Home Birth Emergencies in the United States: The Trouble with Transport

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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 chapter, I examine what happens in the United States when transport occurs, how the outcomes of prior transports affect future decision making, and how the lessons derived from the transport experiences of U.S. birthing women and midwives could be translated into improvements in maternity care. In the developing world, 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? And (2) What happens when she arrives? In the United States, where some form of transport is almost always available, the latter issue is by far the most salient. America's trouble with transport is not its lack but rather what happens when it places the mother who had planned to give birth at home, and the midwife attending her, in interaction with biomedical personnel.

In the United States, as elsewhere, 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 that 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 disarticulation occur. The tensions and dysfunctions that result are displayed in midwives' transport stories, which I here identify as a narrative genre. In this chapter, I 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 focus specifically on the transport stories told by American midwives with whom I have conducted extensive interviews. I narrate six of these stories, analyzing them as cultural terrains that reveal how childbirth can go unnecessarily awry when domains of knowledge conflict and existing power structures ensure that only one kind of knowledge counts. I describe such encounters as (1) *disarticulations* 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 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 link these U.S. transport stories to their international context, describing how they index some of the cross-cultural 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. —*Webster's New World Dictionary*, 2000

My use of the term "articulation" in this chapter comes from Gramsci through Lawrence Grossberg (1992:54), who 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 (1997:56) 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 (1997) 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" (1978:140). 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 1997:57)

Although the American home birth midwives whom I have studied treat their own knowledge system as authoritative in the home context, they are acutely conscious of the larger and more valued authority carried by biomedicine not only inside the hospital but also in the culture at large. 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 a 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—care that 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 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 disarticulation 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

This chapter is based on my continuing research on American midwives (begun in 1995). The focus of much of this research has been midwifery education, praxis, politics, and status within the American technocracy (Benoit et al. 2001; Davis-Floyd, 1998, 2003, 2004, in press; Davis-Floyd and Johnson 2005). This research did not specifically focus on transport stories as a genre or on transport as a salient issue. But during its course, I heard many transport stories told. 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. The particular stories I present here embody the collision of worlds I seek to analyze. It is important to note that in the United States, there are approximately 200 nurse-midwives (out of over 6000 CNMs in practice) 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.[1] Because of the political problematics of midwifery practice and especially of transport, all names I utilize are pseudonyms.

Background and Context: Obstetrics and Midwifery in the United States

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 intravenous 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 United States are pulled out with forceps, vacuum extractors, or via cesarean section (Ventura, Martin, Curtin, Menacker, and Hamilton 2001). As various social scientists have previously described (Davis-Floyd 1992; 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; this has also been documented in Mexico (Castro 1999). 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 to also to supervalue technology, control, and most especially the elimination of labor pain (Davis-Floyd 1994). For instance, the 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-based practitioners, the choice for home birth appears to be a choice for danger, 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 often 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.[2] 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 practitioners 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.

From an anthropological point of view, U.S. direct-entry midwives elide and confound the usual international 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 (Benoit et al. 2001; Davis-Floyd 1998); others are nurse-midwives trained in university-based programs. 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 all home birth midwives in the United States are inspired by a transnational ideology of home birth and "sisterhood" in midwifery. All home birth midwives 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. 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.[3]

All midwives who practice out of hospital must occasionally transport. In the United States, home birth midwives have a transport rate of about 12 percent (Johnson and Daviss 2001).[4] In other words, 88 percent of their clients give birth safely at home, while 12 percent are transported to the hospital during or after labor for various reasons: 6 percent (six out of 100) 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. 3.6 percent (3-4 out of 100) are transported for potentially life-threatening emergencies (Johnson and Daviss 2001). The transport stories I have culled from my interview data and selected to recount below cluster inside that 3-4 percent; 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 things can go wrong: (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, usually because of prior bad experiences with transport; (3) the hospital staff taking the call may not understand the urgency of the mother's problems; (4) emergency medical technicians (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; and (7) not all natural disasters are fixable by biomedical means, so even with the very best of care, the death of the mother or baby can occur. Only some of these possible levels of awryness are illustrated in the stories I tell below. I selected these particular 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 chapter 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

In this section, the stories as the midwives recounted them to me are italicized; these stories are not direct quotes but my summarized 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. 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 "~~h~~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 emergency room (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, "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 nonverbal 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 1980).

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, unplaced "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 obstetrician to attend a walk-in, and 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 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" that 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.

Fractured Articulation

Lana's Story: An Inaudible Voice

Lana Lane, an American direct-entry midwife, learned midwifery through a two-year apprenticeship in Fairbanks, Alaska, 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 counterpressure 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 counterpressure 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, to punish her for trying to give birth at home, or both. 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).

This transport took place in 1986 but is far from 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 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~~operating room, 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.

Dina's Story: Home Birth as Child Abuse?

Dina Farraw, an American CPM from Arkansas, 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 United States are not taught in medical school, and most obstetricians are simply unaware of the good outcomes home birth midwives generally achieve (Rooks 1997:345–384). 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 midwives 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 (such as Latinas in the Rio Grande Valley in Texas, or the Amish in Pennsylvania and Tennessee). Midwives thus transgress and elide professional boundaries on a daily basis, while obstetricians tend to reinforce them. Fractures in attempts at articulation (like this doctors' insulting remarks) often result from this kind of obstetrical boundary reinforcement.

A few U.S. physicians are willing to elide and transgress professional boundaries in order to support home birth midwives. Such support can be costly: in the United States, 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. 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 midwives in the United States ever lose a mother, but out of every 1,000 births, two or three babies will die no matter where they are born or who attends them. In the United States, 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 and Singh 1998; Johnson and Daviss 2001). As I noted above, only 2 percent of transports are true emergencies; the same emergencies happen in hospitals. But clearly, transports that involve fracture or disarticulation 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 effectively, 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 aforementioned CPM from Atlanta, Georgia.

A mother pregnant with her second child started bleeding during mild early labor. Although the baby's heart tones were 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 told the nurse-midwife that some kind of placental abruption might be occurring. Welcomed in the hospital, the mother labored for another three hours in the jacuzzi and on the birth ball. She pushed for about ten minutes, and delivered on her hands and knees while the nurse-midwife caught the baby. When Carrie and the nurse-midwife examined the placenta, 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. 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."

A primary ingredient in Carrie's willingness to transport early rather than late was the excellent relationship she has established over time with this doctor and this particular hospital. Carrie's many positive experiences with the M.D. and the nurse-midwives who work with him illustrate how different kinds of articulations can happen in the same location as the actors come to know and develop trust in each other over time.

Brigitte Jordan's (1993) call for the replacement of top-down, culturally inappropriate obstetrical systems with models of mutual accommodation between biomedical and indigenous systems is equally significant for postmodern home birth midwifery systems. Nurse-midwives are especially well placed to achieve such mutual accommodation, as they inherently straddle and bridge (and occasionally fall into the fissures between) 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. The prior communication and relationship between Carrie, the nurse-midwives, and the supportive physician certainly facilitated the smooth articulation of systems that this story illustrates. In fact, the articulation between Carrie's knowledge system and that of the hospital practitioners is *so* smooth that she is more than willing to transport even for situations that have nothing to do with risk:

A mother giving birth for the first time had pulled a muscle in her back. Carrie spent hours trying to relieve her back pain 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. 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? My observations are that the ingredients key to an individual MD's predisposition to smooth articulation and mutual accommodation include (1) exposure to midwifery care, (2) exposure to midwives, and (3) attention to scientific evidence. I will briefly deal with each of these in turn.

Exposure to midwifery care. Some doctors train in hospitals where nurse-midwives practice and thus are able to observe firsthand the benefits of midwifery care, which can include 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. These trainees often become imbued with a desire to incorporate this humanistic approach into their own practices, 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 (e.g., Wagner 1997). 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 specific practitioner give good care, make good decisions, and 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, and the experiences they do have may be skewed if ~~it~~ they come~~s~~ only during emergency transports. It's a tautological circle: lack of experience with working together creates problems that exacerbate and perpetuate lack of experience with working together.

Exposure to midwives. It is accurate to say that in general, American home birth midwives have 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.

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 1997:345–384; Macdorman and Singh 1998; Goer 1999; Enkin et al. 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 tradition-based obstetrics.

Cross-Cultural Perspectives on Transport

Midwives 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. Cross-cultural research provides multiple examples (e.g., Allen 2001; Barnes-Josiah, Myntti, and Augustin, 1999; Davis-Floyd 2003; Iskandar, Atom, Hull, Dharmaputra, and Aswar 1996; Graham, 1999; Kroeger, 1996). For one brief example that stands for countless others, Deborah Barnes-Josiah and her colleagues 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 professional midwives trained in two-year, government-approved courses (Hsu 2002; Jenkins 2002; 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 obstetricians: some intervene inappropriately, ignoring the evidence, while others exercise a more balanced and judicious approach. The transport stories I recount 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 1 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 percent (Weigers 1997), and New Zealand, where in recent years it has risen to 12 percent 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, and Benoit, 2001). In Europe as in the United States, 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 philosophical 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 many Third World countries, 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, some of these urbanized traditional midwives are developing hybrid techniques that reflect the multiple systems of knowledge that intersect in their practices (Davis-Floyd 2001b, 2003). 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 home birth midwives everywhere, 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 transport stories I 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 possibilities for tragedy inherent in one knowledge system's closed dismissal of its marginalized competitor, and the enhanced possibilities 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 (1992:57) terms "active structures . . . that cut across domains and planes." Further elaboration by medical anthropologists of such structures of smooth articulation could extend individualized links and nodes across the hospital/home divide, ending the disarticulations, and mending the fractures~~,~~ that generate much of the trouble with transport.

Notes

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1. Much of this chapter is adapted from Davis-Floyd (2003a).

2. Ideally, nurse-midwives' transport experiences should be seamless but often are not. While there ~~is~~ are excellent data on the statistical *outcomes* of nurse-midwife-attended births in the ~~U.S.~~United States, including home-hospital transports (Macdorman and Singh~~,~~ 1998), I know of no research on American nurse-midwives' transport *experiences*.

2. 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.

3. A caveat: ~~T~~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 some hospital practitioners criticize 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.

4. In the United States, there were 23,232 home births in 1998 and 23,518 in 1999—an increase of 1.2 percent. 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 percent) were attended by a physician, 12,123 (51.5 percent) by a midwife, and 8,524 (36.2 percent) by someone else. Some, but not all of the "other" attendants were probably midwives practicing without legal authority (Ventura et al. 2001).

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