts and displays the technocracy’s supervaluation of speed, efficiency, control, high technology, and the flow of information through cybernetic systems. Technobirths are typical and normative in American hospitals through a consensual, biopowerful process jointly driven by physicians, who tend to be trained exclusively in that approach, and women, who tend also to supervalue technology, control, and most especially the elimination of labor pain (Davis-Floyd, 1994). For instance, use of epidural anesthesia necessitates the use of many other technologies to monitor for and intervene in complications associated with the epidural. In other words, while some women might make other choices if they had more information, generally speaking the interventive American approach exists by mutual agreement between women and physicians steeped in the core values and overall approach to life characteristic of their technocratic culture. Both groups believe that this approach offers both comfort and safety in the face of an unpredictable natural process that proceeds more safely when carefully controlled, in the same way that a river subject to flooding seems improved when a series of dams and floodgates are installed.

To hospital practitioners steeped in this approach, the choice for home birth appears to be a choice for pain and random chaos in contrast to order and control. Most hospital-based practitioners have never seen a home birth and know little about the knowledge base of home birth midwives, in part because of a near-total lack of contact. The many safe and woman-centered births that take place at home are invisible to the medical gaze; biomedical discourse tends to center around "botched home births." This phrase is one I have often heard bandied about by medical practitioners who tend to assume that any home birth that ends up in the hospital must be "botched," even if it is the result of an appropriate transport.[5] Of course, the midwifery response is usually a sarcastic comment about enormous numbers of "botched hospital births"; women who have had "botched" hospital experiences and later choose home birth are an important source of such accounts. This trading of insults is an in-group phenomenon: hospital practitioners complain to other hospital practioners about home birth and midwives; midwives complain to other midwives about hospital practitioners. Dialogue between these groups is rare; mostly, their members inhabit separate worlds that only intersect when a home birth goes awry and a transport is the necessary result.

Throughout most of the twentieth century, the movement of birth was from home to hospital, as technomedicine became increasingly dominant and cultural notions of safety became increasingly tied to the technomedical management of birth (see DeClerq, DeVries, Viisainen, Salvesen & Wrede, 2001). Reacting to what they experienced as "over-medicalization," in the 1970s thousands of American women began to move their births away from the hospital and back to the home; a new class of practitioners emerged to serve them in what came to be known as the lay midwifery renaissance. By the 1990s, many of these lay midwives had been practicing for over twenty years and had ample opportunity to create a distinctive knowledge base for out-of-hospital midwifery (e.g. Frye, 1995; Davis, 1997; Gaskin, 1990; Rooks, 1997, pp. 225-294). As part of their process of professionalization, they dropped the appellation "lay" in favor of the European term "direct-entry," which indicates that they entered directly into midwifery education without passing through nursing first (see Davis-Floyd, 1998b). The exact number of direct-entry midwives practicing currently in the US is not known; educated guesses place it at around 3000. Almost all of them work exclusively out-of-hospital, attending around one percent of births.[6] Approximately 5500 nurse-midwives practice mostly in hospitals, attending around seven percent of all births (Declerq, 2001).[7] In 1982 a coalition of lay and nurse-midwives created a national organization, the Midwives' Alliance of North America (MANA), whose primary purpose is to support out-of-hospital midwifery. In 1995, tired of being accused of being "ignorant" and "untrained," and wanting to offer consumers assurance of competence, MANA members created a new national certification that could test and validate their knowledge, skills, and experience--the Certified Professional Midwife (CPM) credential (Davis-Floyd, 1998b; Rooks, 1997).[8] At this time of writing, there are over 700 CPMs in the US, and three in Mexico. CPM certification honors multiple kinds of midwifery education, including apprenticeship, which seems to many home birth midwives to most effectively teach the experiential, intuitive, non-interventive, and trust-based approach they value as deeply as their technomedical knowledge and skills. CPMs and other independent direct-entry midwives practice legally or a-legally in 35 states and illegally in 16 states.[9] In most alegal and illegal states, they are fighting uphill battles for legalization (Davis-Floyd & Johnson-Levitin, nd). In some states where they are licensed, their services are covered by private insurance companies and by Medicaid (and sometimes managed care). But in most states, home birth attended by direct-entry midwives is still an out-of-pocket expense—a factor that exercises a significant limitation on its growth. (In states like Washington and Florida where home birth is reimbursed, the percentage of home births is on the rise.) While their practices are not uniform, most direct-entry midwives practice according to specific protocols (sometimes individually arrived at, sometimes mandated by state regulation, and sometimes consensually established by local or regional midwifery associations) that include lists of specific conditions and circumstances that warrant hospital transport. These midwives are presently forming a new professional organization, tentatively named the "CPM Alliance," to generate more

uniform national standards for the increasing numbers of midwives achieving CPM certification, a process that will take some time to develop.

In Mexico, biomedicine has not only taken over childbirth but is redefining its very nature. While high technologies like electronic fetal monitors are not as readily available as in U.S. hospitals, in vaginal deliveries extreme interventions like fundal pressure (*Kristeller*) and manual extraction of the placenta are common, and Mexico's Cesarean section rate (just under 40%) is one of the highest in the world (Belizán, Althabe, Barros & Alexander, 1999; Fernandez de Castillo, 1997).[10] A common argument against midwifery made by government officials and MDs is that there are plenty of doctors and nurses in Mexico, that the poor are entitled to the same care as the middle class, and that therefore progress in maternal health care should entail giving everyone access to hospitals and doctors. This argument is representative of what has been called the "megarhetoric of developmental modernization" (Appadurai, 1996, p. 10), which identifies a single point in a given area toward which development should be progressing (Appiah, 1997, p. 425): in health care, that single point is Western biomedicine.

As Marcia Good Maust (2000) has shown, Mexico's high Cesarean rates stem in large part from physicians' deeply held belief that birth is a dangerous process that can cause harm to mothers and babies and that technological interventions like Cesarean sections are the best way to ensure the safety and wellbeing of mother and child. Such physicians see midwives as a hangover from the undeveloped past, a temporary evil that must be replaced as quickly as possible with the vanguard of the future--modern health care. In the US and other developed countries, a postmodern discourse (one that stems from multiple points of reference, that does not assume the superiority of any one method) around the benefits of professional midwifery care and certain indigenous approaches--such as walking during labor, upright positions, and herbal remedies—occasionally punctuates the national dialogue about birth. This discourse is barely heard in today's Mexico, outside of some branches of the public health sector. In the US, nurse- and direct-entry midwives, backed by supportive consumers and often by public health officials, due to their record of good outcomes and cost-effectiveness (Rooks, 1997), are engaged in active campaigns to increase government and public awareness of the multiple benefits of midwifery care. But in Mexico, there are no midwifery lobbyists to disturb legislative halls.

Nevertheless, many working-class women resist government initiatives to bring birth into clinics and hospitals, choosing instead to birth at home attended by a midwife.[11] Officially labeled "traditional birth attendants" (TBAs) by WHO and UNICEF, these midwives refer to themselves as *parteras tradicionales* ("traditional midwives": see Davis-Floyd, 2001a, b for more detail). They are usually mothers who have given birth several times and who have become midwives by being asked to attend the births of friends and relatives, slowly gaining first-hand experience of birth. Some of them undertake long apprenticeships, while others learn simply by attending births. Between 1995 and 1996, traditional midwives attended less than 17% of births in Mexico (INEGI, 1999). The majority are over 65 years of age (SSA, 1994); many are dying without training replacements (Good Maust, Güémez Pineda & Davis-Floyd, nd).[12]

Efforts to reduce maternal and perinatal mortality in the Third World by UNICEF and WHO and those engaged in implementing the Safe Motherhood Initiative have for two decades centered around "TBA training"—short, usually two-week-long courses taught by biomedical personnel, usually doctors, nurses, or professional midwives to community midwives (Jordan, 1993; Pigg, 1997). Almost always, these courses are extensions of biopower, fingers of articulation reaching from biomedicine into indigenous communities designed not to clasp hands in mutual accommodation but to alter what they encounter. Very seldom do the "trainers" enter a community and spend time there learning about indigenous birthways before they try to intervene. Rather, they attempt to educate traditional midwives in biomedical ways of thinking, most especially about conditions of risk that are deemed to necessitate transport. In Mexico and other countries, UNICEF has just discontinued funding for TBA training courses; since maternal mortality rates have not dropped after 20 years of TBA training, the conclusion is that such training is ineffective. This conclusion is based on the assumption that mothers die because

midwives give them inadequate care or fail to transport them in cases of need. As I have described elsewhere (Davis-Floyd, 2000), in rural areas the unavailability of transport is often the greater problem. But refusal or deliberate delay of transport does occur; as we will see, often the reasons for this delay stem from negative prior transport experiences.

TBA training courses and other forms of exposure to biomedicine have resulted in fundamental alterations in practice for many traditional midwives in Mexico. Across the country, it is now common for them to give pitocin injections to hurry labor, to insert IVs for hydration, and to wear blue biomedical garb when attending births. Combining such practices with the traditional *sobada* (massage), herbal treatments, and religious beliefs, Mexico's contemporary midwives practice at the intersection of various cultural domains.

These forces and trends have particularly influenced midwives who practice in urban areas, as my extensive interviews with seven traditional midwives who live and practice in various *colónias* in or around the city of Cuernavaca reveal. These urban *parteras tradicionales* (unlike many of their rural counterparts) have long been incorporated into the state health care system in Morelos through bi-monthly seminars on family planning and other topics; the government uses them as agents of family planning and birth control, a service desired by women which they are happy to provide. All seven went through a period of using allopathic interventions like oxytocin injections to induce stronger contractions; experiencing complications as a result, all have returned to the use of their traditional herbs. Today they routinely send women out for ultrasounds when they diagnose a breech or transverse presentation to confirm their diagnosis, and offer their clients an eclectic potpourri of traditional techniques like external version (turning the baby manually) and biomedical options like sending a woman to a doctor they know and trust for a Cesarean section. Dancing fluidly at the interface of biomedicine and their traditional systems, these midwives are strategically negotiating the boundaries between knowledge systems and creatively producing a hybrid and increasingly well-articulated knowledge system of their own. In this endeavor they are assisted by a new group of *parteras profesionales* (professional midwives) whom I have described elsewhere (Davis-Floyd, 2001a). These professional midwives, three of whom are CPMs, are all members of MANA and have worked to extend MANA's support of midwives and home birth into Mexico by putting on five annual MANA Mexico conferences around the country and by recruiting as dues-paying members interested traditional and professional midwives.[13] My Cuernavaca interviewees are members of MANA and regularly attend these conferences, often doing volunteer work on conference organization; in recent years they have also attended, via scholarships from MANA, various MANA conferences in the U.S.

Significant differences in lifeworld, knowledge base, and practice styles distinguish American direct-entry midwives from the urbanized traditional midwives of Cuernavaca, along with equally salient differences in social class and access to wealth, education, and other resources of the technocracy. But their similarities are also relevant here. The transport stories they relate below can most effectively be interpreted in light of the understanding that the members of both groups do not practice in conceptual or geographic isolation, as some midwives do, but rather exhibit all the characteristics of what I have called the "postmodern midwife"—one who balances and evaluates knowledge systems in a relativistic way, and who participates in transnational networks of community-building and information exchange (Davis-Floyd & Davis, 1997; Davis-Floyd, Cosminsky & Pigg, 2001). Like American homebirth midwives, the midwives of Morelos are busy balancing knowledge systems and constructing hybrid identities in urban areas in which they must constantly engage in strategic negotiations with physicians. Their membership in MANA gives them access to international midwifery networks; participation in these networks is helping them to form a new state association to support traditional midwifery in Morelos, and to participate in a national certification project for Mexican midwives that is currently underway (see Davis-Floyd, 2001a).

From an anthropological point of view, both the Cuernavaca midwives and American direct-entry midwives elide and confound the usual distinctions between professional and traditional

midwives: some of the American home-birth midwives who are professionally licensed and certified were trained through apprenticeship or self-study; the Cuernavaca midwives, trained the same way but considered lay practioners by their government, are engaged in an unnamed but nevertheless visible process of professionalization (see Davis-Floyd, 2001b). Their ethnic, economic, and class differences are salient; yet despite these differences, and because of their mutual dedication to the welfare of women and belief in the safety and efficacy of home birth, it is fair to say that the members of both groups are inspired by the transnational ideology of home birth and "sisterhood" in midwifery that MANA seeks to foster. Both groups critique the failures and limitations of biomedicine and have a strong sense of mission about preserving home birth in the face of biomedical hegemony. They believe in women's ability to give birth with little intervention most of the time, in the superiority of homes and birth centers as the sites of birth, and in the efficacy of their own knowledge systems and skills.[14] They do not undertake transport unless they are convinced that the situation is truly in need of technomedical intervention, and when they do transport, their intent is to do all in their power to make the medical system respond in ways they consider appropriate. Thus their transports usually involve at least two people from outside the biomedical realm: the mother who needs help, and the midwife who will not abandon her even when she is no longer in charge of her care.[15]

All midwives who practice out-of-hospital must occasionally transport. No national statistical data on transport for Mexico is available, but in the US, home birth midwives have a transport rate of about 8% (Johnson & Daviss, 2001). In other words, 92% of their clients give birth safely at home, while 8% are transported to the hospital during or after labor for various reasons: 6% of their clients are transported for precautionary reasons like failure to progress in labor, meconium staining in the amniotic fluid (possibly but not necessarily a sign of fetal distress), or a retained placenta after the birth. Approximately 2% of their clients are transported for potentially life-threatening emergencies (Johnson and Daviss 2001). (My Cuernavaca interviewees anecdotally report similar rates.) The transport stories I have culled from my interview data and selected to recount below cluster inside that 2%; I urge my readers to keep in mind that the circumstances they recount are *quite rare* and not representative of the vast majority of births. These experiences are most likely to be encoded in narrative because they are so unusual and also because of their heavy emotional charge. Stories give meaning and coherence to experience; midwives who transport under frightening circumstances often need to find that coherence and to evaluate through narrative, with the benefit of hindsight, their own actions and those of the mother and the biomedical personnel.

In transport situations, there are various ways in which "awryness" can occur: (1) The fact that transport is indicated means that the natural process of birth has in some way gone awry, or seems likely to; (2) the midwife may wait too long to summon transport, either because of prior bad experiences with transport, as we will see below, or because of the midwife's lack of knowledge of indications for transport;[16] (3) the hospital staff taking the call may not understand the urgency of the mother's problems; (4) EMTs may fail to respond appropriately, or there may be disjunctive communication between the midwives and the EMTs; (5) arrival at the hospital can go awry for the mother and the midwife if either is ignored or mistreated; (6) even well-intended biomedical interventions can at times do more damage than they fix; (7) not all natural disasters are fixable by biomedical means, so even with the very best of care, the death of mother or baby can occur. Only some of these possible levels of awryness are articulated in the stories I tell below. I selected these particular six stories because they are typical: they represent the range of possible outcomes of transport and are emblematic of many other situations and possibilities I do not have room to treat here. Since I have no way of ascertaining the truth or untruth of these stories, for the purposes of this article I take them at face value and unpack them for what they reveal about midwives' perceptions of and the meanings midwives attribute to events as they unfold.

The Stories

> Analyzing an event involves (re)constructing it or, in Foucault's terms, fabricating the network of relationships into with and within which it is articulated, as well as the possibilities for different articulations.
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> --Lawrence Grossberg (1992, p. 54)

In this section, the stories as the midwives recounted them to me are italicized; these stories are not direct quotes but my retellings (unless otherwise indicated). Contextualizing information, my analyses and interpretations, and the midwives' additional comments, appear in regular font.

Dis-Articulation

Carrie's First Story: Unnecessary Delay

Carrie Smiley is a Certified Professional Midwife (CPM) who has practiced in Atlanta, Georgia for over 18 years, attending during that time over 850 births.[17] Her practice is "unlawful" (meaning that it is punishable in the misdemeanor category). Most of the home births she attends are for white middle-class couples. She does prenatal care out of her own home, a two-story house at the edge of a small lake in an attractive Atlanta suburb. She began her birth career in the late 1960s working as a volunteer in labor and delivery, and then took training as a biomedical assistant, working in labor and delivery and for a pediatrician for several years. Starting in 1977 she began attending the home births of friends; in the early 1980s she undertook a year-and-a-half apprenticeship with another home-birth midwife who later became her partner. The following episode took place in 1984, during the early years of Carrie's home-birth midwifery practice. But it should not be regarded as dated, as it typifies many transports that presently occur, especially in "illegal" states.

Carrie and her partner are attending a mother pregnant with her first child, laboring at home and planning a home birth. After about eight hours of labor, the mother has reached ten centimeters dilation and is starting to feel the urge to push. Monitoring the baby's heart tones, the midwives detect strong decelerations, a sign of fetal distress. Hoping to get the baby out quickly, the midwives ask the mother to push a few times to see if the baby will come down. When they realize that the mother is not going to be able to get the baby out with sufficient expediency, they get her to kneel in a knee-chest position, put her on oxygen, and call the EMTs. When ten minutes pass and the EMTs have not yet arrived, the midwives help the mother into their car, planning on driving her to the hospital themselves. Just as they are ready to go, the ambulance pulls up and blocks the driveway. Announcing, "We're here now, we'll take it from here," the paramedics pull the mother out of the midwife's car and help her into the ambulance. But they refuse to heed the midwives, who are urging that they must rush the mother to the hospital, insisting that first they have to get a history. Asking questions like "have you had any nausea during this pregnancy?" the EMTs are wasting precious time. Frantic at the delay, and knowing the baby might be suffering from oxygen deprivation, the midwives ask the paramedics to put the mother on oxygen. They refuse, wanting to continue with the history, so the midwives get their own oxygen tank out of the car, at which point the medics finally accede and hook the mother up to the ambulance oxygen tank. As the ambulance starts toward the hospital, the midwife riding with the mother asks her to get on her hands and knees to relieve any possible cord compression, but the paramedics get upset and turn the mother flat on her back. Knowing that this position will exacerbate cord compression and reduce blood and oxygen flow to the baby, the midwife compromises by turning the mother on her side, and continues to listen to the fetal heart tones.

Arriving at the hospital, the midwives are told that there are several obstetricians present in the hospital, but only the one on-call is allowed to treat a "walk-in" and he is not in-house and will have to be called. Increasingly frantic, the midwives insist to the nurse in the ER that the baby is in distress. The nurse auscultates the heart tones, records them at 130, announcing this to the midwives and the mother, and tells the midwives that "Everything is fine; we will take over from here." She will not look at the records the midwives brought, which show the heart fluctuations, nor pay heed to their insistence that this is an emergency. The midwives are not allowed to remain with the mother in the ER or to accompany her to labor and delivery. Instead they are sent to the waiting room. Carrie says, "Every

time we went outside the room, we noticed that everyone seemed to be looking at us and talking about us."

Terrified that they will be arrested and sent to jail, the midwives finally head home. Later they learn that it took the doctor on-call one hour and 45 minutes to show up. In the meantime, the nurses caught the baby, who was stillborn. The cause of death was listed on the hospital record as "prolonged fetal distress." The EMT records said that the mother had been antagonistic and refused oxygen, which the midwives insist is untrue. The nurses said the mother refused the electronic fetal monitor. The hospital pushes the mother to file criminal charges against the midwives, but the mother tells the hospital personnel that this death is clearly the hospital's fault, that the midwives acted appropriately and bear no blame, and that if the hospital should try to harass the midwives in any way, she will sue the hospital, not the midwives.

In Carrie's view, she and her partner did their best. Trained to detect fetal heart rate decelerations and to recognize which ones are dangerous, they responded appropriately to the signs of fetal distress. But in retrospect, Carrie wishes that they had taken the woman to the hospital themselves. When I asked her why they called 911 in the first place, Carrie responded, "We were really dumb—we thought that was the appropriate thing to do."

From Carrie's point of view, blocking the driveway and announcing "We'll take it from here" demonstrated the EMTs' arrogant and authoritative attitude, which at first glance seemed to leave no further role for the midwives to play. She feels that she and her partner demonstrated strength in their refusal to accept this dismissal. Rather, they flexibly and creatively tried to work with the EMTs to help the mother get what they felt she needed. Frustrated by their inability to convince the EMTs of the need for haste, they experienced their success in getting the mother back on oxygen as a small victory. They had good reason to believe that the baby was oxygen-deprived, so when the EMTs refused to act, the midwives resorted to the non-verbal but nonetheless eloquent strategy of getting their own oxygen tank out of the car, figuring that the EMTs would rather use their own oxygen than accept it from the midwives.

One possible reason for the baby's lack of oxygen might have been that the cord was compressed. Cord compression is usually exacerbated when a woman lies flat on her back, so the midwives wanted to put the mother on her hands and knees in the ambulance, as this is the position most likely to take the most pressure off the cord. (In addition, the flat on the back position can cause supine hypotension (low blood pressure) in women because it occludes the vena cava, resulting in inadequate circulation of blood (which carries oxygen) to the placenta and baby). But a woman on her hands and knees in an ambulance is a strange and unsettling sight and most likely did not match the medic's internal maps of proper patient position or behavior, or of safety while driving. So the midwives had to give up on the most physiologic position; here again they creatively compromised, finding a position that minimizes both cord and vena cava compression while not challenging the medics' views of how a patient should be positioned. For Carrie and her partner, these stand as examples of midwives' ability to think around situations to get the system to meet the woman's needs. Such creativity has been demonstrated to be typical of subaltern groups, who must be as aware of the features of the dominant group as of their own in order to successfully navigate inside the dominant system (Schaef, 1992).

Several obstetricians present in a hospital, but only the one on-call is allowed to treat "walk-ins," and that one is not in the hospital: here Carrie's voice dripped with sarcasm. For her this situation evidences hospitals' tendencies to be highly structured, category-oriented, and rule-bound. Her outside gaze notes that people who have a place inside the biomedical system, having contracted with a private obstetrician, are more likely to get an immediate response than the anomalous, un-placed "walk-in." The fact that the nurses would not look at the midwives' records seems analogous to the medics' refusal to heed the midwives' insistence on haste. Instead, the EMTs wanted to take a history,

which of course the midwives already had. But the information the midwives had obtained *did not count* for these biomedical personnel, who valued only the knowledge they themselves obtained. It seems to Carrie that reality as defined by biomedical categories (taking a history, allowing only one OB to attend a walk-in, counting only information obtained by biomedical personnel) was more salient here than reality as the midwives, the mother, and the stillborn baby experienced it.

Tragically, the mother's refusal to be put on the electronic monitor denied the biomedical system an indicator on which it might have acted. This refusal probably stemmed from the distrust of the biomedical system and its technology that led the mother to plan a home birth in the first place. When the ER nurse announced that the heart tones were at 130, the mother took this news to mean that the problem had resolved itself and "everything was fine." Carrie later learned that in the labor and delivery unit the fetal heart rate decelerations were noted and recorded by the nurses who were auscultating the mother, but for some reason they never told the mother that they could hear the decelerations, so she continued in the belief that the heart tones were still OK. Emphatically, Carrie stated that if the midwives had been allowed to remain with the mother, they would have convinced her to allow the monitor; she said "We would have done everything from cutting a huge episiotomy to jumping on her tummy to get that baby out. But we were sent away."

Carrie's sarcasm extends to the "lie" the EMTs told on their official records, a lie she is sure they told to cover themselves in case of lawsuit. It is likely that the paramedics assumed that as biomedically trained practitioners, their word carried more authority and cultural weight than the words of the midwives and the mother, so their notes were more likely to be seen as valid. Practicing inside a hegemonic cultural space can facilitate one's claim to truth. Practicing outside that space not only calls one's veracity automatically into question, but also puts one at risk of legal action: Carrie and her partner feared being sent to jail since their practice is unlawful in Georgia. They have dealt with this threat through their excellent outcomes, on which they keep careful statistics; through obtaining CPM certification, which is not recognized in Georgia but at least shows that they have been tested and have demonstrated the requisite competence; and through publicity: every few years, a local paper publishes a several-page spread on Carrie and her practice, showing pictures of her and of the happy couples she has attended. She feels that this high level of visibility affords her far more protection in the form of community support than would remaining underground.

Reality is as one perceives it and the effects of any given event depend not on the actual circumstances of that event but on how they are narrated. On both sides of this particular biomedical/midwifery//biopower/counterpower fence, opinions were formed or reinforced by this experience. We can imagine that the story that circulated among hospital personnel about this birth was very different from the one the midwives tell: chances are it was a story about another botched home birth attended by irresponsible midwives. On the midwifery side, it was one more story about the absurdity of biomedical bureaucracies and the arrogance and narrowmindedness of biomedical personnel--nurses, physicians, and EMTs alike. And it was a story about the dedication and loyalty of the midwives' clients: when I asked Carrie why the mother did not sue the hospital, she responded, "Because she knew that if she did, the hospital would come after us."

Later Carrie added, "Before this experience, I always thought that if you *have* a problem, you call the paramedics. Now I know that if you *want* a problem, you call the paramedics." She notes that this experience made her much savvier about the limitations of the biomedical system. Specifically, it taught her and her partner to always make sure they transported only to hospitals with on-call physicians in-house, and not to involve the paramedics if there was any way the midwives could transport the client on their own. And, as we will see below, it led Carrie over time to work to develop a network of relationships with individuals in the hospitals to which she now transports in order to enhance her ability to prevent this kind of disarticulation of systems, and to facilitate the kind of smooth articulation that can save lives.

Luz's Story: A Transnational Parallel with a Different Ending

Laura de la Luz Gomez ("Luz" for short) is a traditional midwife of over 30 years' experience who attends home births in the impoverished barrio of Santa Laura, just north of the city of Cuernavaca in the state of Morelos, Mexico. Luz and her family live in a crowded one-room house made of wood and corrugated tin, with a dirt floor. They are building a much bigger house of brick and cement next door; they have been working on it for 25 years and it is finally near completion. Years ago, Luz and her family chose to pour the resources they could have put into the house into the construction of a birth center behind their one-room shack. The shack is hot, small, and unadorned; the cement-floored, freshly painted birth center is spacious, cool, and breezy. Two double beds allow family members to keep women company during labor; Luz's autoclave and midwifery equipment rest on the table in between the beds. The women of her *barrio* like this birth center and prefer it to their own houses. There Luz attends four to five births per month. In the summer of 1999, Luz told me the following story.

A woman who had not come to Luz for prenatal care showed up on her doorstep one day in labor. Luz does not like to attend women she has not seen before, but nevertheless took her in. Listening to the baby's heart tones through her fetoscope, Luz heard the heartbeat drop from 135 to 100, then rise back to 135, then drop again. She called a taxi[18] and transported the mother to the hospital, where she carefully explained to the nurse on duty that this was an emergency. In spite of her entreaties, she and the laboring woman were ignored. Luz insisted to the nurse that the baby was suffering, and the nurse said "How do you know that?" "Because I am a midwife with thirty years' experience," Luz replied, "and I checked this patient and I know she needs to be in the hospital because the baby's heart tones show distress. And she has just come to me for the first time with no prenatal care, and you tell us to refer in such cases, and so for these two reasons I am referring." "Sit down for half an hour," responded the nurse. "The doctors will be with you when they can." "No, call the doctor now!" insisted Luz. "The baby is in danger, it is very big and is not coming down, she needs a Cesarean." Luz continued:

> We were there one hour and a half waiting. I could hear the doctors laughing and laughing down the hall—they were drinking their coffees. When I knocked on the door, they were putting away the cups. And still they made us wait. And I got really angry and I said to her husband, "Do you have money?" And he said, "Well, I've been working so I have some." And I said "OK, well go and get it, because you're going to need it—I am taking her away from here." And so I called the doctor who is a friend of mine at a sanatorio (private clinic), and he said "OK, you can bring her in and I will do the Cesarean." And we took that woman to his clinic and he did the Cesarean. It cost a lot, but we got out of that problem, didn't we? They tell us to "refer at the first points of alarm," so that the baby or the mother won't die because of my ineptitude. Ha! El plan de trabajo mio es lograr a que viva la gente, no a que se muera." (My plan of work is to succeed at people living, not dying.)

Like Carrie's story, Luz's story is about a midwife responding appropriately to dropping heart tones yet being ignored by biomedical personnel. In both stories, the midwives express their efforts to get attention and their enormous frustration at being ignored. Luz went so far as to appropriate the lexicon of TBA trainings when she listed to the nurse not one but two reasons for referral. "You tell us to refer in such cases": the plural "you" indexes the biomedical trainers who told her that she should send patients to whom she has not provided prenatal care to the hospital if they show up in labor, and that consistent fetal heart decelerations are an indication for transport. Taking the biomedical system at its collective word, Luz used those same words to try to get the system to respond. Yet like Carrie and her partner, in spite of the "thirty years of experience" Luz invoked in an attempt to garner authority, she was ignored—an act that constituted a de facto dismissal of Luz from having *any* kind of authority, and which she resented deeply.

Not willing to sit passively and wait, Luz went so far as to knock on the door of the doctors' lounge, and was again dismissed. As in Carrie's case, this hospital was not going to respond smoothly

or quickly to a “walk-in.” But there was some benefit in trying, as this second dismissal convinced Luz that she was never going to get anywhere in that hospital, a realization that inspired her to search for an alternative. Exhibiting a creativity in hostile circumstances parallel to that of Carrie and her partner, but with better results, Luz conceived the idea to take the woman to a doctor she trusted and often worked with. His practice was private and would require financial payment, while the hospital, as part of the Mexican public health system, would have been free. So a prerequisite was to ask the woman’s husband if he had money and could pay for the Cesarean. His affirmative answer freed Luz to implement her plan that mother and child should “live and not die.”

Like Carrie’s story, Luz’s experience highlights the frustration midwives often feel at the lack of obstetrical recognition or valuation of their knowledge. Midwives see themselves as guardians of the normal. They are skilled at recognizing when a situation deviates from the normal and lands in the realm of obstetricians, who are experts in the abnormal. From a midwife’s point of view, this professional demarcation system might work well if midwives’ knowledge about normal and their ability to diagnose abnormal were regarded as authoritative by nurses and obstetricians. But as we have seen, in the face of biopower and biomedical knowledge, the midwife’s knowledge and attempt to generate a response from the medical system often simply do not count; in this case, dis-articulation—no response from the hospital to the midwife--was the result.

The fascinating difference between Luz’s story and Carrie’s lies in their endings. In Carrie’s story, the disarticulation of systems ended in the baby’s death, and might have done so in Luz’s story as well. But Luz found the opportunity to seek a smoother articulation. Over years of practice and referral, she had built a mutually respectful relationship with one obstetrician who did not question her diagnosis, but rather was immediately ready to respond. So she was able to create a radically different ending to this otherwise very similar story. Luz said, “What happens is that the politics are against us, so we have to be as creative as we can.”

Fractured Articulations

Lana’s Story: An Inaudible Voice

Lana Lane, an American direct-entry midwife, learned midwifery through a two-year apprenticeship in Fairbanks, during which, with her mentor, she attended over 100 births. Shortly after finishing her training in 1985, she moved to Wasilla, Alaska, where she went into partnership with Susan Eakin. By then the direct-entry midwives of Alaska had achieved their legislation and were practicing legally. This story, told to me by Lana’s partner Susan, took place the following year.

Arriving at the home of a woman in early labor who lived less than five minutes away from a tertiary care center in Anchorage, Lana performed a vaginal exam to check the degree of cervical effacement, dilation, and station (the position of the baby’s head), and suddenly found the umbilical cord in her hand. Susan said, “The cord was just below the baby's head. Lana tried to slip it up away from the vaginal opening, hoping the head would block it, which can sometimes be done if too much cord doesn't wash down. But the cord just kept slipping, so all Lana could do was keep the cord from being pinched (which would cut off the baby’s blood and oxygen supply) by splinting it between her fingers and pushing the head off it.” While the mother crouched on her knees and prayed, Lana maintained the head in place, telling her partners to administer oxygen to the mother and the father to call 911. He held the phone for Lana as she described the situation and begged them to have an operating room ready. At that point, the baby’s heart tones were fine. The ambulance arrived in two minutes. The EMTs were cooperative and did not question the midwife’s judgment. Lana straddled the stretcher below the mother, applying counter-pressure to the baby’s head with one hand and with the other using the Doppler to monitor heart tones that were steadily dropping. They were inside the hospital within minutes. But upon arrival, they found that nothing had been done to prepare for the Cesarean. For thirty minutes, Lana knelt on the stretcher holding the head in place and listening to the

heart tones drop—50, 40, 30. She lost her voice from screaming for the hospital staff to hurry. But by the time the Cesarean was finally performed, the baby had died.

A prolapsed cord is life threatening to the baby—when the cord is in front of the baby's head, it is compressed, thereby cutting off blood and oxygen circulation to the baby. Unless the baby can be birthed immediately or a Cesarean quickly performed, the baby is likely to die. In this situation, wherever it occurs, the mother must get into the knee-chest position, which takes the pressure off the cord, while the practitioner kneels behind her and applies counter-pressure to the baby's head so that the cord is not compressed between the head and the woman's pelvis. Keeping her hand inside the mother's vagina, the practitioner must hold up the baby's head until the baby is removed by Cesarean—a dramatic scenario to say the least, the success of which depends on how quickly the Cesarean is performed.

This story resonates with pain; indeed Lana's partner Susan, who first recounted it to me, was crying as she spoke. She did not know exactly why Lana's pleas for speed were ignored, but she felt sure that it had something to do with the hospital staff's disapproval of home birth. The worst case scenario would interpret hospital personnel as deliberately ignoring this "walk-in" from outside to prioritize the women inside and/or to punish her for trying to give birth at home. Prior and subsequent experiences have ensured that Susan holds this worst-case view. She said:

> In my opinion, the reason no one came to the rescue is because it was a planned home birth gone bad. I don't think they "believed" Lana knew a thing. More than once we've been forced to wait on circumstances they would normally be scampering to fix. I could tell you several stories in which the medical staff tried to hang us, instead of acknowledging that we transported appropriately.

In contrast, the scenario that attributes the best intentions to the hospital practitioners has to do with the logistics of hospital procedures. When a cord prolapse occurs in hospital, the practitioner who identifies it issues a crash call, the obstetrical team flies into action, and when all goes well the baby is delivered by Cesarean within ten minutes. But getting everything in place for a Cesarean is very expensive in terms of the personnel and equipment needed, and most hospitals have experiences of doctors, paramedics, nurses, and/or midwives telling them to prepare for a Cesarean when one really isn't needed. Setting up unnecessarily ties up rooms, obstetricians, and anesthesiologists and may keep them from being available if needed elsewhere. Thus it is logical that a hospital would want to assess the situation before taking action, especially on the word of a person unknown to them (which might include a private physician) (Judith Rooks, personal communication[19]).

This transport took place in 1986 but cannot be dismissed as anachronistic—similar scenarios still play out around the country, especially in states where midwives practice illegally but also in states where they are legal but not well accepted by or well known to biomedical practitioners. It illustrates the dysfunctions generated by partial, fractured articulations between the biomedical and home-birth midwifery systems. The biomedical system's first response was appropriate—the EMTs supported the midwife to continue her work and did not challenge the validity of her knowledge or approach. And on the phone the hospital promised a response. But somewhere between the promise and the mother and midwife kneeling on the stretcher in the hall, a fracture occurred in what had promised to be a system of smooth articulation, and it was the baby who fell through the crack. Both the worst-case scenario (that the hospital deliberately delayed action to punish the midwives and the mother for attempting a home birth) and the best-case scenario (that, given the expense and difficulty of preparing the OR, hospital practitioners didn't feel they could risk taking these unknown midwives at their word) point up the importance of prior dialogue and relationship between the hospital and the midwives in order to establish mutual trust and systems of smooth articulation well in advance of this kind of emergency.

Marisa's Story: A Public Humiliation

Marisa Salinas defines her primary identity as that of a traditional midwife; she also is a registered nurse. Her friend and colleague Laura de la Luz lives to the far north of Cuernavaca, while Marisa's residence is in a barrio called Tejalpa to the east of the city on the road to Tepoztlán and Cuautla. Marisa became a traditional midwife because she resented the subordination of the nursing role, and found allopathic biomedicine entirely too interventionist for her taste. She attends four to five births a month, mostly in women's homes but also in the bedroom she uses as a birth center; she has a separate room for prenatal exams. Every time I have visited, wild herbs lie drying on the prenatal exam table, a visual elision of boundaries and juxtaposition of worlds that is characteristic of the hybrid nature of these midwives' practices.

One night Marisa received a phone call from the family of a distant cousin of her husband, from a small rural town. The cousin was six months pregnant and the family was worried about her and wanted to know if they could bring her to Marisa for a check-up. Thinking they mean at some future date, Marisa agreed. At about six the next morning the woman arrived on her doorstep. Marisa was already in her nursing uniform, about to head out on a campaign to offer Pap screens to rural women. She didn't like the way the woman looked, and immediately took her blood pressure; the diastolic pressure was 170, suggestive of pre-eclampsia. Marisa immediately called a taxi and accompanied the woman to the hospital. By the time they arrived, the woman was convulsing. The hospital staff put her into intensive care, while Marisa waited outside in the waiting room:

> And every so often the doctor came out and told me that I am this thing and that thing, saying "Useless midwives, why do you take these cases when they are serious and high-risk?" yelling at me in front of all the people in the waiting room. And the second time he came out he said more things to me and threatened me and in truth made me feel very bad. "Don't leave," he said. "Because if she dies right now we're going to *see about you*." And I got scared. I didn't do anything besides take her blood pressure and bring her straight to the hospital. And after a while her family arrived and I told them that she started convulsing all of a sudden. I told them that I hadn't done *anything*, that I had been headed somewhere else and took a detour to accompany her.
>
> And finally the family spoke with the doctor and explained everything to him, and I spoke with another doctor there who knows me and has always helped us midwives. That first doctor was a real despot. And yes he finally apologized to me, because the doctor who is kind to me and respects me is the head of obstetrics at that hospital, and made him apologize. But he apologized to me in private in a little back room, and he insulted me in public in front of everyone. The whole thing made me feel sick. But in the end they did save her life and the baby's life. In the ultimate case I wasn't the one who was important, right? She was, and the baby was. But yes, my morale did go way down. What did I do wrong? Why would I keep her here and have her die on me? That despot wouldn't even let me tell him what I had found.

As a nurse, Marisa has often served as first assistant at Cesareans; she has good relationships with several physicians who respect her, and so the doctor's belittling remarks took her by surprise. Even worse than the insults, from her point of view, was the doctor's complete unwillingness to listen to the facts of the case; he blamed and judged her without even knowing what had happened. As with Carrie, Luz, and Lana, the midwife's knowledge and prior experience did not count--in Marisa's case, indeed, did not exist inside the system. The other midwives at least verbalized what they knew, even if they were not heeded, while Marisa's voice had no chance to be heard. So even in this case, where the hospital recognized the gravity of the situation and immediately took over the care of the woman in appropriate ways with a good outcome for mother and child, the midwife was punished. As she told me the story, which took place six months before our interview in summer 2000, Marisa's face turned red and tears came to her eyes. She was grateful that the doctor and hospital staff saved the life of mother and child, but kept returning to the personal damage done to her. The doctor's apology seemed to her too little and too late—the humiliation was public, the apology forced and done in private.

From the biomedical point of view, it is important to understand that the doctor's specific question, "Useless midwives, why do you take cases that are serious and high-risk?" reflects his

understanding that traditional midwives are taught a series of risk factors in training courses and told that they should always refer such cases. Earlier we saw Luz mention two of these risk factors as reasons for transport: fetal heart rate decelerations and unknown prior history. Pre-eclampsia is another such risk factor. Although in this particular case, the doctor's insult was unfounded, he had other reasons to make it. The traditional midwives I have interviewed in Cuernavaca often *do* take high risk cases, choosing to ignore the protocols they have been taught, because of the circumstances under which they practice. Dona Alina Garcia, one of the most respected traditional midwives in Morelos and Marisa's close friend and mentor, explains:

> In a given moment the woman comes knocking on my door with eight or nine centimeters of dilation, and I can't turn her away even if it is a case of high-risk—I have to attend her. And we have moved forward with plants, with massage, we give all that is within our reach to give health to the parturient woman so that everything turns out well. . . . When the case is high risk because the baby comes breech, in the moment of the birth we have to be doing *maniobras* [hand maneuvers] to turn it, and if it can't be done, we have to receive it as it comes, even if the person never went to a prenatal consult. . . . A low-lying placenta is a high-risk case, right? What we do is push the placenta to one side and the baby can come through and be born. Only when really the placenta comes first, and then the baby—placenta previa--then we have to take her to the hospital, because that truly is a case of high-risk.

Marisa too acknowledges that she has often attended women that would be labeled high-risk by the biomedical system. For example, it is not uncommon for poor Mexican women to avoid prenatal care—they don't like the long waits at the hospital and the impersonal treatment they receive, so many of them just don't go. Perhaps such a mother would prefer receiving prenatal care from a midwife, but she may not feel she can afford it or that it is really necessary, especially if she has had other children already. So then she comes to the midwife in labor, having avoided paying for prenatal care but preferring to pay for a midwife-attended birth over having a hospital birth for free. Or perhaps the midwife lives close by, and labor comes on precipitously, and there is no time to reach the hospital. So then, as Dona Alina says, what is the midwife to do? These midwives share an ethic of care that involves service to women; most traditional Mexican midwives (and some American direct-entry midwives) will not violate that ethic by turning away a laboring woman they have not attended prenatally before they even check her. And if they check her and encounter a problem that they feel they can handle, especially later in labor, they are very likely not to transport in order to save the woman from the otherwise inevitable Cesarean.

Although many Mexican traditional midwives accept the notion of biomedical superiority and devalue their own skills in relation to biomedicine, Marisa and her postmodern colleagues in Morelos do not. Like American direct-entry midwives, they see their own knowledge system as more appropriate than technomedicine for all normal and some high-risk births, and they engage in a radical critique of technomedical limitations, pointing out that most doctors have no idea how to deliver breeches, much less turn them, or to deal with low-lying placentas. They simply perform a Cesarean in anomalous cases. Women who come to traditional midwives in urban areas are usually there because they do not want to have a Cesarean birth, which has become almost normative in urban Mexican hospitals. Urban women who go to a traditional midwife could have gotten biomedical care for free; they want her care badly enough to pay for it. The postmodern midwives of Morelos charge around fifteen American dollars for a birth—a far cry from the two or three thousand dollars American direct-entry midwives often charge. But for the urban and rural poor who seek the traditional midwives out, their fees, even though usually offered on a sliding scale, can still be a challenge to pay. Home- or birth-center birth with a traditional midwife in an urban area like Cuernavaca, where hospital birth has long been the norm, is thus a deeply desired alternative choice in the same way that it is in the United States. It was the existence of this alternative, which many doctors would like to elimate in the cities at least, combined with the even more provocative willingness of midwives to ignore the protocols they are taught in their training courses, that had the doctor already so angry at traditional midwives in general that he blew up at Marisa without even bothering to learn the facts of this particular case. His knowledge system insists

that Cesareans are the solution in almost all high-risk situations, and that the midwives' *maniobras* are both ineffective and dangerous. This physician's successful management of the mother's eclamptic seizure, which the midwife could not manage, is of course one of the lifesaving skills that allows him to maintain his belief that only his knowledge counts.

It is worth noting that in each of the earlier stories, the biomedical staff would have had to trust the midwife's knowledge to take quicker action, as the complications resulted from fetal heart rate anomalies detected by the midwives but not by biomedical staff, and a cord prolapse that only the midwife had confirmed by touch. We can speculate that the reason why Marisa's cousin got such quick attention when the other women we have heard about did not was the visible, unmistakable, and dramatic nature of her condition, which required no reliance at all on the midwife's knowledge to diagnose.

As in Carrie's story, the threat of legal action against the midwife hovers in the air in Marisa's story. Unlike Carrie, Marisa practices legally with her identification card from the health department, issued to her upon completion of her two-week TBA training course. She also relies on her nursing registration for various aspects of her practice. There is no national certification as yet available for Mexican midwives; Marisa is highly supportive of midwives' current efforts to create one (see Davis-Floyd, 2001a), as she has longed for years to be able to prove her worth to the physicians in town. In the meantime, like the other traditional midwives in Cuernavaca I have interviewed, she continually augments her education through workshops and seminars given by various organizations and continuing education courses at local universities. The walls of her prenatal exam room are covered with framed certificates from these courses; she showed me a large drawer full of others she intends to frame. Such certificates are proudly displayed by all of my interviewees in Mexico as visible evidence of their commitment to education and their ongoing quest to improve themselves as practitioners. Sadly, Marisa noted that while these certificates do carry weight with her clients, she didn't suppose they would make a difference to the "despot doctor." She was truly terrified by his threat to "see about you" should the woman die; as I noted above, although Marisa and her colleagues practice legally, when there is a death they are often arrested and put in jail before an investigation is complete. In Marisa's story, as she is the first to point out, the *mother's* transition from midwife to hospital was smooth; the fracture ocurred in the interaction, or lack of it, between the midwife and the doctor. This fracture made Marisa realize that the certificates on her wall cannot protect her from biopowerful devaluation, and gave her a great deal of impetus to address this fracture by working to increase midwife power through supporting the formation of a midwives' association and the legal fund its members hope to generate.

Marisa's story finds a transnational echo in one told to me by Dina Farraw, an American CPM from Arkansas, who transported a client after a home birth for a retained placenta. The doctor did remove the placenta, but only after sternly telling the woman and her husband that it was "child abuse" to give birth at home with midwives. This insulting remark was most likely made out of sincere beliefs that midwives are ignorant and that home birth is a highly risky enterprise. The statistics on the safety of home birth in the US are not taught in medical school, and most obstetricians are simply unaware of the good outcomes home birth midwives generally achieve (Rooks, 1997, pp. 345-384). Of course, it is ironic that the doctor's belief in the midwives' ignorance stems from his own. The hegemony of obstetrics has forced midwives to educate themselves in its ideology and assumptions, protocols and lexicon to enhance their chances of successfully interfacing with it and of being able to defend their actions in its terms. In contrast, the marginality of midwifery has allowed obstetricians to remain ignorant about it. Obstetricians tend to be unilingual in the language and technologies of biopraxis, while my midwife interviewees on both sides of the border tend to be multilingual. They manipulate the lexicons of both obstetrics and midwifery, as well as of various folk systems of practice and belief that inform the lifeworlds of the clients they attend. Midwives thus transgress and elide professional boundaries on a daily basis, while obstetricians tend to reinforce them. Fractures in attempts at

articulation (like these doctors' insulting remarks) often result from this kind of obstetrical boundary reinforcement.

In both the U.S. and Mexico, a few physicians are willing to elide and transgress professional boundaries in order to support home birth midwives. Such support can be costly: In the U.S., some physicians have lost their hospital privileges, their insurance, and their ability to practice in their communities as punishment for working with home birth midwives, including a very recent case in the state of Massachusetts. Of course, the more physicians supportive of home-birth midwifery are marginalized within biomedicine, the less ability they have to create needed structures for smooth articulation.

Smooth Articulation

It is important to remember that for all the transports that go awry, many others go smoothly and most do not result in anyone's death even when they are characterized by fractured articulations. Very few urban midwives in Mexico and the U.S. ever lose a mother, but out of every 1000 births, two or three babies will die no matter where they are born or who attends them. In the US, home birth data indicate that babies whose births start out at home do not die at any higher rates than babies whose births start out in the hospital--there is no added risk to home birth (Rooks, 1997; Macdorman & Singh, 1998; Johnson & Daviss, 2001). As I noted above, only 2% of transports are true emergencies; the same emergencies happen in hospitals. But clearly, transports that involve fracture or dis-articulation between biomedicine and midwifery can amplify the problems already generated by the complication that motivated the transport; sometimes those disjunctures alone are enough to cause a death that would not otherwise have occurred. On the other hand, when a home-birth transport is treated as effectively as a problem that takes place within a hospital, the chances for survival of mother and baby are greatly enhanced. This more positive scenario requires smooth articulation between the biomedical and home-birth midwifery systems, which the following two stories will illustrate. They both come from Carrie Smiley, the afore-mentioned CPM from Atlanta, Georgia.*

A mother pregnant with her second child, whose first birth had been very fast, started bleeding during mild early labor with contractions six to eight minutes apart. Carrie had sent her for an ultrasound at 34 weeks, which had been normal, so she knew she was not dealing with a placenta previa (the placenta does not move after 34 weeks). Carrie noted that "If the mother had not had ultrasound, there is no way I could have checked her with that much bleeding at home." (In a case of true placenta previa, doing a cervical check can cause harm.) Carrie checked the baby's heart tones, which sounded good. Carrie was concerned by the dark red color of the blood, which indicated that it was not from a superficial cause. She called the hospital and talked to the nurse-midwife who works for Carrie's back-up doctor, telling her it looked like some kind of placental abruption might be occurring. They drove the mother to the hospital, where the nurse welcomed them into the labor and delivery unit and put the mother on an electronic fetal monitor, hooked up an IV, and drew blood to type and screen in case she had to have a Cesarean. The baby's heart tones remained steady and strong. The doctor came in about ten minutes after they arrived and said to Carrie and the nurse, "It looks like you have everything under control." Carrie expressed her concern about the color of the blood, but the doctor was not worried. He stayed for only about five minutes. After he left, the mother labored for another three hours. She spent time in the jacuzzi, sat on the toilet and then the birth ball for a while; eventually, she got in bed to try to rest. Carrie and the nurse-midwife turned off all the lights in the room. When pushing contractions kicked in, the mother pushed for about ten minutes, as Carrie recalls, and delivered on her hands and knees while the nurse-midwife caught the baby. The baby stayed with the

* (Utilizing more than one story from the same midwife allows me to save the space that would otherwise be required to introduce and describe other midwives. Again I note that I choose these particular stories because they are typical and representative of many others.)

mother. The placenta came fairly quickly after the birth; when Carrie and the CNM examined it, they could see a five centimeter clot on it—an indication that the placenta had partially detached in that area and had been bleeding from that place for a while. (If a placenta detaches uniformly after the birth, there will not be many clots on it unless it has been sitting in the uterus for quite a while, but if there is a partial separation, there will be clotting or additional clotting at the site of the partial separation.) The mother and baby went home the next morning. After the birth, the doctor told Carrie that she probably could have stayed at home for this one. And Carrie told him, "You have to realize that it's important for me to transport sooner rather than later when I have the option." And he said "You are right—I don't always see it from your side."

In the hospital, a partial placental separation is not cause for major alarm, since facilities for a Cesarean are there at hand. But home birth midwives like Carrie prefer to err on the side of caution—if you see too much bleeding to feel OK about it, you transport. A primary ingredient in Carrie's willingness to transport early rather than late is the excellent relationship she has established over time with this doctor and this particular hospital. She said,

> Since the early years of my practice, over time we have built up a lot of really good rapport, so that we have a lot of unoffficial back-up [it can't be official as Carrie's practice is not legal or licensed in Georgia.] We now have a doctor who is providing backup for us in that during the pregnancy he will see the mothers if we need him too--if we need an ultrasound he'll do one in the office. He says he doesn't like home birth but also he doesn't like the fact that many doctors are refusing to see home birth mothers. He says everybody deserves good medical care when necessary. And if something comes up in labor, we can call the nurse-midwives who are always in-house. They listen to what we have to say on the phone and have everything set up when we arrive--the operating room ready, the doctor already in-house. So it is a really good situation—there are no animosities or repercussions or "attitudes" toward home birth mothers. The doctors aren't exactly thrilled--they have said to the CNMs, "I wish you'd quit being so nice to these midwives so they'll quit bringing women in." And the CNMS have answered, "Would you rather leave them at home?" And the hospital is wonderful! It has no newborn nursery—I would consider them mother-baby friendly. The babies are never taken away from the moms unless they are really in trouble and *need* to be in the NICU.

Carrie's experiences point out that different kinds of articulations can happen in the same location as the actors come to know and develop trust in each other over time.

In 1978 with the first publication of *Birth in Four Cultures*, Brigitte Jordan issued a call for the replacement of top-down, culturally inappropriate obstetrical systems with models of mutual accommodation between biomedical and indigenous systems--a plea that is equally significant for non-indigenous home-birth midwifery systems. Both Luz's earlier story about transferring a patient from an unsupportive hospital to a private clinic with a physician who knew and trusted her, and Carrie's story above illustrate the positive results of this sort of mutual accommodation. Nurse-midwives are especially well-placed to achieve it, as they inherently straddle and bridge (and occasionally fall into the fissures beween) biomedicine and home-birth midwifery. Establishing close relationships with home birth midwives who are not legal is simultaneously a transgressive and a boundary-spanning act. This prior communication between Carrie, the nurse-midwives, and the supportive physician certainly facilitated the smooth articulation of systems that both of these stories illustrate. Carrie feels that the key to this sort of smooth articulation is mutual respect and a cooperative attitude on the part of all concerned. Carrie's long and safe practice in her community has earned her this kind of respect from the hospital practitioners who know her best. She notes that it can take years to build up this kind of relationship, especially with physicians who start out mistrusting midwives. Once established, though, such relationships tend to last. Many home birth midwives, including Carrie, Susan, Dina, Marisa, and Luz, do presently enjoy mutually accommodating relationships with one or two supportive physicians that they have worked hard to build over the years. But they note that such smooth articulations are jeopardized when the supportive MD moves away or retires and is replaced by a younger doctor "with an attitude," as Carrie puts it, and then the midwife has to start all over again on the process of building

trust. And most of my interviewees cannot always count on the availability of the physicians who support them; thus, even those who have spent years building good reputations and good relations with certain physicians sometimes still have to deal with fractured articulations during transport.

But in Carrie's case, because of her long-term relationship with the nurse-midwives in her local hospital, the articulation between her knowledge system and that of the hospital and its practitioners is so smooth that she is more than willing to transport even for situations that have nothing to do with risk but rather with the mother's comfort alone, as the following short story shows:

A primapara [mother giving birth for the first time] *had pulled a muscle in her back at end of pregnancy and was in a lot of pain as a result; she called Carrie to her home in the middle of the night. Carrie arrived to find the mother was in very early labor, at two centimeters dilation, but with close to unbearable pain from the back spasms. Carrie spent hours trying to relieve the pain in her back with showers and warm compresses and massage. She said,*

> After a while we were running into brick walls as far as pain relief for the spasms, so we decided to go into the hospital where they have jacuzzis in the labor rooms. By the time we got there, she was 6 centimeters. The nurse-midwives who received us told her she was doing great. The jets did good counter-pressure on the back pain. They never started an IV and she had no pain medication. The baby's heart tones always sounded great. I was able to catch the baby as "the grandmother" on the chart—the nurse working with us had had her babies at home, and the nurse-midwife was very supportive and felt this mom really deserved the continuity. The baby was fine and the family went home twelve hours after the birth.

As these two stories illustrate, smooth articulation between knowledge systems proceeds through points of overlap, transition, and communication that facilitate the seamless flow of information and linked, imbricated decision-making in which the actions taken by one person or group build on the information supplied by another. The relationships between Carrie and the hospital-based CNMs encompass such points, as do the relationships between the Cuernavaca midwives and their supportive MDs. When this kind of decision-making takes place within the top-down biomedical system, such imbrication requires a rejection of its tendency to discount or dismiss as irrelevant other ways of knowing. Such rejections can and do take place at the level of the individual even when the system as a whole remains dismissive.

What motivates or inspires a physician to reject the top-down system and give credence to home-birth midwifery knowledge? In my experience, the ingredients key to an individual's rejection of biomedical hegemony in favor of mutual accommodation include: (1) exposure to midwifery care; (2) exposure to midwives; (3) attention to the scientific evidence.

Exposure to midwifery care. Some doctors train in hospitals where nurse-midwives practice and thus are able to observe first-hand the benefits of midwifery care. Physicians I have interviewed are often awed by the midwife-attended births they witness, which are often visually and audibly nothing like previous births they have seen. Women attended by midwives in hospitals are more likely than women attended by physicians to give birth in upright positions, without an episiotomy, and with a great deal of hands-on support. Nurturance and consideration tend to characterize the midwife's approach to the mother; shared decision-making takes place in a context of mutual respect. Physicians who do not ordinarily witness this kind of birth can find the experience transformative, can become imbued with a desire to incorporate this kind of respectful, humanistic approach into their own practice, and will be more likely to work with nurse-midwives in the future from a partnership, rather than a hierarchical, perspective. Occasionally a brave physician will venture outside hospital bounds and observe a midwife-attended home birth—an experience that tends to be emotionally evocative and ideologically transformative (see, for example, Wagner, 1997).

More profoundly, it is important to note that clinicians judge other clinicians as individuals, not just as members of a class or category; individual judgments can overcome prejudices based on

subcultural differences. Does a practitioner give good care, make good decisions, communicate accurately? Individual practitioners decide the answers on the basis of experience. All clinical practitioners constantly gather experience and information, and react differently to a comment, order, or action from someone they trust as opposed to someone whose judgment has been faulty in the past or whom they do not know. Midwives work best with the doctors they have come to trust as a result of experience, and vice versa. But most doctors have little or no experience of working with home birth midwives; the experience they do have may be skewed if it comes only during emergency transports (see footnote 6). Lack of experience with working together creates problems that exacerbate and perpetuate lack of experience with working together (Judith Rooks, personal communication).

Exposure to midwives. Postmodern midwives in the U.S. and Mexico, I can say without overstatement, tend to have huge hearts, impressive personalities, a strong sense of commitment and dedication to serving women, a secure sense of their own self- and professional worth, and a large fund of knowledge about parturition that seamlessly permeates their conversation. Simply spending time with them can turn a hospital practitioner from an opponent to a supporter. In U.S. communities where smooth articulation characterizes transport, home and hospital midwives, and sometimes physicians, often participate in periodic potluck dinners where models of mutual accommodation begin to emerge over casseroles and drinks. Hospital midwives who develop respect for and good relationships with home birth midwives often transmit this trust to the physicians with whom they work, in a kind of spillover effect that paves the way for future smooth articulations during transport. This kind of socializing, facilitated in the U.S. by the middle-class status shared by participants, is far less likely to occur in Cuernavaca, where differences in social status between physicians and traditional midwives are more extreme.

Attention to the scientific evidence. There is increasing emphasis these days on “evidence-based medicine” (Rooks, 1999). As we have seen, midwifery tends to be more evidence-based than obstetrics because midwives are generally less interventive than physicians (Frye, 1995; Davis, 1997; Gaskin, 1990; Rooks, 1997) and the scientific evidence (Rooks, 1997, pp. 345-384; Macdorman & Singh, 1998; Goer, 1999; Enkin, Kierse, Neilson, Crowther, Duley, Hodnett & Hofmeyr, 2001) shows that many common interventions do more damage than good. Any doctor who actually looks at the evidence instead of relying solely on what he is taught by biomedical tradition will take note of the benefits of midwifery care, and will thus be less likely to assume a blanket superiority for obstetrics.

Crosscultural Perspectives on Transport

> Articulation is the production of identity on top of difference, of unities out of fragments, of structures across practices. Articulation links this practice to that effect, this text to that meaning, this meaning to that reality, this experience to those politics. . . And these links are themselves articulated into larger structures.
>
> --Lawrence Grossberg, (1992, p. 54)

The experience of transport looms large in the minds of midwives because it is so emotionally loaded for them: they transport in hopes of resolving a situation they feel they cannot or should not handle at home, with hopes and prayers for a good reception most especially for the mother, but also for themselves. A positive reception in the hospital reinforces midwives’ sense of themselves as competent practitioners and elicits in them feelings both of pride in their good judgment and of gratitude toward the biomedical system for its efforts; a negative reception can leave the midwife and the mother emotionally scarred. Once burned, twice shy, they may in the future try too hard to avoid another transport, with potentially unfortunate results. Crosscultural research provides multiple examples (e.g., Allen, 2002; Barnes-Josiah, Myntti & Augustin, 1998; Iskandar, Atom, Hull, Dharmaputra & Aswar,

1996; Graham, 1999; Kroeger, 1996). For one brief example, Deborah Barnes-Josiah and her colleagues (1998) have shown that in Haiti, community midwives who have been badly treated in hospitals, or whose clients have received inadequate care after transport, try in the future to avoid transport by coping with emergencies at home as best they can, often until it is too late to seek help. If disaster befalls, the midwife is handed the blame, with no account taken of the prior experiences that generated her avoidance behavior.

The solution to the trouble with transport that the governments of developing countries have generally sought to implement usually involves the goal of eliminating home birth and traditional midwifery in favor of hospital or clinic birth attended by physicians and/or or professional midwives trained in two-year government-approved courses (Hsu, 2002; Jenkins, 2001; Sargent, 1989). Yet for a variety of reasons (see Davis-Floyd, 2000), women in many countries continue to choose their traditional attendants. Certainly, as Roger and Patricia Jeffrey pointed out in 1993, it is important not to romanticize indigenous midwifery and indigenous midwives; some indigenous customs are beneficial and some are not; some traditional midwives are competent practitioners within their own systems and some are not. Similar notes can be sounded about Western obstetricians: some intervene inappropriately, ignoring the evidence, while others exercise a more balanced and judicious approach. The transport stories I have recounted here should not be simplistically interpreted to indicate that all midwives are good and all biopowerful practitioners are bad or vice versa, but rather as ways of illuminating points of disjuncture and fracture, as well as models of smoothness, in the cross-boundary articulation of disparate knowledge systems.

Today in most developed countries, the home birth rate hovers around one percent. That home birth might be more widely chosen in the developed world if it were more readily available is indicated by the Netherlands, where the home birth rate has never dropped below 30% (Weigers, 1997), and New Zealand, where in recent years it has risen to 12% as the result of a strong alliance between midwives and consumers that has generated active government support. These two countries stand as models of what I would name *seamless articulation*—their midwives practice and their health care systems fully support birth in all settings, creating ease of choice and continuity of care across what in most other countries can only be seen as the home/hospital divide (DeVries, van Teijlingen, Wrede, & Benoit, 2001). In Europe as in the US, active movements seek to restore home birth as a viable option, with variable success. Meanwhile, in the developing world, home birth rates continue to decline in response to the pressures of modernization, yet millions of women still give birth at home, some because there is no other option, some out of active rejection of their region's biomedical system, and others out of philosphical choice.

Home birth was both normal and normative for most of human history. But with the advent of biomedicine in the industrialized West, hospital birth became normative and home birth for most women ceased to exist as a viable or even thinkable option. In the developing world, this process is still unfolding; in countries like Mexico, it has already taken root to the extent that while home birth remains normative in rural areas, in the cities it has become an alternative and marginalized choice as it is in most of the developed world. Nevertheless, some women still make that choice, and traditional midwives continue to serve them, only now, like American midwives, these urbanized traditional midwives are developing hybrid techniques that reflect the mutiple systems of knowledge that intersect in their practices. They value the knowledge systems they are creating *and* the sometimes lifesaving knowledge system of biomedicine; yet the biomedical system, generally speaking, values only itself. Thus for both Mexican and American home birth midwives, biomedicine stands at once as the ultimate recourse and the ultimate enemy, often with no guarantees in any given transport as to which aspect will manifest.

The six transport stories I have recounted and analyzed here are fractals for thousands of others that shed light on the trouble- and stress-full interface between the worlds of biomedicine and home-birth midwifery. Spiraling beyond the bounds of the specific situations they recount, they index

both the myriad possiblities for tragedy inherent in one knowledge system's closed dismissal of its marginalized competitor, and the enhanced possibilties for more positive outcomes when members of that system open its boundaries to admit the fingers of articulation extended by practitioners from the outside. When parallel fingers reach out from the inside, taking account of midwives' information, acting on their recommendations, and encouraging them to remain with the mother to provide ongoing support, the result can be what Grossberg (1992, p. 57) terms "active structures . . . that cut across domains and planes." Further elaboration of such structures of smooth articulation could extend individualized links and nodes across the hospital/home divide, ending the dis-articulations, and mending the fractures, that generate much of the trouble with transport.

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Endnotes

1. During the course of this research, I have interviewed approximately 50 nurse-midwives, 45 nurse-midwifery students; 50 direct-entry midwives, 30 direct-entry midwifery students, 20 Mexican professional midwives, and 7 traditional midwives in Morelos who are professionalizing. I found both groups of Mexican midwives through my participation in conferences in the US and Mexico put on by the Midwives' Alliance of North America (MANA) (see Davis-Floyd, 2001a for more detail). I have also spoken informally or conducted short interviews with over 100 traditional Mexican midwives from all over the country.

2. Further research should include thorough quantitative and qualitative research on the treatment of transported women and its specific outcomes.

3. Other factors involved in the marginalized status these midwives hold in relation to physicians include differences in formal education, credentialling, and social class with wealth as proxy; in Mexico especially, gender is also an important factor (Judith Rooks, personal communication, 2001).

4. Ideally, nurse-midwives' transport experiences should be seamless but often are not. While there is excellent data on the statistical *outcomes* of nurse-midwife-attended births in the U.S., including home-hospital transports (Macdorman & Singh, 1998), I know of no research on American nurse-midwives' transport *experiences*. In Mexico, nurse-midwives do not really exist as a class of practitioners. Rather, nurses who choose to specialize in obstetrics undergo an additional year of university training. Officially titled *Licenciadas en Enfermeria y Obstetricia* (colloquially known as *las LEOs*), these women mostly work as high-tech labor and delivery nurses, in addition to performing administrative work and teaching. But they do attend births and function like American nurse-midwives in a few private hospitals and clinics in central Mexico.

5. Medical practitioners who only see problematic home births that are transported to the hospital tend to think that all home births are "botched." The rate of problems derives as a function of a numerator (number of cases with problems) and a denominator (total number of cases--the majority--that have good outcomes). If one only sees the numerator, it is impossible to realize that the rate of transports is actually very low compared to the number of successful home births.

6. In the U.S. there were 23,232 home births in 1998 and 23,518 in 1999–an increase of 1.2%. Midwives are not the only practitioners who attend home births. Of 23,518 home births reported on U.S. birth certificates in 1999, 2,476 (10.5 %) were attended by a physician, 12,123 (51.5%) by a midwife, and 8,524 (36.2 %) by someone else. Some, but not all of the "other" attendants were probably midwives practicing without legal authority (Ventura et al., 2001).

7. Nurse-midwives began their long struggle for legitimation in the 1920s. In 1955 they created a national association, the American College of Nurse-Midwives (ACNM), whose members have worked hard for decades to achieve legal and medical acceptance of their profession. Certified nurse-midwives (CNMs) are legal, licensed, and regulated in all states. Most of the 5500 or so practicing nurse-midwives attend births in hospitals; appromimately 200 of them attend births at home. The ACNM officially supports home births, and many of its members would like to be able to attend them. But ACNM-certified midwives must have physician backup and insurance and many are unable to attain these for out-of-hospital birth. For hospital births their services are covered by private insurance companies in all states, as well as by Medicaid and managed care. They attend 7% of American births; 96% of the births they attend take place in hospitals (Rooks, 1997; Paine, Dower & O'Neil, 1999, p. 343; Curtin, 1999, pp. 349-352).

8. MANA members created the North American Registry of Midwives (NARM) which in turn created CPM certification, issuing its first certificates in 1994.

9. CPMs and other direct-entry midwives are legal, regulated, and licensed, registered, or certified in 17 states; legal through judicial interpretation or statutory inference or a-legal in 18 states; effectively prohibited in 7 states where licensure is required but unavailable; and illegal in 9 states. For updates on these numbers, see <www.mana.org/narm>.

10. In public hospitals in Mexico, the Cesarean rate increased from 13% in 1990 to 25% in 1997 – and from 25% to 37% in Mexico City (Secretaría de Salud, 1998); in private hospitals the national average in 1997 was 52% (Comité Promotor por una Maternidad sin Riesgos, 1997). Recent research indicates the doctor-driven nature of this excess of Cesareans, which social scientists are now calling an "iatrogenic epidemic" (Castro, Heimberger, and Langer, n. d.).

11. Home birth is almost completely non-existent as an option for middle-class women, most of whom would not think of using the services of a traditional midwife; see Davis-Floyd, 2001a for exceptions.

12. Young people in Mexico today in general prefer to seek formal education into a profession, and see the hospital as the progressive place to go for birth (see also Fraser, 1995).

13. As of June 2001, MANA has 67 dues-paying members in Mexico, most of whom are either professional direct-entry midwives (see Davis-Floyd, 2001a) or urban traditional midwives in the state of Morelos. The annual conferences these MANA members in Mexico have been putting on since 1995 are attended by hundreds of traditional midwives from all over the country.

14. My Cuernavaca interviewees keep notebooks recording their outcomes, and turn statistical forms into the Department of Health. It would be an excellent research project to compile their statistical data, including the outcomes of their transports.

15. A caveat: To my knowledge, most home birth midwives who transport enter the hospital and stay with their clients for as long as they are allowed to stay. But I have heard critiques from some hospital practitioners of home birth midwives who "dump their clients at the hospital door and take off." Such midwives usually live in states where their practice is illegal or in places where local hospital personnel are known to be particularly negative and unreceptive. Leaving their clients at the door can be viewed as an extreme form of disarticulation stemming from midwives' fear that any interaction with the hospital system at best will result in serious harassment and at worst will send them to jail—a powerful argument for the legalization of midwifery, which certainly facilitates the development of systems of smooth articulation.

16. Some midwives fail to transport because of lack of familiarity with medical indications for transport. I cannot speak to such situations here, because all of my interviewees for this article—American direct-entry midwives and the professionalizing traditional midwives of Cuernavaca--were thoroughly schooled in indications for transport.

17. All names are pseudonyms.

18. My Cuernavaca interviewees almost never call 911 for an ambulance because of long delays in arrival. Taxi drivers fees are low and they arrive quickly because they are familiar with local neighborhoods and rarely get lost, in contrast to paramedics.

19. Judith Rooks CNM, MPH is an epidemiologist and expert on midwifery care. She is the author of *Midwives and Childbirth in America* (1997), the definitive book on the subject.

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