PATIENTS’ NARRATIVES OF OPEN-HEART SURGERY:
EMPLOTTING THE TECHNOLOGICAL

By

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A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Graduate Department of Nursing
University of Toronto

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ABSTRACT

The steady increase of technology has become particularly ubiquitous in environments of heart surgery. Patients in these environments come into close contact with technology in its many guises. Often, practitioners may be deterred from engaging with patients because technology and the associated routines of care become the focus. As a result, it is important to understand how patients make sense of the technological situations encountered during treatment and recovery with attention to the constitution of identity and emerging moral issues. A narrative methodology was employed to examine patients’ experiential accounts of the technological in open-heart surgery and recovery. Sixteen patients were interviewed 3-4 days after surgery and 4-6 weeks after discharge, in addition participant journals were employed.

Study results pointed to the technological as the dominant discourse in heart surgery and recovery, strongly organizing health care practices and patients’ recovery. These discursive influences shaped participants’ stories resulting in two temporal shifts of authorial voice. Authorial voice reflects the dominant discourse and structured how stories unfolded. The first temporal shift exhibited how technology acted as the authorial voice, structuring stories of the preoperative and early postoperative period. Although participants were the narrators of their own stories, they were strongly influenced by the dominant discourse of the technological and its associated dimensions of care. Participants’ stories revealed how patients were at the centre of activity, but passive, universal and undifferentiated. Although technology continued to influence
stories of the later postoperative period and recovery at home, there was a shift of authorial voice to participants. Narratives reflected how the technological was incorporated into participants’ daily lives, but their stories included more personal elements rooted in their own particularities.

Study implications involve a critical uptake of technology that emphasizes the balance between technologically- and humanistically-focused practices in heart surgery and recovery. A key implication is the critical need to encompass affective and social dimensions of patients within the technologically-driven practices of heart surgery. Of great significance is how practitioners, particularly nurses, can act as supporting characters in helping with transitions of authorial voice from the technological back to the participant.
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AGENCY
Agency is conceptualized as the capacity and process for individuals to act and make choices. Agency exists along a continuum and is located within and contingent on circulating discourses. It is not something people have, but is enacted in language, behaviours and actions.

AUTHORIAL VOICE
A polyphony of voices underpin a narrative, but authorial voice is the controlling presence of how a story unfolds. Authorial voice often reflects the dominant discourse, shaping the unfolding of stories and narrative structure. The person telling the story is influenced by and internalizes the dominant discourses and its prevailing meanings of values, identity and behaviour.

DISCOURSE
Discourse is institutionalized systems and ways of thinking that influence peoples’ meanings of values, identity and behaviour.

EMPLOTMENT is an active process of developing the plot of a story and evoking meaning. Although it is the narrator who tells the story, there are many other forces and people that contribute to how a story is emplotted. Emplotment is often a subconscious activity that individuals do not necessarily engage in at a conscious level. By drawing attention to the act of emplotment in patients’ storytelling, practitioners can understand the various components of stories and learn how they contribute to certain plot lines.

EXPERIENCE involves a personally encountered and perceived occurrence, situation, or event. Experience is linguistic and conceptualized as a way of talking. For example, just because technological objects exist, or processes/routines of care occur around a patient does not mean that patients experience them. To experience the technological in heart surgery, an individual must encounter or perceive—be it in a cognitive, physical, verbal, actual, or imaginative manner.

IDENTITY is conceptualized as dialogical in this study. A dialogical stance assumes that identities are dynamic and constituted in social worlds, relations and interactions. Part of this dialogue involves the stories people tell and as a result the ways identities are not only constituted in narrative, but also performed.

NARRATIVE
People tell stories, but there are certain underpinnings that develop stories, and these are referred to as narratives. In this study, I will use the term narrative when referring to the underpinnings of a story such as with reference to plots.

NARRATIVE INQUIRY refers to the use of stories/narrative as a research methodology.

PLOT
Plot is an organizing feature of both story and narrative that creates a meaningful whole out of a sequence of scattered events and characters. A number of elements are involved in plots including a central character (and usually other characters), a number of events, some sort of problem that is described and explained (and may or may not be resolved), an outcome and a level of emotional cadence (including not just a description of how things happened, but an affective dimension of how things felt).
STORIES
In this study, stories are first person accounts of patients’ own experiences. Stories are accounts of actions, characters and events that have a temporal dimension. Plots hold stories together.

TECHNOLOGY
Commonly, technology is associated with objects (e.g. the technological devices). In this study, technology will be used to refer to the material objects such as intravenous, ventilators, cardiac monitors, pacer wires, chest tubes, medications etc…

THE TECHNOLOGICAL
The technological is a more comprehensive and characterological definition of technology referring to the logics, processes, routines, and systems that emanate from object technology
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CHAPTER I: PROLOGUE

SPEAKING THE UNSPOKEN BACKGROUND STORIES

Are you aware of that thing that beats beneath your skin?
Just inside your chest cavity
beyond the bony protective cage
beyond the normal optical range of the eye
(Lapum, 2005, p. 12).
The heart.

That thing that beats beneath my skin.

I am well aware of it.

As I embarked on the journey of a narrative inquiry and turned my gaze to the patient, I realized that I must first depart from self. It is not a coincidence that I came to study patients’ experiences of technology in heart surgery. Clandinin and Connelly (2000) suggest that research interests are influenced by researchers’ own personal and professional stories. The often unspoken background stories frame my thoughts and drive my research.

At the same time, I realized I am a part of two ostensibly antithetical worlds. I have one foot planted in the world of science and one in the world of arts. Although a sharp demarcation has been preserved between the arts and the sciences, they are not as polarized as once thought. Sandelowski (1995b) suggests that both the arts and the sciences are “oriented to understanding” (p. 206). A synergistic relationship between the arts and the sciences can provide a rich understanding of peoples’ experiences. Initially, I resisted the temptation to allow the arts into my scientific world because it is not the traditional way to practice as a nurse and researcher in the health care field. In time I timidly engaged the arts; this inclusion allowed me to embrace a new way of knowing and to view the sciences from a different perspective.

Narrative inquiry provided me with a way to access both the arts and the sciences in an exploration of patients’ experiences of technology in heart surgery. Narrative inquiry involves a focus on stories and storytelling throughout the research process. In this dissertation, traditional scientific discourse is woven together with narrative writing and poetry. The research text moves back and forth between first and third person. These dialogical approaches represent the many sides of my being and the many facets of knowing, and invite the reader into the story.

Because of the various ways narrative is used, it has become a nebulous and catchall term. It is important to preface this study with a clarification of how I use the following three
terms: narrative, narrative inquiry and story. The everyday common usage refers to narrative as spoken or written passages that appear as sentences or paragraphs (Polkinghorne, 1988). However, this sweeping definition obscures important literary components. Historically, narrative originated in the literary genre (Ricoeur, 1984; Riessman, 2002). It is a style of writing and communication that occurs in storytelling. In this study, the use of narrative referred to the literary structures that underpin stories. While narrative inquiry was used to refer to the research methodological components. In addition, the synonymous use of story and narrative in the literature has been a cause for confusion. But as Frank (2000a) explains: “people do not tell narratives, they tell stories” (p. 354). A narrative ensues from analytic attention to how stories are assembled in particular ways and what discourses they draw on or take for granted (Riessman & Speedy, 2007; Wiltshire, 1995).

Poetry and Science

Poetry surfaced unmethodically as a way to contextualize my scientific approach and evoke self understanding. By resisting the poetical side of my being, my way of thinking was more commensurate with the dominant discourse of biomedical science. The dominant discourse in biomedicine values scientific, objective and empirical ways of knowing. Biomedicine underpins nursing practice and is governed by principles of control, randomization, and verification (Mitchell, 2001). Estabrooks (2001) cautions that a “focus on scientific knowledge to the exclusion of other knowledge forms” (p. 283) is not beneficial. I did not want to eschew this type of science, but to engage in an inquiry that embraced a different way of knowing. Both narrative and poetry allowed me to engage in scientific knowing that is also informed by aesthetics and personal knowledge in which morality and emotions are engaged (Carper, 1978; Richardson, 1994). Poetry allowed me to engage both the scientific and the artistic aspects of self, and allowed me to dwell within my story and to understand facets of self in ways that had previously escaped me.
In this doctoral inquiry, I engaged scientific knowledge that was situated within narrative where self cannot be absent. A narrative inquiry does not focus on stories alone, but involves recognition and engagement of self in the research process. Remembering and re-engaging my poetic being allowed me to voice my story in which self was more present than absent.

Mere acknowledgement of self.
Traditional bracing of me.
Objectifying it, compartmentalizing it, pushing it out of my mind, burying it into the bottom – of my being.
Nearly out of reach
unleashing “self”…
uprooting that which is ingrained
understandings arising
truth
fading
notions of objectivity dissipating
struggling to extricate self
engaging self
confusion looms heavily
—a way of being faltering
bridling biases
guarding the personal
—an illusion unsound
representing self without subsuming my essence
—an illusion faltering
a struggle to rid myself of me
vacillating between ways of thinking
cast into disarray
potent convictions to savour this immersion
hold strong, anticipating the demise of my struggle as though an end exists
fortunate my thinking isn’t paralyzed
gazing at this endless path further into the abyss I proceed unleashing self
letting my story sway my next move
spiralling daunting exposed—
I gaze inward

(Lapum, 2008)

The struggle that is undeniably present in this poem was initially disturbing. I was releasing my grip on a dominant way of thinking that I had been comfortable with because of tradition. At the same time, I had been uncomfortable with this way of thinking because it did not engage all facets of my being and creativity. Rarely is there a place for self in the dominant discourse of biomedical science. I am expected to step out of and suspend self. The traditions of biomedical
research place value on grand narratives and the production of generalizations (Clandinin & Connelly, 2002). Grand narratives are universalizing and totalizing in nature, and attempt to encompass all dimensions within a story. The applicability of grand narratives to real life, real people with real differences, and within different contexts remains contentious. They cannot realistically capture the complexity and unique aspects of human experience. Frank (2002) suggests that individuals should engage in research personally and begin with stories. In my research into the experiences of others, I began with my story as the point of departure.

Departing From Self: My Story

I begin with one of the first stories I put to paper. It is one among many stories that reveals the why of this narrative inquiry:

The first time I entered an Intensive Care Unit (ICU) was as a nursing student. I do not remember any of the patients. Although the feelings I remember of being a student nurse in the ICU tend to be representative of many novice nurses, these feelings of being overwhelmed, consumed, and incompetent were amplified. Reflecting back, I believe my feelings were a result of my unfamiliarity with technology and its ubiquitous nature in the ICU. The daily practices of my student placement tended to revolve around technology. Even after I had completed my placement in the ICU, I continued to feel as though I would never be able to understand and oversee the various technologies there.

Yet I was, nevertheless, drawn to the ICU and jumped at the chance when I was offered a position in a general ICU after graduation. Again, the same feelings re-emerged: overwhelmed, consumed and incompetent. I felt that if I could master the technology, despite my un-artful nature as a novice nurse, then my esteemed, experienced colleagues might deem me worthy of respect or, at the very least, think I had the potential to be a “good” nurse. Within less than a year, I had generally “mastered” the technology. But I began to question the “goodness” of technology. I felt technology was driving me as a nurse and driving patient care, so that the patient, literally, came second. Although some technology seemed to save patients’ lives, it also imposed a sense that all lives could and should be saved, no matter the side-effects for patients and their families, and for nurses.

I remember an older patient whose heart rhythm continually went into ventricular fibrillation (a lethal heart rhythm). Algorithms for ventricular fibrillation indicate defibrillation as the treatment of choice. We defibrillated him until his rhythm reverted to normal sinus rhythm. This event occurred over 50 times within 48 hours. I shocked his heart until we “cured” him. He was discharged from the hospital and died at home one month later. I wonder how this patient, this person, this father, this grand-father experienced technology and whether technological intervention had been appropriate?
After a few years of working in a general ICU, I transferred into a cardiovascular intensive care unit (CVICU), caring for patients in the acute, post-operative phase of heart surgery. Technology is not only ubiquitous in the CVICU, but nurses’ work becomes even more systematic and technologically organized. A certain amount of comfort emerges for nurses with a regular routine that is generally specified for every patient. But, with routine emerges the standard patient. Again, I began questioning patients’ experiences of the technology and the routines that emanate.

Re-telling these stories of my experiences in the ICU revealed part of the why of my doctoral inquiry and strengthened my focus. These stories made me think about things that I was not necessarily conscious of beforehand. Often, the telling of experiences through stories can reveal tacit knowledge (Conle, 1996). My ambivalence and tensions towards technology became evident as I re-storied my experiences. Furthermore, I began to consider the processes and routines that emanated from object technology.

At this critical juncture, I shift the terminology from technology to the technological. Although my initial reference was to technology as an object, a broader understanding was implicit in my stories including technological knowing and processes. As is further detailed in Chapter 2, technology is more than mere objects (Barnard, 2002; Barnard & Sandelowski, 2001; Sandelowski, 1997a, 2000a). The word technology “originated from two Greek concepts: logos, relating to the rational order of things, and techne, the know-how of making things” (Locsin, 2001, p. xxii). The non-technical aspects that this definition conveys (e.g., people, knowledge, processes) must be examined in relation to object technology, in order to understand it more fully (Barnard, 2002). As such, the focus of my doctoral research became patients’ experiences of the technological in heart surgery. The technological encompasses not only object technology, but the logics and processes of care that emanate from it.

When I recounted the story of my experiences in the ICU to a colleague, she said: “It seems you integrated technology into your practice and into your own identity as a nurse.” I reflected on her comment and responded with another story, a story that seemed to spiral onwards and reveal new understandings:
Of course I have integrated technology into my own practice. I do not have a choice working in health care in the 21st century. The presence of technology is a constant. But did I integrate it into my identity as a nurse? My practice as a nurse is technologically organized. Often my routines and processes of care emanate from object technology. I titrate medications or begin allowing patients to wake up following heart surgery based on the numbers a cardiac monitor or ventilator show. But, always in the background of my mind I hear “don’t just treat the numbers, treat the patient.” I consciously resist the technological. I consciously see the patient. My patient is more than a body lying in a bed attached to machines and embedded with tubes, wires, and drains that I must monitor. I am more than technological, aren’t I?

In the 19th century, nurses were considered as an instrument of sorts. They were the doctor’s eyes and ears. I am not an instrument…I am not merely that. I am a nurse, a professional. I have my own identity and ability to think and make decisions. I am more than merely technological…aren’t I? Questioning the technological nature of my being as a nurse prompts me to think of Heidegger. His questions resound in my mind - do I remain un-free and chained to technology? Has it become so much a part of me that it is a means and an end? Have I become so caught up in resisting the technological that I am actually rebelling “helplessly against it”? (Heidegger, 1993, p. 330). Early in my career I wanted to master technology. I remember thinking “if I could master the technology, then I must be a good nurse.” But it is more than that now.

Why am I studying this phenomenon of patients’ narratives of the technological in heart surgery? Why am I focused on the technological? The answers to these questions seem more apparent now. The technological has shifted my identity, recast my story, and I am left to wonder about the patient in the midst of all of this. I am a nurse. I am used to the technological. Patients are not necessarily accustomed to it.

Anticipations and Ruminations

The technological has been a focus in my professional career from the beginning. Despite the prominent place of the technological in nursing practice, patients’ experiences have received inadequate attention (Barnard & Cushing, 2001). What is the story of a person who undergoes heart surgery? Imagining myself as a person who has undergone heart surgery, I wrote the following story in poetic verse. In the story, a composite character is developed based on my personal and professional experiences and the many stories I encountered in the academic literature and through my practice as a nurse.

My heart is sick.
There is a blockage in one of my arteries that feeds my heart.
I am going to get it fixed.
They are going to open up my chest - I don’t know how I will ever recover.
I will have to sell my house
I won’t be able to drive the school bus again
I’m sick, getting old, I’m going to be weakened, stricken, I hate this weakened state
this isn’t me, they -
wheel me into the operating room,
why didn’t they put me to sleep before?
it is so bright I can hardly see, what the hell are they going to do?
I’m not sick. I feel okay. I should go home. I fall asleep and I don’t remember,
much else.
My imagination kicks in and I envision this technological journey into my body, my heart, a journey that takes me into my physical body, yet transgresses the bounds of the body into a story simply left
tainted
changed
recast
Take me back, I don’t want to move forward, awaking, floundering, struggling, I, consented to this deliberate cracking open of my sternum, I felt myself fading.
Fading away fast, and I don’t know who this broken person is that they brought back. They—
trespassed on my identity
took up camp
I’ve been recast
the rhythm is strange
I am marked—like no other
“T” am no longer.
They say I’ll be okay, I was amended-mended, I’ll be okay, I’m fine. I’ll never be, the same.
I did retreat unknowingly to something that resembles me, survived, recovered but changed ever so slightly that it is forever in the background of my foregrounded life.
I didn’t sell my house
I am driving the school bus again
things are better
my weakened state dissipated but didn’t vanish
I am unseasoned to the way they look at me now
a certainty of what is to come is difficult to consider
I is difficult to say

Telling this story helped me to identify my initial understandings as I entered the research field. It provided me with awareness of my presuppositions concerning this phenomenon, particularly how the technological changes people. It is important to embrace an inward gaze because individuals approach research from different standpoints. A reflexive approach can bring “to consciousness some of the complex political/ideological agendas hidden in our writing”
(Richardson, 2000, p. 936), and in our thinking and research. Poetry and storytelling are two methods that can provide a way to turn a critical gaze towards self as researcher and explicate the implicit dimensions in researchers’ thinking. My critical and reflexive inward gaze continues…

Prior to the pilot study I conducted for the purpose of methodological restructuring of my doctoral research, I crafted two poems. Through the crafting of these poems, I further understood what was implicit in my thoughts and actions around my inquiry. In this fashion, writing became a way of knowing (Richardson, 2000) and a method of self-inquiry. A common theme in these poems is that while surgery is represented as physically repairing the blocked artery or the incompetent valve, the person is changed, and his or her story is recast. Is my understanding of the experiences of heart surgery parallel to patients’ stories? Are they different? Do they contradict each other? Are they interwoven?

*Open*-heart

Marked.
Bare life.
A heart suspended
blood flow technologized
approached death
retreated unknowingly
survived slightly
recovering
but never recovered so it seems…
changed
ever so slightly
in ways that shift every aspect of my life
mended well
a scar perfected
flawed to my core
in a way inescapable
incessant reminders
seared to my being
memories that stand
a heart fixed
a self tainted

*After-effects*

Open.
Closed.
Put back together.
Un-normal
unnatural
unnerving.
Fixed.
Cured.
Remotely understood.
Sewn up
diligently
cemented shut.
Open
closed
a self amended
after-effects come later.

After reading these poems, a colleague said that she felt I was dwelling within stories that haunted me, stories that I had repressed: “Every one of these poems seems to be about someone
you cared for. They are so real.” She said that she sensed that being part of the technological bothered me. She thought there were more stories to be told. There were…

Shifting to the Personal

A patient I knew personally underwent heart surgery in the CVICU where I worked. He had an uneventful recovery. Months later he told me “I will never have heart surgery again.” I later found myself wondering why he had said what he said. I thought of the first time I saw him in the CVICU after surgery. He was asleep from the medication. There were tubes and wires attached to him everywhere, but this was heart surgery. This was routine. I knew that scene well. Though, it was odd this time, because I knew this person outside of the messiness of technology. The next day he was sitting up in a chair and much of the tubes and wires had been removed. He was on his way to recovery.

As I recount this story, I remember his words months after surgery “I will never have heart surgery again.” I know heart surgery is a profound experience and I perceive it as a life-altering event. The technological is exceptional and whether patients are changed as a result is unknown. I am now questioning patients’ experiences of the technological in heart surgery. I do not suggest reverting to times when object technology was nominal. However, nursing practice and theory, as it relates to the technological, should be based on patients’ experiences. I am left wondering about the patients I have cared for. I only cared for them in the acute postoperative phase of heart surgery, generally the first 24 hours, and then they are transferred to a cardiac unit. Did they go home? Did they recover? Will they ever be the same? Will they always be aware of their beating heart beneath their skin? Will I?

I now know why I am drawn to study this phenomenon of patients’ experiences of the technological in heart surgery. Telling my own stories has revealed the implicit in my thinking. These stories have seared into my being. The why and what of my inquiry are inextricably bound. My patients’ stories blend into mine, my stories flow into my inquiry.

I have been a nurse for almost 15 years. The technological was obviously frightening for me as a novice, but I followed my fears right into the ICU. Thinking my competence would be judged by whether I could work the ventilator, interpret heart rhythm strips, or figure out how to work a transducer hemodynamic pressure system, I somewhat bypassed patients’ stories. Of course I remembered many patients, but it is only now that I am attending to their stories with a fullness of being. Attending to these stories. Remembering my own story. Finding my inner poet.
Re-engaging self. Conducting a doctoral inquiry. Finding a sense of adequacy to morally understand patients’ experiences of the technological in heart surgery.

During the analytic phase of my pilot study, I crafted the following poem. The seeds of my professional experience are interwoven throughout this poem with a sense of the technological in heart surgery. The poem is first situated from the patient’s perspective and then I shift into the nurse’s perspective.

Taking Off the Gloves

A constant reminder of what happened
  a keepsake that,
  would have been better left un-given.
A scar to show your war wounds,
  a scar to show your whole chest was cut open
  life on the brink
  can this be repressed?
Seeing the evidence everyday when you shower and dress
  seeing your history impressed upon your body.
    a history you cannot escape.
    a constant reminder.
      Physical. Visible.
      Ever present
      rarely absent …

A look to my hands
  hands of my history
  disinfected, but damned by stories.
The many bodies of heart surgery. Monitored. Touched. Altered. Lives stopped. Started. Hearts. Wholly reconstructed. The tubes, wires, drains, the bags, the lines, the bandages, machines, trembling hands of fear, bodies in disarray, eyes into the soul purposefully taped shut.
Chaos, ambivalence, unknown, anticipated tears of contemplation. Stop. A bodily reading lay bare in a technological green wave, fluttering with an aberrancy that unfolds into a cavalcade of urgent undertakings
  undertaken
hope of human error dashed as the technological confirms the audible soundlessness of the heart
  mirroring the monitor
  echoing a trauma
  a horizon in the distance brought to the fore
  imposed compressions
  on an ambiguous heart.

A repression of this man yielding a potential reparation. His mortal others, wondering,
  wandering, waiting, worried
  oblivious to the organized chaos to preserve
offsetting death in the lifesaving tendencies of an electrical force
devoid of retrieval, repair and the chest,
is reopened in a room not used to,
opened chests.
An unplanned recoil to the table where life
was interrupted, as it swirled through tubing and back into a body
to no avail, his body temperature was near normal.
  It was supposed to be over.
As quick as he came into my room, he is gone
  back to surgery
  back to be recast
he threw a hitch into my story
  like arriving at a funeral and the casket is empty.
  I take off the gloves.
—
My hands are marked

Moral issues concerning the technological and how patients’ identities are narrated are critical to consider. What is right? What ought to be? These are moral questions that permeate the technological practices of heart surgery. My poetry reveals moral dimensions that are constituted in patient care and nursing practice, concerns that I previously could not articulate. As is evident in the crafted poetry thus far, I have a strong sense that the technological of heart surgery is a salient dimension of patients’ experiences and recasts their stories. In a way, it has done the same for me as a nurse. That is why I feel I am drawn to study this phenomenon.

Driven by the Personal

I have recounted professional stories of caring for people that are acutely ill. The heart, technology, and heart surgery rest heavily in these stories. I have yet to touch on personal stories. What do my own personal stories have to do with science? Are these stories too close to home? Too close to my own mortality to consider? Patients’ stories touch me all the time. But, nurses often distance themselves in order to protect self from the constant toll of illness, death, and sadness. When I finally did write a story more personal than professional, I was able to shed further light on the reason I am not only drawn, but driven to study this phenomenon.

None of my family have ever undergone the unfortunate experience of heart surgery. Nevertheless, the heart revealed itself as a focal point in my life. My mom, who recently turned 76 and has been a smoker for 60 years, had a silent heart attack. She is the
stereotypical woman, who ignored her symptoms and chalked them up to indigestion or old-age. So when I say silent, it wasn’t actually silent. I’m sure her heart was screaming at her, but she didn’t listen. My mom is the type of person who likes to pretend that nothing is wrong and that she can handle anything. She is a very strong person, but I know she is not invincible. The doctor told her months later that she had a heart attack. She didn’t tell anyone, but in time she mustered up the courage to tell me. I knew she felt she had to, because I was the nurse in the family, and I always interrogated her about her doctors’ appointments and her health, and I constantly prodded her to quit smoking, and to eat whole wheat bread, and to stop putting mounds of butter on everything. These things she never listened to, still doesn’t.

My dad has never had a heart attack, but he has hypertrophy of the left ventricle, probably caused by his high blood pressure. He is 78, never smoked, never drank, and walks and rides his bicycle almost everyday. He lives a healthy lifestyle, unlike my mother. However, I must qualify that my mom’s lifestyle isn’t awful. She eats well-balanced meals, drinks juice at breakfast, eats fruit with her lunch, and eats her vegetables and salads at dinner (but with lots of butter and dressing!) She is quite meticulous to remind me that she never cooks with salt. She doesn’t exercise, unless the walking associated with shopping counts. But really, she is fairly healthy for 76.

They each have their pill bottles lined up, pretty much all related to the heart. My mom’s pills sit on the kitchen table and my dad’s pills sit in the bathroom. When I go home to visit them, I always check their pill bottles to see if their doctors have changed their medications. It is my way of verifying what they tell me is the truth. They share their health problems with me, more so when I pry. I think they censor the things they tell me to protect me or maybe to protect themselves. Maybe it isn’t really there, if it isn’t talked about. Maybe it is less harrowing. Maybe it will go away. I worry about them a lot. Sometimes my imagination takes me places I shouldn’t go, such as the what ifs? And what about? The future. What lays ahead for them? Me? My mom always says that she is a DNR (do not resuscitate), jokingly, but serious. She has seen a lot of people die and suffer in her day, and she doesn’t want to be hooked up to any “life-saving” technologies that will only prolong her death and suffering, as opposed to prolong her life. I think she worries about us too, sitting vigil at her bedside, she doesn’t want us to ever suffer.

We all bear burdens in our lives. Our stories may weigh heavily on our spirits, and for some, they may weigh heavily into our research. My doctoral research may be a way that I can find a sense of adequacy in attending to my own stories and reconciling the moral tensions that result from the technological in my personal and professional experiences of – the open-heart.

The aim of my doctoral research was to shed light on patients’ experiential accounts of the technological in heart surgery. In this research I truly listened to patients’ stories and invite other nurses to listen as well, and possibly re-conceptualize their thinking and their practice.

The heart.
That thing that beats beneath my skin.

I am well aware of it.

Life rotates around it.

In more ways than one.

These stories build the *why* of my doctoral inquiry, the *why* I call my parents a few times a week just to check on them, the *why* my heart skips a beat when I see their number on my call display.

The life experiences that constitute my personal and professional stories in this Chapter played a critical role in drawing me to this substantive research area, and continue to guide my thinking. While the germination of this study began before I articulated, crafted, and put these stories to paper, they provide the reader with the personal context of this professional nursing inquiry. In light of these stories as the foundation of this study, in Chapter Two I provide the formal introduction to my doctoral inquiry, including the problem statement, the background, the purpose and research questions, and the significance of this narrative inquiry.
CHAPTER II: INTRODUCTION

PROBLEM STATEMENT, BACKGROUND, PURPOSE, RESEARCH QUESTIONS

AND SIGNIFICANCE

The ubiquity of the technological in heart surgery is an escalating and yet strangely unexplored phenomenon
Problem Statement

The ubiquity of the technological in heart surgery is an escalating and yet strangely unexplored phenomenon. Despite abundant research examining outcomes of mortality, morbidity and economics, patients’ experiences of the technological have been largely neglected (Lehoux, 2008; Pearson, 1993; Sandelowski, 1993a). This is a significant omission in heart surgery considering that patients tend to be unaccustomed to the technological foundations, creating a potential for stress, depression, fear and ambivalence. There is a cluster of empirical evidence concerning the serious implications of depression and anxiety following heart surgery (Connerney, Shapiro, McLaughlin, Bagiella, & Sloan, 2001; Doering, Cross, Magsarili, Howitt, & Cowan, 2007; Fitzsimons, Parahoo, Richardson, & Stringer, 2003; Ivarsson, Larsson, & Sjoberg, 2004; Pignay-Demaria, Lesperance, Demaria, Frasure-Smith, & Perrault, 2003). Psychological symptoms such as depression can precipitate a host of physiological responses related to increased cardiac morbidity and mortality (Barth, Schumacher, & Herrmann-Lingen, 2004; Lesperance, Frasure-Smith, Talajic, & Bourassa, 2002). In addition, it is argued that technological environments of health care (such as heart surgery) may preclude attention to patients, and result in feelings of distress and dehumanization (Barnard & Sandelowski, 2001; Kleinman, 1988). Nurses are well versed in the technological in which technologically-driven routines of care and the presence and use of object technology follow as a matter of course. The extraordinariness of the technological becomes ordinary and familiar in ways that may deter nurses and other health care professionals from recognizing that patients are undergoing what can be a traumatic and unfamiliar biographical disruption. Exploring patients’ experiential accounts will help health care professionals understand how patients make sense of the technological dimensions of heart surgery and recovery and how they reconcile this biographical disruption.
Background to the Research Problem

Heart Surgery

Cardiovascular disease is the leading cause of mortality and morbidity (Statistics Canada, 2005; World Health Organization, 2007). Over seventeen million people died of cardiovascular-related diseases in 2005 (World Health Organization, 2007). As a response to the high incidence of cardiovascular disease, heart surgery is one of the most common major surgical procedures performed. In Ontario, the number of people who undergo advanced cardiac procedures continues to rapidly grow (Cardiac Care Network of Ontario, 2004). Over 11,000 people per year receive heart surgery in Ontario alone (Cardiac Care Network of Ontario, 2005). Heart surgeries include coronary artery bypass grafting (CABG), heart transplant, congenital heart repair, and heart valve repair and/or replacement.

Rapid technological advancements have a significant impact on patterns of practice (Cardiac Care Network of Ontario, 2006). Heart surgery began as a closed, blinded procedure during the Second World War where doctors attempted to remove shrapnel and bullets from the hearts of wounded soldiers (WGBH Educational Foundation, 1997). The demands of war pushed forth a critical consideration of open-heart surgery. The first successful open-heart surgery was performed in 1953 (Westaby & Bosher, 1997). Surgery has now progressed from open-heart procedures that involve hypothermia to cardiopulmonary bypass to off-pump coronary revascularization. Alternatives continue to be examined for making heart surgery less invasive using endoscopic procedures, robotic- and laser-assisted surgeries, and thoracotomy incisions. In Canada, heart surgery commonly remains invasive in which the chest is opened by means of a sternotomy. A sternotomy involves a median incision through the sternum in which the rib cage is opened, causing musculoskeletal insult and potential nerve damage. The sternotomy provides the surgical team with access to the pericardium and heart using devices such as a sternal saw and retractors.
Scientific advancements in the evolution of cardiovascular practices are in part due to the technological progression. The last few decades have been committed to perfecting operative techniques and reducing mortality, morbidity, costs, and the invasiveness of heart surgery.

Technologies in health care have become increasingly complex since the 1960s (Sandelowski, 1997b). Technology has always been present in health care, but since the 1940s it has evolved to what is referred to as “modern,” including automation, vital function monitoring, and computerized and information technologies (Sandelowski, 1997a, 2002). There is increased attention on the systematic assessment of health care technologies for effectiveness and efficiency. In Canada, technology assessment became a structured activity in the late 1980s (Menon, 2000). This increased attention was in part due to the establishment of various organizations such as the Canadian Coordinating Office for Health Technology Assessment (Canadian Coordinating Office for Health Technology Assessment, 2006). A working group for the Ontario Ministry of Health recommended a comprehensive program for assessment of technologies specifically related to critical care (Technology Subcommittee of the Working Group on Critical Care Ontario Ministry of Health, 1991).

The Institute of Circulatory and Respiratory Health (2005) identified the rapidity of technological changes as a challenge. The focus of technology assessment is related to costs and mortality, morbidity and biophysical outcomes. This research focus has been invaluable to ensuring evidence-based approaches, improving procedures, and decreasing mortality and morbidity. Broadly speaking, health care research has increasingly focused attention on patients’ experiences. However, patients’ experiences of the technological dimensions of health care have been largely neglected.

Alongside this evolution are debates in the literature examining features of technological optimism (e.g., technology as good for nursing) and technological romanticism (e.g., technology
as disruptive and dehumanizing; Sandelowski, 1997b). Sandelowski argues that both optimists and romantics essentialize technology and nursing. An essentialist view of technology can result in simplistic explanations of phenomena and restrict the development of nursing practice (Barnard & Cushing, 2001). Reducing nursing itself to a technology places it at risk of becoming merely manual labour (Sandelowski, 2000a). Linked into merely technologized practices of care is the potential of patient dehumanization. It is essential to examine the impact of technology (Walters, 1995), including an exploration of the ethical and social concerns of such rapid technical innovations (Benner, 2003; Lehoux, 2008). A major ethical and social concern is how patients make sense of the technological in environments such as heart surgery.

**Technological Framing**

It is important to secure an understanding of the technological because of the various ontological assumptions. Reflecting back on some of the stories I told in Chapter 1, at first glance one might say technology is the machines, monitors, tubes, and drains. However, my experiential accounts imbued an understanding of technology that was not merely object related. Technology also emerged as part of my thinking, knowing and actions as a nurse. The social embedded components of object technology are an important consideration (Lehoux, 2008). Definitions of technology tend to essentialise it by identifying a definitive meaning and reducing it to an object. A more comprehensive and less restrictive way to understand technology is to address its characteristics (Barnard, 1999). Thus, my inquiry, with regard to technology, became a focus on the technological. The technological involved a focus on object technology, but also the logics and processes of care that emanated.

employs a characterological definition that is directed at the various attributes. Technology is defined as a complex interrelationship between physical objects, existing knowledge, values, culture, policies, systems, processes, and people (Barnard, 1996, 1997). Pilot study work conducted to assist in developing the methodological approach for my doctoral study demonstrated the usefulness of Barnard’s conceptualization. Framing understandings of the technological in this way allowed me to consider participants’ experiential accounts in ways that did not restrict their stories and did not put my boundaries on what data emerged.

This conceptualization of the technological is capacious and complex. At many points in the development of my doctoral work, I considered narrowing my focus, but I kept returning to the aim, which was to understand patients’ experiential accounts within their own local frameworks. The purpose was to understand how they make sense of the technological and the various ways that patients put their stories together. It was important to avoid imposing schematic limits on patients’ stories and to maintain an understanding of the technological that is comprehensive and inclusive. Nevertheless, the potential for ambiguity existed because the technological tended to encompass everything. As a result, I constructed boundaries for my research without restricting patients’ stories and essentializing the technological. Sandelowski’s (2000a) delimitations guided me to a workable understanding. As a point of departure into this investigation of the technological, I began with physical objects as an initial focal point (Sandelowski, 2000a). Henceforth, I let participants’ storytelling shape the path of the interview, always keeping in mind the complex interrelationships concerning the technological.

The technological is not always defined so broadly and a characterological framework rarely guides research. It is common for researchers to examine patients’ experiences of object technology, such as pacemakers, epicardial pacing wires, ventilators, intravenous pumps, computed tomography, or magnetic resonance imaging (e.g., Anderson, Moyle, & McAllister, 2002 to 2003; Beery, Sommers, & Hall, 2002; Lindahl, Sandman, & Rasmussen, 2003; Murphy,
2001; Pelletier, 1992; Roschkov & Jensen, 2004). Other researchers have attempted to move beyond object-technology and explore patients’ experiences of technological environments such as the ICU (e.g., Almerud, Alapack, Fridlund, & Ekebergh, 2007; McKinley, Nagy, Stein-Parbury, Bramwell, & Hudson, 2002; Rier, 2000; Russek & Schwartz, 1998; Wong & Arthur, 2000). Nevertheless, there is an absence of research exploring patients’ experiences of the technological in ways that are comprehensive and inclusive of its many dimensions.

**Moral Dimensions**

The technological dimensions in heart surgery bring moral dimensions to the forefront of nursing practice. The technological focus of the biomedical model shifted attention away from the subjectivity of patients and their experiential accounts in ways that have the potential to be dehumanizing and amplify distress (Kleinman, 1988). Medicalization and the ensuing technologization limit patients’ agency (Morgan, 1998) and may conceal subjectivities, reducing people to mere objects. These concerns are reflective of the romanticism that Sandelowski (1997b) refers to, in which the technological can be viewed as disruptive and dehumanizing. Morgan suggests that subjectivities need to be reclaimed, and that an epistemic place for lived experiences must be engaged in order to move forward from a potentially oppressive medicalized discourse that can reduce, trivalize, and silence patients. If we continue to eschew patients’ experiences, health care practice will become completely technologized and the unique attributes of patients will be unnoticed all together. It is important to consider (from patients’ perspectives) how health care professionals can engage in practices of care that respect and actively involve patients (Morgan, 1998).

The technological is an essential component of health care practice and it is not inherently bad or good. Of course there are risks of dehumanization associated with object technology (Sandelowski, 2002). Barnard and Sandelowski (2001) argue that it is not object technology that depersonalizes and dehumanizes patients, but how it is used. There is a moral
need to consider the human-technology interface in a time when the technological continues to evolve in the professional lives of nurses and the personal experiences of patients (Watson, 2001). An examination of the moral dimensions associated with patients’ experiences of the technological is generally absent in the literature (Barnard & Cushing, 2001).

At times, practitioners become caught up in the technological including the curing, the fixing, the managing of machines, tubes, wires, and drains. Frank (2004) suggests that people have forgotten the importance of what he calls generosity – gracefully welcoming the patient. He claims that a demoralization has embedded itself in health care, which is affecting both patients and practitioners. “It takes so little to demoralize – a missed opportunity for dialogue here, a silence – and generosity often requires little” (Frank, 2004, p. 26). By not engaging in or bearing witness to this dialogue, health care professionals can enact oppressive identities, and reinforce the oppressed agencies and subjectivities that can accompany medicalization (Morgan, 1998). It is important for practitioners to engage in dialogue with patients, because moral concerns ensue when they withdraw from this dialogue (Frank, 2004). Various authors refer to this withdrawal from patients in a number of ways, such as sensing things but not attending to experiences (Crites, 1986), dehumanization (Kleinman, 1988), nonrecognition (Taylor, 1994), and patients who are “unheard, unrecognized, unremembered” (Peschel & Peschel, 1986, p. 4). Patients’ subjectivities and idiosyncrasies are repressed as a result of this withdrawal. Attention to the stories that patients tell may open up a new space for interaction and moral engagement. A moral framing of practice can provide further understanding of what nurses ought to do (Johnson, 2004), particularly in the technologized environments of heart surgery.

Stories have “provided moral footing for thousands of years” (Nisker, 2004, p. 286) and can impart an understanding about how patients feel, and how their care and treatment can best be enacted. Dialogue (in which practitioners authentically listen to patients and their stories) may be key to remoralizing care (Frank, 2004; Kleinman, 1988), and may be a critical factor in
framing strategies for patient care and tailoring of interventions in ways that honour patients’ voices. Given the presence of the technological in heart surgery, and the moral aspects that are embedded in the technological evolution (Hofmann, 2005; ten Have, 2004), it is time to seriously consider patients’ experiential accounts and stories.

**Conceptualizations of Identity**

The ways that patients make sense of the technological are linked with the various components of their stories and how identity is reconstituted. The technological has long been part of patients’ experiences, but issues concerning identity have emerged over the past decade. During the Renaissance, inner workings of human bodies were increasingly revealed with dissection (Sawday, 1990). This led to a continued fascination with (dis)covering the human body in ways that were increasingly technologized. Haraway (2000) argues that in the 21st century, all people are cyborgs, which she defines as an interface between human and machine. Implantation of biotechnical devices can challenge the boundaries between human and machine (Beery, 1997). In patients’ experiences of heart surgery, these boundaries are invasively challenged on multiple levels, from the temporary insertion of monitoring and therapeutic devices to the surgical insertion of grafts and valves.

The blurred boundaries between human and machine have led to shifting identities that are no longer simple and clear, but ambiguous and indefinite (Haraway, 2000). A cyborg identity constructs a sense of otherness in a person (Balsamo, 2000). This sense of otherness is exemplified by Nancy, a French philosopher who himself had heart surgery. He referred to the intervention as an intruder that entered his body, describing confusion concerning his heart as a foreign object within him (Nancy, 2002). He stated, “I am the bits of wire that hold together my sternum, and I am this injection site permanently stitched in below my clavicle” (Nancy, 2002, p. 13). The technological became embodied for Nancy in more than a physical way, and altered his identity. Radley (1996) echoes similar sentiments, suggesting that the process of bypass surgery
becomes part of patients’ “identity, their heritage – a mark on their biography” (1996, p. 135) in which individuals must reconstruct their biography.

In this study, I assumed a dialogical conceptualization of identity and considered how it was framed in narrative accounts. When a dialogical stance is assumed, it is important to consider narrative identities as dynamic and constitutive of social worlds, relations and interactions (including research interviews). Identity is a process of defining and understanding who one is (Kashima & Foddy, 2002; Taylor, 1994). It is dynamic and fluid (Nelson, 2001) and grounded in and continually evolving with our situated and lived experiences (Bury, 1982; Orona, 1990; Weinreich, 2003). The temporal nature of narrative identities is accounted for in stories that are continually retold based on the situatedness of the storyteller. It is an assumption in this study that identities are constituted through stories over time (Frank, 2005; Rice & Ezzy, 2000; Sampson, 1993; Shotter, 1999). Identity “incorporates experiences in interaction with other people” (Weinreich, 2003, p. 22). A dialogical conception of identity indicates that human beings are affected by the world they live in, and the relationships they engage and interact within. As such, the technological of heart surgery has the potential to affect how patients narrate their identities.

The significant gap in the empirical literature about patients’ experiences of the technological in heart surgery is a pressing problem. Patients’ perspectives and the various components of their stories can signpost strategies for nurses and other practitioners to mediate the impact of the technological. Because the technological features so prominently in trajectories of illness, as well as in the treatments and recovery from heart surgery, it is critical to explore patients’ experiential accounts.

Research Purpose

The purpose of this narrative inquiry was to explore adult patients’ experiential accounts of the technological in heart surgery and recovery until 4-6 weeks post discharge from hospital.
Research Questions

1. How do patients narrate the technological in stories of heart surgery?
2. How do patients frame identity in these narratives?
3. How are the moral concerns narrated in these stories?

Significance

There will be multiple layers to the significance of this study. Initially, this study will provide a forum for participants to share their experiential accounts of the technological in heart surgery. By engaging in dialogue with participants and encouraging them to tell their stories, they may find a sense of generosity and also make sense of the technological (figuring out how to live and conduct their life following surgery). It also may provide a way for me and possibly others to find a sense of adequacy amongst the technological in heart surgery. This study will invite nurses and other practitioners to think with patients’ stories as ways to reconceptualize thinking and practice.

Overall, this study will provide an understanding of participants’ experiential accounts of the technological in heart surgery and ways to remoralize patient care through dialogue and humanistically-oriented practices. The knowledge derived from this study will provide ways to undertake health care routines and procedures, and reconfigure environments and logics of care in the technologically-mediated context of heart surgery. This knowledge will inform research, policy, education and practice dimensions in the domain of heart surgery. As well, this research will contribute to the philosophical and theoretical understandings of the technological and the reconstitution of narrative identities.
Sawed in half…ever so—mindful of my body,
listening to the sounds,
the faint beat of my heart.
In this chapter, I provide a critical review of the literature. The purpose of this review is to explore current constructions of and knowledge about patients’ experiences of the technological in heart surgery. Specific attention was directed at the components of patients’ experiential accounts. The literature was reviewed in relation to the postoperative and recovery phases of heart surgery.

At the outset of this review, I found an absence of empirical literature that focused specifically on patients’ experiences of the technological in heart surgery. Nevertheless, the technological emerged implicitly in researchers’ analytic summaries and participants’ narratives in the studies reviewed. This implicitness may be a result of the prevalence of the technological in everyday life—it is so present that it is viewed as ordinary and mundane. Considering the implicit nature of the technological in the literature it was necessary to broaden the scope of the review to research concerning patients’ experiences of heart surgery more broadly. This was a critical portal to understanding how patients narrate the technological in heart surgery and how identity and moral issues are framed in these accounts.

Literature Review Synthesis

This synthesis is organized according to themes that inductively emerged from the literature, following a thematic analysis. I critically examine and synthesize the six thematic areas that emerged: (1) body; (2) mortality; (3) psychological dimensions; (4) spirituality; (5) activities of daily living (ADL), roles and relationships; and (6) quality of life (QOL) and functionality. These themes were the main components of patients’ stories with various events, characters and situations interwoven throughout. It is important to note that this synthesis is not organized according to the various technological dimensions, because that would have involved deductive and external classification. The synthesis is presented in correspondence with the implicit nature of the technological in the existing research. As noted earlier, the characterological definition of the technological involves a complex interrelationship between
physical objects/machines, existing knowledge, values, culture, policies, systems, processes, and people (Barnard, 1996, 1997, 1999). This understanding of the technological is woven throughout this synthesis; it sensitizes the reader to the many ways in which the technological is implicit in the research documented.

**Body**

The body, as both the site of surgical intervention and an integral part of our identities, is forefront in patients’ experiential accounts in heart surgery, partly because it is so tangible. In a qualitative study that explored recovery experiences of ten women who underwent CABG, Hawthorne (1993) found that the surgical incision and resulting scar became a threat to patients’ identity and body image. Patients often talk about a sense of shock when they first see the graft incision (Tolmie, Lindsay, & Belcher, 2006). The sternotomy incision that accompanies most heart surgeries opens patients’ bodies in ways that most people have never experienced.

Generally, heart surgery is an invasive procedure. In a hermeneutic phenomenological study of 12 older women, Allen and Wellard (2001) found that women in their study described a sense of invasion. Some of the women described the operation itself as a serious invasion in which the body was literally sawed in half. One woman referred to cutting the sternum like a butcher cutting meat. The resulting scar acted as a constant reminder of what had happened. Hawthorne (1993) found that women felt a sense of being damaged and mutilated and were concerned that the scar would affect their sexuality.

In a grounded theory study of ten women, King and Jensen (1994) reported that women’s sense of self was disrupted and they needed to account for the new look of their bodies. Often, women were shocked and repulsed by the scar and used clothing to cover the remnants; however, with time, acceptance of the scar emerged for many (Allen & Wellard, 2001). In an interpretive study of six men, Hawthorne (1990) reported that men in the study perceived the scar as empowering and as proof they had overcome adversity. The men also considered that the
disfigurement caused by the sternotomy would be more of a concern for women. Allen and Wellard found that older women sensed younger women would have more difficulty in accepting the scarred body and would develop problems associated with body image and self-confidence. These claims reinforce the cultural stereotypes concerning age, beauty, and gender; it also suggests that bodily and identity disruptions are gendered.

It has been documented that patients’ experiential accounts focus on sensing the physical injury (Bartz, 1988; Trumbull, 1993). Theobald and McMurray (2004) and Trumbull reported that patients experienced a heightened awareness of the body. In Trumbull’s phenomenological study of 14 people, it was found that patients talked about the psychological effect of CABG (e.g., listening to their hearts, always questioning themselves, and being attentive to every bodily sound). The physical sensations of the body are not only perceived, but are interpreted with great concern. In a survey study using structured interviews of 15 men and 5 women who had CABG, Moore (1994) found that patients’ sensory experiences centered on the chest and leg incision, and that these physical sensations did not diminish until the third postoperative week. In Plach and Steven’s (2001) qualitative study of 15 women, they found that women determined the state of their health and well-being according to the presence or absence of physical sensations. They found that women were at odds with their bodies, because their hearts had been physically repaired, and they were still unable to do everything that healthy bodies are expected to do. 

Women’s postoperative recovery is fraught with threats to gender identity (Angus, 2001; King & Jensen, 1994). Women cannot act in ways that signify feminism comportment (Angus, 2001). Gender is embodied in both visible patterns of comportment and aesthetics.

Another aspect of heart surgery that impacts understandings of the body is the role of the technological specific to object technology and disruptions to agency. Hawthorne (1990) indicates that heart surgery is common, and for this reason viewed by many as ordinary and mundane. However the technological is extraordinary. In Trumbull’s (1993) phenomenological
study, it was apparent that patients’ bodies became technologized. The narratives that underpinned patients’ stories enveloped a body that was literally invaded by and dependent on machines. Patients’ experiential accounts were detailed in ways that focused on object technology. For example, patients recalled the many machines in their rooms and feeling tied down. Patients were aware of how dependent they were on the machines; one patient described worrying about what his body would do if the machine failed to work. In a prospective interview study of 42 men, Radley (1996) reported that patients undergoing CABG described the surgery time as a period of non-being. Patients felt that it was futile to imagine oneself as a body on the surgical table just waiting to be cut open. Rather, patients placed themselves in the doctors’ hands, both physically and figuratively. In another study, the technological emerged as prominent in women’s experiential accounts of waking up from surgery (King & Jensen, 1994). Women described a loss of control; the mechanical experience of heart surgery (including intubation, ventilation, chest tubes, and the pharmacological effects) took control and left them as an inanimate body, literally, just lying there.

The body as a component of patients’ stories surfaced moral issues. Both agency and identity were disrupted. The technological seemed to alter the way patients thought about their bodies and their sense of being. People who underwent heart surgery engaged in a process of rethinking the relationship with their bodies and the biographical disruption.

Mortality

Mortality is a common component of patients’ stories of heart surgery whether it is talked about directly or in a less explicit way. Despite the low risk, patients are still aware of their mortality, because heart surgery involves the organ that many relate to life. As well, technological discourses manifest in the surgery’s informed consent process identify the risks concerning death. Empirical literature reports that a concern for one’s mortality becomes an issue
Mortality is described as unnerving for patients, but it is a necessary confrontation when contemplating heart surgery (Hawthorne, 1990). Hawthorne suggests that patients, literally, must expose themselves to the possibility of death, in order to avert death. Patients confront a discontinued existence as they weigh the risks and benefits of heart surgery (Trumbull, 1993). In a qualitative phase of a larger prospective descriptive study, Lindsay, et al. (2000) found that many patients described an impending doom when approaching heart surgery. Others have reported that patients experience a fear of death (Pennock, Crawshaw, Maher, Price, & Kaplan, 1994; Shih & Chu, 1999). While cardiac surgery may possibly extend life and relieve cardiac symptoms, there is a simultaneous possibility of unfavourable outcomes (Radley, 1996).

Mortality is linked so closely to our sense of self that the risk of death triggers the ontological question of who we are if we are no longer. Hawthorne (1990) found that heart surgery was a rude awakening for patients who realized they were not immortal and indestructible. Moral questions ensue about how to live when mortality is no longer a distant eventuality, but a real possibility in one’s life. This realization creates a dramatic shift in perceptions of self, from strong and vital to fragile and vulnerable (Hawthorne, 1990; Karlsson, Johansson, & Lidell, 2005). In Chessick’s (1995) phenomenological study of inner mental processes immediately following his own heart surgery, he suggests that being on the edge between life and death and facing the possibility of mortality is one of the reasons for the high incidence of psychosis. Chessick explains that following heart surgery, psychosis is a coping strategy to manage this boundary between life and death.

These studies demonstrate that patients experience a temporary suspension of life as a result of heart surgery, and death becomes as much a possibility as living. This issue of temporality is developed further by Radley’s (1996) conception of the surgery as a non-time in
that the surgery is beyond the patient’s consciousness. Patients are literally suspended in time, with no conscious awareness of their time on the surgical table. In a descriptive cross-sectional survey of 127 men and women who had undergone CABG, Pennock, et al. (1994) report that patients described the postoperative period in the ICU as extremely distressing. Almost 80% of the patients described events associated with the ICU in which intubation and an inability to talk were the most distressful aspects. These technological experiences in which patients are unable to talk reveal not only a temporary suspension of agency, but also disruptions to the identity.

Postoperative experiences have been characterized as a removal of the death sentence (Lindsay, Smith, Hanlon & Wheatley, 2000). Patients’ lives have been literally extended, and once again living becomes more of a possibility than death. Yet it is reported that patients’ sense of self was altered, so that many felt marked (Radley, 1996). Radley (1996) theorizes that medicine becomes “part of their identity, their heritage—a mark on their biography” (p. 135), suggesting that this close involvement with the technological of heart surgery may actually prompt a recasting of self in ways not yet explored.

Issues of survival following heart surgery were expressed by many patients in the postoperative phase (Bartz, 1988; Fleury, Kimbrell, & Kruszewski, 1995; Keller, 1991; King & Jensen, 1994; Robinson, 2002; Shih, Chu, Yu, Hu, & Huang, 1997). Because of the perceived risk of death associated with heart surgery, survival becomes an important part of postoperative recovery (Robinson, 2002). In a grounded theory study of eight men and one woman, Keller found that the knowledge of having survived was part of the process of regaining normalcy following surgery. King and Jensen (1994) identify survival as a phase of cardiac surgery that patients experience during the process of “preserving the self” (p.100). In Shih, et al.’s descriptive qualitative study of 15 men and 15 women, they found that survival was viewed as a positive turning point, characterized by patients’ initial opening of their eyes following surgery, seeing their family, eating for the first time, and being transferred out of the ICU. In a grounded
theory study of 13 women, Fleury et al. report that the phenomenon of healing involved knowing they had survived, and was characterized by a striving for personal integrity in the midst of chaos. Furthermore, strong issues of temporality were recognized in which patients’ existence was viewed from within a new perspective of time. Patients had a new appreciation of life; they understood the impermanence of life and the uncertainty of their future.

Dying is usually so far from most peoples’ imaginations within their everyday lives. Talk of mortality is not a component of peoples’ daily life stories. Many people even resist thinking about mortality because it is disturbing, but it is also inevitable. Facing one’s mortality is not an everyday occurrence and doing so has the propensity to bring forth psychological issues.

**Psychological Dimensions**

Technological dimensions manifest in the environments of heart surgery and the expected pathways of recovery. As noted by a number of studies, these dimensions can lead to stress. Patients’ postoperative recovery is initiated in the technological environment of the CVICU under the constant one-on-one care of a registered nurse and a multi-professional cardiovascular team. A number of studies report that patients experience a high level of stress and fear in the ICU, because of the unfamiliar environment and processes (Gardner, Elliot, Gill, Griffin, & Crawford, 2005; Schelling et al., 2003). Pennock, et al. (1994) found that 21% of patients could not recall their time in the ICU, while many others could. The after-effects of anesthesia and many of the medications in use can block memory. However, patients may subconsciously or consciously attempt to block memories as a coping strategy. In a descriptive qualitative study of 12 men and women, Hunt (1999) reported that many patients were able to remember experiences in the ICU. Memories of the time in the ICU can be a combination of real (and horrifying) memories, imagination, and co-constructed memory to which family/friends and health care professionals contribute. Another critical study reported high levels of stress in spouses when their partner did not meet the expectations of clinical pathways (Micik & Borbasi, 2002). It is
important for future research to examine how patients make sense of the expectations of clinical pathways and the ways that their story unfolds when recovery follows accordingly and when it deviates from the expected course.

Psychological issues are an important dimension of recovery in heart surgery. In Shih’s (1997) grounded theory study of 35 people, psychological issues were found to be a common occurrence following surgery. Hunt (1999), who explored patients’ experiences in the ICU following CABG, found that over half of participants reported unexpected psychological disturbances. Although participants in some studies felt optimistic and excited following heart surgery (Goodman, 1997; Lukkarinen, 1999; Moore, 1994), others expressed depression, anxiety, irritability, mood swings, and anger (Goodman, 1997; Moore, 1994). Shih reported that psychological changes, including nervousness, stress, and vulnerability, were a result of the physical environment. Hunt reported that postoperatively patients felt a sense of vulnerability related to the busy unit, delays in care, and difficulty communicating. Object technology appeared as a factor in patients’ apprehension and vulnerability; however, nurses’ vigilance and the personalized care helped to alleviate these feelings among patients. In a qualitative descriptive phase of a larger study (n=89), Doering, McGuidre, and Rourke (2002) reported that patients were most concerned about not being cared for after cardiac surgery; their concerns were related to unmet needs, such as pain and sleep. The significance of nurses’ presence and vigilant care, suggests the technological may be an important aspect of the psychological dimensions of heart surgery, broadening the understanding of how patients experience the technological. The nurse’s actions may mediate patients’ experience of the technological and be critical to a positive and moral surgical event and recovery.

Feelings of abnormality among patients were prevalent in the cardiovascular literature, and this leads to questions about the involvement of the technological. Shih (1997) reported that patients felt an overall sense of abnormality; they perceived a negative impact on their sense of
self in all its dimensions (including, the cognitive, spiritual, and social self). Patients described feeling only partially recovered during the hospital stay and reported a sense of insecurity. King and Jensen (1994) suggested that patients focused on normalizing the perceived changes that were occurring. Keller (1991) found that patients’ behaviors following heart surgery were aimed at “seeking normalcy” (p. 173). Furthermore, Shih et al. (1997) found that perceived normalcy was identified as a positive outcome.

There are reports that some patients indicated feeling depersonalized and alienated during the hospital stay (Doering et al., 2002; Hawthorne, 1990; Lukkarinen, 1999). According to Doering, et al. depersonalization was related to the patient feeling not cared for as a person. The busy and impersonal environment of the hospital left patients feeling like objects. One patient stated “I was a commodity—an object on a factory assembly line” (Doering et al., 2002, p. 336). Hawthorne (1990) found that patients described fears related to similar feelings. Hawthorne suggests that feelings of depersonalization and dehumanization were a result of the mechanized and commercialized world we live in, which includes the culture of heart surgery itself. One patient described the heart surgery procedure and experience as follows,

it’s sort of posthumously, in these places that are doing these procedures, the person behind the mask doesn’t even have to be seen, you see. That’s the kind of thing that gives me that feeling that it is a mass-produced kind of thing … I’m very concerned that everything has become so mechanized and so depersonalized (Hawthorne, 1990, p. 183).

Demoralization constituted by feelings of depersonalization and dehumanization amidst the technological of heart surgery deserves greater attention.

A common occurrence in the postoperative period were problems associated with confusion (Chessick, 1995; Heijmeriks, Dassen, Prenger, & Wellens, 2000; Laitinen, 1996). In a phenomenological hermeneutic study of ten patients who were interviewed between 4 to 8 days post surgery, Laitinen found that patients remembered their confusion vividly and felt a loss of self-control. In a prospective observational study of 600 patients who were undergoing heart
surgery, the incidence of mental confusion in the elderly was significantly higher than in a younger cohort of patients (Heijmeriks, et al., 2000). Although mental confusion was not an independent predictor of mortality, those with mental confusion had a higher rate of mortality.

In some studies it was evident that the technological of heart surgery was at the forefront of patients’ experiences of confusion (e.g., Camp, 1996; Laitinen, 1996). In Camp’s grounded theory study of 17 people who underwent CABG, nurses’ work, processes, and behaviors were reported to have created patients’ confusion. For example, for one participant, the common practice of a nurse bending at the end of the bed to empty a catheter bag was confused with the presence of a dog. These researchers also reported that the fast paced environment of the ICU including the noises, talking, and constant activity added to patients’ confusion (Camp, 1996; Laitinen, 1996). Confusion as it relates to the technological can be a result of the physiological impact of the surgery itself, including, the effects from the pump time, anesthesia, and various drugs. As well, confusion may emerge from patients’ experiences of the technological as it relates to object technology, the foreign environments they are embedded in, and the necessary technologized social organization of activity that occurs in the heart surgery realm.

Depression and anxiety were identified as two major psychological conditions that occur in recovery from heart surgery (Goodman, 1997; King & Parrinello, 1988; Laitinen, 1996; Moore, 1994; Plach & Heidrich, 2002); these conditions may influence patients’ physiological recovery and the quality of life (QOL) they experience. It has been suggested that depression, based on behavioral and pathophysiological pathways, may be linked to the development of coronary artery disease (CAD), and increasing negative outcomes for people with existing CAD (Lesperance & Frasure-Smith, 2003; Zellwegera, Osterwaldera, Langewitzb, & Pfisterer, 2004).

Depression was reported by many patients in the postoperative phase of heart surgery (Goodman, 1997; Oxman & Hull, 1997). In a cross-sectional descriptive survey of 157 women who had undergone heart surgery, Plach and Heidrick (2002) found that 36% of participants
were clinically depressed. However, in a prospective self-report survey of 53 men and women, Rymaszewska, Kierjna and Hadrys (2003) found that depression levels did not vary from preoperative measures to postoperative measures. In a structured interview study of 34 men and women, King and Parrinello (1988) reported that mood changes, including feeling down, depressed and anxious, decreased over the weeks following surgery. Furthermore, in a prospective questionnaire in which 80 subjects completed all measures, Vingerhoets (1998) found that postoperative depression is related more to somatic complaints. There are reports of high anxiety levels following heart surgery (Laitinen, 1996; Plach & Heidrich, 2002). However, it is also reported that anxiety levels diminish over a couple of days (Rymaszewska, Kierjna & Hadrys, 2003; Vingerhoets, 1998). Evidence concerning incidence of depression and anxiety are variegated; I suspect this is due to the idiosyncratic nature of human experience, and pathophysiological pathways and variables not yet accounted for.

An increasing focus on women’s experiences of heart surgery is evident in the research in the past decade, including a focus on psychological issues. Plach and Stevens (2001) found that many women looked to the future positively, while others experienced depression, fear, and frustration. Using a self-report scale, Plach and Heidrich (2002) examined the relationship between social role quality and psychological well-being. They found that women who possessed higher social role quality (e.g., more role balance and less role discrepancy) reported better psychological health outcomes. In a survey study by Ben-Zur, Rappaport, Ammar and Uretzky (2000), higher anxiety levels were reported in women than in men. Similarly, in a group with low levels of social support, women fared worse than men in terms of depression, anxiety, and hopelessness (Okkonen & Vanhanen, 2006). In a grounded theory study of 17 women, Murray, O’Farrell, and Huston (2000) found that younger women, as compared to older women, were more focused on anger and emotional issues, and had more difficulty coping. However, Hawthorne (1993) suggested that psychological issues might be less disruptive for women, as
compared to men. The emerging contradictions concerning mens’ and womens’ experiences could be a result of the paucity of comparative analyses in this area.

**Spirituality**

Spirituality emerged as a minor theme in the literature, yet it deserves attention because of its close relationship to sense of self and moral issues. Conceptualizations of spirituality are contingent on patients’ own meanings (Pesut, 2008). Although spirituality is a nebulous concept, it can be understood as an experiential attribute of feeling understood, connecting with others and achieving a sense of meaning (Carr, 2008). Raholm (2002) and Camp (1996) suggest that spiritual issues can become important when people encounter life-threatening events, such as heart surgery. Both of these studies focused specifically on understanding spirituality in patients’ recovery from CABG. Camp, and Raholm, found that faith (e.g., faith in self, in God and in communication) was an important aspect of spirituality. Faith in the technological was implicitly present in Camp’s analytic interpretations. Camp found that patients focused their faith on nurses and their behaviors and routines that supported individuals’ recovery from heart surgery.

Optimism is related to a person’s faith. A number of studies have examined patient optimism and heart surgery (Contrada & Krause, 2004; Rafalson, 2005; Scheier et al., 1989). In a survey study of 58 patients undergoing CABG, dispositional optimism was examined using the Life Orientation Test, which assesses a person’s outcome expectancies (Scheier et al., 1989). Scheier, et al. found that optimists had a higher QOL at 6 months postoperative than pessimists, and that optimists physically recovered more quickly than pessimists. On the other hand, in a prospective survey study using a convenience sample of 142 patients, Contrada and Krause found that dispositional optimism was unrelated to heart surgery outcomes, such as length of hospital stay and postoperative complications. Rafalson conducted a survey study examining the association between optimism/pessimism and adjustment and recovery from heart surgery. Although an optimistic attitude did not demonstrate a significant relationship with heart surgery
outcomes, Rafalson suggests that further work is required to examine the dimensions of optimism. The technological and the resultant moral dimensions were not the focus of these studies, but they do lead to questions concerning the mediating impact of these dimensions.

It is important to acknowledge that spirituality is multi-dimensional and does not necessarily have religious meaning (Camp, 1996; Raholm, 2002). Only one of the reviewed studies examined the impact of religious involvement on the outcomes of heart surgery (Contrada & Krause, 2004). In this prospective survey study, Contrada and Krause found that those with stronger religious beliefs had better outcomes (e.g., fewer complications and shorter length of hospital stay). In a hermeneutic survey study of 564 patients recovering from CABG, Raholm found that spirituality involved an inner strength and finding meaning, two concepts that are also specifically addressed by Rosenfeld and Gilkenson (2000), and Dingley, Bush and Roux (2001). Rosenfeld and Gilkenson conducted a grounded theory interview study of six women, focusing on the meaning of illness for those undergoing CABG. They suggest that the basic process to finding meaning involves seeking understanding. Seeking understanding involves patients’ reflection on the significance of the surgical experience that was often characterized as life-threatening and life-altering. In a grounded theory study, Dingley, Bush, and Roux’s explored inner strength in eight women, in which spirituality played an important role. They described the importance of inner strength in learning to live postoperatively with a new normal. The idea of a new normal (Dingley, Bush & Roux, 2001; King & Jensen, 1994) can affect all dimensions of patients’ lives, such as activities, social roles, and relationships.

**ADL, Roles, and Relationships**

Returning to everyday life following heart surgery involves a reconfiguration of daily activities, social roles and relationships, and lifestyle changes emerge. Moral work concerning how to live following illness is embedded in peoples’ everyday life (Frank, 1998). The recovery phase has been found to involve an alteration of one’s ADLs (Goodman, 1997; King & Jensen,
Womens’ and mens’ capacities, including the physical ability to tolerate common activities, were significantly altered during recovery, resulting in a loss of previous lifestyle (Plach and Stevens, 2001; Theobald & McMurray, 2004). In a descriptive qualitative study of ten men and women, Goodman reported that patients perceived that activities, such as bathing and dressing were initially limited. These activities were limited because they exerted too much pressure on the sternal wound, causing discomfort. King and Parrinello (1988) found that within two weeks post-CABG, most people had resumed personal care activities, but still reported less social activities. By six weeks after surgery most people had resumed all usual activities.

New lifestyle changes are a significant component of recovery. In a phenomenological phase of a larger longitudinal study, Lukkarinen (1999) interviewed 20 participants following cardiac intervention, such as CABG. Lukkarinen found that two groups of people emerged after cardiac intervention; one group was accepting and progressive of their lifestyle, taking an active role in changes, and the second group was non-accepting and regressive, having difficulty accepting their new lifestyle. In another phenomenological study of 12 women, Robinson (2002) found that older women focused on the routines of their everyday lives as a way of circumventing the issue of mortality. Womens’ abilities to complete normal everyday activities contributed to their sense of well-being (Plach & Stevens, 2001). Also, women described feeling positive about their lifestyle changes, but acknowledged difficulties in making the appropriate changes (Plach & Stevens, 2001). Robinson found that older women’s experiences of recovery focused on re-engaging their abilities to live alone and re-gaining their independence.

Recovery from heart surgery was reported to involve an alteration of one’s dependence/independence in life (King & Jensen, 1994; Lukkarinen, 1999; Moore, 1994; Robinson, 2002; Trumbull, 1993). Issues of being dependent were a concern for both women and men (King & Jensen, 1994; Trumbull, 1993). However, Moore found that men were more concerned about
being dependent on their spouses and families than women. Trumbull examined the importance of moral and physical support of family and friends, and found that although patients valued and were thankful for their help, some reported resentment because they felt dependent upon them. Lukkarinen found that some people were appreciative and used family as a support, while others felt isolated and were fearful of being dependent. In a qualitative descriptive study of 30 individuals following CABG, Theobald and McMurray (2004) found that families were critical to the recovery process, but some patients were concerned about being a burden on their families. Hawthorne (1993) found that women were happy to receive intergenerational help, but also felt a sense of loss in not being able to take care of themselves.

The gendered practices of women’s daily lives following heart surgery has been given recent attention. Recovery from heart surgery is reported to involve a reworking of one’s ADLs, social roles, and relationships for both men and women (Lukkarinen, 1999; Plach & Stevens, 2001; Theobald & McMurray, 2004). However, qualitative explorations of these gendered practices have focused, more recently, on women. There is evidence that women’s lives are embedded in an otherness orientation in which they are typically the family caregiver and homemaker (Angus, 2001; Hawthorne, 1990, 1993; King & Jensen, 1994). As a result, women’s recovery and healing is severely complicated and affected by previous and expected roles. Hawthorne (1993) found that the otherness orientation creates a disruption when a woman becomes ill and must recover. King and Jensen reported that for women, preserving sense of self after cardiac surgery involved a struggle with their new role as a patient; this new role mediated role-related behaviors associated with domestic work and interpersonal relationships. Angus conducted an institutional ethnography of women’s experiences of returning home to recover. She found that some women experienced conflict between their own health-related needs and their social locations as homemakers and caregivers. Her work indicates that gender is contingent because this conflict was experienced differently depending on women’s life circumstances.
Plach and Stevens suggest that heart surgery has a paradoxical impact on women’s roles and relationships; women in their study valued the support of family, but also struggled to maintain roles and relationships. Plach and Heidrich’s (2002) cross-sectional, descriptive study revealed that women had difficulty completing activities of daily living, and that women who had a higher role quality were better off in relation to their psychological health. The literature reinforces ideas concerning recovery as a gendered experience with particular attention to the ways that women’s social lives interface with the healing and recovery process (Lapum, 2005).

**QOL and Functionality**

QOL and functionality are a common focus in the literature concerning recovery from heart surgery. The common everyday activities and how well people function in their daily lives are key components of the QOL people experience. The *QOL Research Unit* (n.d.) at the University of Toronto defines QOL as “the degree to which a person enjoys the important possibilities of his or her life.” Blumenthal and Mark (1994) suggest that QOL is an important aspect of recovery from heart surgery of which health and well-being are two important dimensions. A person’s physical and psychological functionality are components of QOL.

Research has shown that following heart surgery, patients’ QOL significantly improves in most dimensions (Elliot, Lazarus, & Leeder, 2006; Falcoz et al., 2003; King, Porter, Norsen, & Reis, 1992; Schelling et al., 2003). Schelling, et al. found that improvements in the physical functioning dimension of QOL were most pronounced compared to mental components. Although improvements in physical functioning were reported at six months postoperative, mental component scores were significantly lower at the time (Elliot et al., 2006). It has also been reported that in comparison to a healthy population, individuals at six months postoperative report deficits in QOL specific to their physical functionality (LaPier, 2007).

Improvements in QOL were not as evident in certain sub-groups of the patient population. Individuals who experienced a high level of stress during their hospital stay, and
elderly patients who experienced postoperative mental confusion reported diminished QOL (Heijmeriks, et al., 2000; Schelling, et al., 2003). Mental confusion associated with surgical risks (e.g., bypass time, aortic, cross clamp time) was clearly related to diminished QOL six months postoperatively (Heijmeriks et al., 2000). However, in a small survey study of 39 men and women, Sjogren and Thulin (2004) compared QOL in a group of elderly patients to a younger cohort of patients undergoing heart surgery; they generally found no significant differences. At the same time, they did report that elderly patients had lower physical functioning postoperatively compared to a younger cohort. Schelling, et al. suggested that psychological factors (e.g., anxiety, fear, and stress exposure in the CVICU) contribute to health-related QOL. Further exploration is required regarding how the technological mediates stress and confusion, and how age and gender might shape these conditions.

The empirical literature demonstrates that functionality is an important component of QOL and, as such recovery from heart surgery. Moore (1994) reported that upon discharge, patients were concerned about their ability to do things for themselves. Men were more concerned than women about being dependent on their spouses (Moore, 1994). Ben-Zur, et al. (2000), Falcoz, et al. (2003), and Murray, O’Farrell, and Huston (2000) focused on the physical dimension of functionality. Murray, O’Farrell, and Huston found that older women recovering from a cardiac event focused on returning to their previous level of functioning, and demonstrated resiliency during their recovery phase. In a sample of men and women undergoing CABG, Ben-Zur, et al. found an improvement in functional capacity postoperatively. In a survey study of 264 men and women, Falcoz, et al. examined cardiac functional status according to reported angina and dyspnea levels. They found that 64% of the patients reported a satisfactory level at one-year postoperative, and 36% reported an unsatisfactory status. Adrian, Crankshaw, Tiller, and Stanley (1988) explored neuropsychological/cognitive dimensions of functionality and linked them to QOL for patients following heart surgery. At postoperative day four, all
patients exhibited a decreased level of concentration, attention and psychomotor functioning, and psychomotor slowing persisted (Adrian et al., 1988).

Researchers found that distress and emotional/social issues were related to functionality. Studies show that functionality was highest when distress and emotional problems were low (Ben-Zur et al., 2000; Zyzanski, Stanton, Jenkins & Klein, 1981). In a study that investigated individuals 5 to 6 years post CABG, reports of QOL were high with improved functional outcomes (Treat-Jacobson & Lindquist, 2007). In a survey study of 165 men and women, researchers employed objective and subjective measures of QOL (King et al., 1992). They found that those who did not find the surgery worthwhile, rated their QOL lower. While those who rated their QOL higher found the surgery to be worthwhile based on functional improvement and the perception of their having been saved.

A Poetic Synthesis of Patients’ Experiences of the Technological

In this section I (re)-present the results of this literature review in a poetic format. Poetic forms have been employed by researchers, more commonly as a method to represent data/findings (e.g., Baff, 1997; Carr, 2003; Glesne, 1997; Poindexter, 2002; Richardson, 1992). However, poetry can also be an effective method to represent findings from a literature review (Lapum, 2005; Lapum & Leung, 2005). This form imbues the empirical literature with an aesthetic and personal way of knowing. Because poetry is evocative and can provide a strong, emotive response, it has the potential to draw readers in and compel them to think (Lapum, 2006; Leung & Lapum, 2005). However, artistic forms of writing can be difficult to understand. In light of that, a critical point of writing is to ensure that the audience takes the main message away (Sandelowski, 1998). It is suggested that poet-researchers should consider providing an explanation of their purpose to contextualize the work (Piercy & Benson, 2005). For these reasons, I clearly lay out the main points that should be attended to when reading the poetry
below. But, I also provide the caveat that there are multiple experiences and multiple voices represented in the poetry.

I crafted three poems with the intention of representing the knowledge gained from this review of the literature in a style that accesses a different way of knowing and provides a rich understanding of peoples’ experiences. My intent is to show how the technological is woven into patients’ experiential accounts as an invasive process in which personal agency is disrupted and self-identity shifts. Even after people go home from surgery, there is the implication that the technological footprint is more than a physical marking of the body. Encountering the technological shifts identities by prompting individuals to rework ways of living and constantly engage in a surveillance of self. This poetry is a compilation of: the various participants’ experiences from the research reviewed; researchers’ analytical and thematic understandings in the respective studies; and the addition of my own voice. The interpretive nature of research (Denzin & Lincoln, 2000) suggests a simultaneous acknowledgement of my own voice, the researchers’ voices, and the participants’ voices. Although my voice and researchers’ voices may be considered biased as previously discussed, they merely reflect our own understandings and experiences. Furthermore, our voices (and your voice as the reader) are a part of the dialogical process of knowledge.

(Open) – heart Surgery

A chest cracked.
A heart exposed.
My – open – heart

a technological invasion
dependent beyond conceptualization
a deliberate sleep a heart beat suppressed
a diplomatic re-routing of life
my technologized body on the surgical table
in the doctor’s hands
out of my control
like a target practice
an ablation of self
the mechanical experience takes over.
Open – heart

Open – body
the site of surgical intervention
accessing my gender
cutting in
cutting down
to the concealed viscera
to the heart
the muscular organ that is failing me
challenging my mortality
on the edge
life –
dead
no longer indestructible
tampering with my sense of self
marking me
in ways beyond the corporeality of my body
my existence

Open – heart.
Cemented shut.

♥

Awakening

Eyes unsealing
consciousness revealing
sensing the time of non-being
non-consciousness as a body laid bare on the surgical table
intentionality clamped off
agency in a temporal suspension
a heart rebuilt
survived normalized normalizing
preserving self
open – heart.

Ever vigilance of the nurse,
presence
a calming experience
security amongst a host of disturbing un-feelings
unwanted
confusion drawing near
constant noises, humming, activity, talking
all wired up
tied down
closing in on me
confusion looms heavily
depersonalized
dehumanized
abnormalized
partially there.

A spiritual pull or something else or nothing else
something to eat – a corner I’ve turned
faith
family
finding meaning
strength
moving out of the ICU
a perception of feeling better – getting better
healing
sometimes
most times
integrity rewoven

♥

The Everydayness

Letting the everydayness of life
overcome my thoughts of mortality
feeling useless
moving on some days
moving backwards other days
the double edged sword of dependence

the otherness of my womanhood                                                                 my manhood
taking precedence                                                                                                                     impressed upon my chest
helping others                                                                                                                   sliced open
when my body is telling me                                                                 fear of dying
to take time for myself                                                                 recovering
can’t escape                                                                                                                      my wife letting me focus
the immediacies of home                                                                 dependent on someone else
of my womanness                                                                                                                      when I am supposed to be the rock

healing somewhere in between
healing in the everydayness of life.

A compound of optimism, depression, anxiety, irritability, excitement
alive
moving on
walking
washing
doing what I can    doing what I have to    doing what I’m able
moving into the role I once occupied
restoring my presurgical ways
within my postsurgical self.
A dramatic shift,  
strength – vitality  
fragile – vulnerability  
a technological recasting of self  
I guess I’m fine,  
for now.

My womanly body invaded mutilated repulsing 
time ticks on, acceptance surfaces 
a remnant of my history impressed upon my body

My manly scar a vicious scar empowering 
proof, adversity overcome

Warded off a breath-(less) lung  
a beat-(less) heart  
death  
ever so—mindful of my body, listening to the sounds, 
the faint beat of my heart

Discussion

Two critical points emerged from this literature review. First, one may assume that the technological is so commonplace in heart surgery that patients’ experiences of it are overlooked as a focal topic of investigation. This leads to the second critical point. Although the technological was not an explicit focus of the reviewed research, it did emerge implicitly in a number of investigations that examined patients’ experiences of heart surgery more broadly.

The complex dimensions of the technological were implicitly present in the research. Prominent in these studies was first a focus on object technology such as the machines, the endotracheal tube, medications, oxygen, and intravenous (Bartz, 1988; Gardner et al., 2005; Grap, Blecha, & Munro, 2002; Pennock et al., 1994; Radley, 1996; Shih et al., 1997; Trumbull, 1993). However, this review of the literature also found that beyond object technology, the technological was present in patients’ narratives and in researchers’ analytic summaries.

Evidence of the technological was documented as an important part of patients’ experiences in
terms of ICU environments and postoperative recovery including the routines of care, certain medical regimens, and clinical pathways or expected trajectories of recovery (Camp, 1996; Doering et al., 2002; Dunckley, Ellard, Quinn, & Barlow, 2007; Gardner et al., 2005; Hunt, 1999; Micik & Borbasi, 2002; Radley, 1996; Schelling et al., 2003; Shih et al., 1997; Tolmie et al., 2006; Trumbull, 1993).

Woven into the technological are issues of mortality, which are critical to consider because of identity and moral concerns. Heart surgery provides the possibility for a literal extension of one’s life and release from the temporary suspension of life-death (Lindsay et al., 2000). Radley (1996) found that patients experience a time of non-being on the surgical table that is beyond their consciousness. Hawthorne (1990) described this as a loss of self that occurs during the actual surgery. For some patients this temporary suspension of self continues into ICU phase. Dimensions of the technological became a focus of knowing whether one was going to live or die (Chessick, 1995). Patients described sensing the technological surroundings as a feeling of being closed in, but not frightened (Bartz, 1988). They also attached a decreasing amount of object technology with signs of improvement (Bartz, 1988). Radley indicated that the object technology of heart surgery and the ICU can become quite meaningful for patients.

Existing evidence leads us to question the ways that the technological mediates a shift in a patient’s identity, and the moral issues that surface. Hawthorne (1990) found that patients’ sense of self was altered. Patients’ narratives indicated that sense of self was altered by heart surgery on multiple levels; this involved a search for and acceptance of a new self (Fleury et al., 1995; Lukkarinen, 1999; Shih, 1997). In some studies patients felt they would never be the same, and that they would not revert to the person they were before heart surgery (Dingley et al., 2001; King & Jensen, 1994). This perception is supported by the idea that patients felt that heart surgery had marked them (Radley, 1996; Robinson, 2002).
Heart surgery was not only a wake up call, but many saw themselves differently thereafter (Theobald & McMurray, 2004). King and Jensen (1994) suggested that heart surgery “affected the very fiber of the women in this study: their sense of self” (p. 100). In another study, one patient specifically stated “I feel my whole self has changed” (Lukkarinen, 1999, p. 707). Robinson (2002) suggests that patients felt an obligation to move on, but vulnerability shaped their present and the way they lived. In this sense, a new normal emerged to accommodate their new way of living, thinking, and being, and demanded they reconfigure their lives.

Moral issues manifest concerning the technological in terms of how individuals think about their bodies and identities. The boundaries between technology and the human body are increasingly blurred, and a clearly defined self is challenged (Sandelowski, 2002). Heart surgery involves technologically-invasive procedures that alter a person’s corporeal existence. The experience of trauma (e.g., heart surgery) can become part of a person’s identity (Weinreich, 2003). Peoples’ identities are potentially recast as they attempt to make sense of the experience of heart surgery and its place in their life. Bury (1982) posits that illness tends to prompt a restructuring of sense of self. It is through storytelling that peoples’ identity is fashioned, constructed, and reconstructed (Bury, 2001; Polkinghorne, 1988; Williams, 1984). People attempt to reconfigure the altered relationship between self, body, and living. Through stories they attempt to construct a moral end of how to live (Frank, 2002, 2004). Identity issues must be forefront in explorations of patients’ experiences of the technological in heart surgery.

Numerous authors have theorized how environments become part of the body (e.g., Casey, 2001; Moss & Dyck, 1996), particularly environments that are technologically grounded, and technology that literally becomes part of one’s body permanently or temporarily. Still, technology associated with the critically ill and the ICU remains understudied (Cook & Sibbald, 1999; Menon, 2000). Research tends to focus on biophysical aspects of a given technology, while the socio-ethical aspects of such technologies are neglected, or at the very least, not a
primary focus (van der Wilt, Reuzel & Banta, 2000). The ways that technological environments, such as open-heart surgery, impact patients’ experiences are not known. Rier (2000) states, “the voice of the critically ill is virtually absent from the contemporary literature” (p. 68). The gap in the literature demands that we explore peoples' experiences within health care environments that are technologically grounded (Pearson, 1993; Sandelowski, 1993; Walters, 1995). This includes an exploration of the ethical concerns of such rapid technical advances (Benner, 2003).

Summary

To summarize, I return to the purpose of this literature review. The purpose was to explore current constructions of and knowledge about patients’ experiences of the technological in heart surgery. The place of the technological in the narrative reconstructions of self in people who undergo heart surgery has not been fully or explicitly explored. This review indicates that people attempt to adjust their way of living and contemplate moral ways of how to live following a surgery that literally changes sense of self. It was evident in this review that mens’ and womens’ experiential accounts of heart surgery are differently articulated in terms of threats to identity and situated practices in the recovery process. As such, this review indicates that the way gender contours patients’ narratives of the technological deserves attention. Although some empirical research in heart surgery provides evidence of identity disruptions, this was not specifically examined in relation to the technological. In a similar vein, moral concerns were not an explicit focus of existing research, but they were nevertheless present in patients’ narratives. This absence may be a result of the neglect of pragmatic ethical discourse, and the difficulty individuals experience in detailing moral situations (Storch, 2004). It is posited that stories may be one way to better understand the moral issues that people enact (Nisker, 2004).

The results of this review indicate that patients’ experiential accounts of the technological in heart surgery are a noteworthy phenomenon that deserves further exploration. The existing empirical research did not explicitly explore the technological in heart surgery. However,
dimensions of the technological emerged implicitly in participants’ narratives and researchers’ analytic summaries. As well, this review demonstrated that Barnard’s (1996; 1997; 1999) characterological definition of technology is relevant to this study. Although object technology was most often evident in the research, dimensions of the technological in terms of logics, processes, routines, and pathways of recovery emerged as significant. Given the presence of the technological in heart surgery, further developments in the ways that patients make sense of the routines of care, the environments, and the expected trajectories of recovery are needed. Researchers need to explore the ways that patients’ stories unfold when recovery follows clinical pathways accordingly and when it deviates from the expected course. Because the technological emerged somewhat implicitly, the implementation of a narrative inquiry is beneficial, as stories are a way to access the tacit and implicit understandings that are sometimes hidden within patients’ accounts.

In the following chapter, I provide an overview of the theoretical and philosophical foundations that frame this doctoral inquiry.
My vice laid bare—an identity fleshed out.
Methodologies are traceable to philosophical and theoretical origins that in turn frame research. Researchers approach their work from a paradigm that encompasses an explicit or implicit theoretical framework and a set of assumptions about social reality and how it can be understood (Kuhn, 1970; Morse, Barrett, Mayan, Olson, & Spiers, 2002). Two facets of the philosophical underpinnings of a study are ontology and epistemology. Ontology is defined as the nature of reality and is concerned with what actually exists (Denzin & Lincoln, 2000; Wainwright, 1997). Epistemology is characterized by the nature and scope of knowledge (Denzin & Lincoln, 2000; Proctor, 1998; Rawnsley, 1998). Epistemology refers to how we come to know what actually exists (Wainwright, 1997). Ontological and epistemological assumptions presuppose all intellectual endeavours and frame research (Caelli, Ray, & Mill, 2003; Harre, 2000). Theoretical and philosophical foundations are paramount to the rigorous conduct of research, because findings are always constituted in part from and should be assessed with regards to a framework (Silverman, 2000). Recognition of the assumptions of a study preface what researchers accept as knowledge. As well, theoretical foundations provide a lens through which researchers view phenomena and engage with analyses. In this chapter, I discuss the theoretical and philosophical foundations of this narrative inquiry.

Prelude to the Theoretical and Philosophical Foundations

Ideas concerning complexity are salient to the foundations of this study. Phenomena can be complex, messy, and textured, the reality of which is elusive and vague (Law, 2003, 2004). Post-positivist assumptions are present in my thinking, by way of habit and comfort. There are parts of me that continue to be drawn to an objective reality, the Truth, and a sense of unquestionable understanding of whatever I study. These are the appealing qualities of methods that are aimed at generalization and universal criteria to base practice (Allen, 1995; Pinnegar & Daynes, 2007). As well, there are indeed concrete dimensions associated with health science phenomena, such as those manifest in the operative procedures, the act of opening the chest and
the resultant incision. However, when examining phenomena associated with human experience, conceptions of reality and peoples’ ways of being are not as objective nor absolute. I made the decision to let complexity breathe…

If I could encounter a pathway beyond a doubt rendering ambiguity irrelevant

If I could encounter a pathway that is palpable irrefutable indisputable quite suitable to the immutable—

I might

Irreverently captured by imperialism—

logics that spiral sometimes from what can be, an unbalanced axis ontological deprivation entangled in stability repeatability the predictabilities a castles’ permeability revealed in its fallibility

life teased apart

realizing I’m only a stone’s throw from veracity but the space from here to there is far from systematically calculable covered with kaleidoscopic cobblestones clogged with so many unknowns

dis-comfort in complexities

discomfort fervently disturbing the often invisible visibilities only unveiled in the intricacies and broken probabilities

my vice laid bare—an identity fleshed out

I purposefully forget—

how to untangle the textured mess letting the elusive rest
finding meaning in what might seem to be, 
a wreckage
at first glance
nonetheless

(Lapum, 2008)

In my research, I loosen my grip on bio-medical and objective modes of knowing. Engaging the complexities of phenomena can be disturbing (Law, 2003, 2004). Illness stories are often complex and non-linear. Narrative inquiry allows for complexity to breathe without giving way to a disappearance of understanding.

Narrative inquiry crosses disciplines and traditions and is not exclusively affiliated with a specific sociological school of thought (Riessman, 2002; Williams, 1984). Narrative as a research methodology edged into the health sciences as the boundaries between the scientific and literary genres became less stringent (Patton, 2002b; Sparkes, 2002). The boundaries of narrative are blurred and continue to evolve, and it remains difficult to situate in a unified way. I decided not to situate this narrative inquiry exclusively in any one of the common paradigmatic constructions of knowledge presented by Lincoln and Guba (2000).

Philosophical Foundations

Ontological Assumptions

In this study I begin with an ontology of experience (Clandinin & Rosiek, 2007). An ontology of experience is relational and continuous (Clandinin & Rosiek, 2007). Peoples’ experiential accounts are often studied as expressed in stories (Pinnegar & Daynes, 2007). The most basic and essential human reality is that of experience (Clandinin & Rosiek, 2007). However, it is important to note that experiences are always constituted in and shaped by social and institutional narratives (Clandinin & Rosiek, 2007).

The term experience is problematic because it is nebulous. It is contested in research because it has become a catchall term that has led to obscurity. Experiences are not mere occurrences or events that happen to people. These are indeed just that—events or occurrences.
Critical to this dissertation is an understanding that experience is linguistic (Allen & Cloyes, 2005; Scott, 1992) and conceptualized as a way of talking (Allen & Cloyes, 2005). Peoples’ experiences do not exist in a vacuum to be studied and examined. A basic assumption of this research is that experience involves a personally encountered and perceived occurrence, situation, or event. For example, just because technological objects exist, or processes/routines of care occur around a patient does not mean that patients experience them. To experience the technological in heart surgery, an individual must encounter or perceive—be it in a cognitive, physical, verbal, actual, or imaginative manner.

However, experience is not the end claim of research (Allen & Cloyes, 2005; Scott, 1992). The claims made in this study are regarding the ways in which people talk about their experiences, and how their stories unfold. Allen and Cloyes (2005) state:

Experiential accounts are narratives, if we are clear that we are studying how they talk, then we can treat these accounts more rigorously by asking more questions, not just about what they said, but why they said it that way (p. 103).

As such, research claims are not just a summary of what participants say, but a linguistic and historical examination of how a story unfolds and why it unfolds in a certain way.

**Epistemological Assumptions**

The epistemological assumptions of this study are grounded in narrative. Narrative is an epistemological stance that is both a type of knowledge and a way of knowing (Clandinin & Connelly, 2004; Gramling, 2004; Witherell & Noddings, 1991). Narrative inquiry involves a commitment to a type of knowing that is different from objective knowing. Objective knowledge tends to be associated with scientific methods that logically deduce from theory, objectively measure, and then replicate methods. Although this type of scientific knowing remains the dominant discourse in health care research, narrative knowing as a way to understand peoples’ experiences is gaining value (Bruner, 1985). Knowledge claims that are anchored in ahistorical and non-contextual criteria are difficult to translate into peoples’ lives and nursing practice is
indeed socially located (Allen, 1995). Storytelling is a way for individuals to make sense of and bring meaning to complex experiences that are locally and historically situated. These meanings provide not only self-knowledge for the individual, but also a deeper understanding of the particular phenomenon for researchers and practitioners.

A narrative epistemology is nonfoundational in terms of being contextual, historical, and local. Phenomena are textured and experienced in many ways, because of the fluid nature of the worlds we live in, and the situated and often unpredictable dimensions of life (Law, 2004). There is a sense of the real and the definite in the particular of stories, but these narratives are also complex and reflect a plurality in terms of shifting identities (Law, 2004). Narratives cannot be generalized as templates (Nelson & McGillion, 2004). However, narrative inquiry provides explanations of the unfolding of certain processes and experiences in densely contextual ways. Although storytelling is relative to historical and local situatedness, the ways in which stories unfold can be juxtaposed against other stories, and generalized in terms of these processes.

Storytelling is a natural way to make sense of our lives (Carr, 1986; Polkinghorne, 1988; Taylor, 1989). It is a skill learned at a very young age. Telling stories is widespread and embedded in peoples’ lives (Polkinghorne, 1988), making the act habitual and effortless. Barthes (1982) argues that humans have never been without narrative and that it is present in all aspects of our lives. People are narrative beings for whom experience has a storied quality (Clandinin & Connelly, 1991). An aspect of cognitive functioning is that humans understand and know through storytelling and stories (Polkinghorne, 1988). Conle (2000b) states that human beings travel along the road of storytelling in their everyday lives and that they only need to give themselves permission to travel along the road of narrative intellectually.

Establishing a Footing: The Theoretical Foundations

The theoretical foundations of this narrative inquiry provide a nexus to pull together the complexities of patients’ stories. Narrative inquiry is often reputed for its atheoretical origins that
were particularly evident in the 1970s (Gotham & Staples, 1996; Sewell, 1992). Narrative researchers may be hesitant to commit to a theory at the outset of their inquiry due to fear that it will over-write the storytellers’ stories. However, the current approach of many scholars to narrative inquiry is theoretically-driven (Sewell, 1992). Theory sheds light on data and provides questions to advance researchers’ thinking (Gotham & Staples, 1996). For me, theory provided a footing to pull together what seemed like a messy story, without dissolving the narrative. The theoretical foundations of this study draw from: (1) a substantive focus on pre-scripted storytelling; and (2) narrative emplotment.

The Pre-scripted Story

In the health care field, technological elements give shape to dominant discourses that can constrain patients to tell a story that follows a particular pattern of progress and recovery (Kierans, 2005). Patients are put on a technological “train” that involves seeing practitioners, getting diagnoses, and receiving intervention (Kaufman, Shim, & Russ, 2004). This train not only inspires the common restitution narrative that Frank (1998; 2004) describes, but also reveals the ways in which storytelling is shaped by discourse.

The many layers of discourse in heart surgery are manifest in technological dimensions, such as clinical protocols, algorithms, standardized care maps, and expected pathways of recovery. For example, many health care settings have care maps that outline time sensitive procedures to be completed based on a patient’s condition (e.g., when a patient is expected to be extubated post surgery). Extubation (removal of the breathing tube) is accomplished by following evidence-based protocols. In addition, there are algorithms that provide flow charts to guide decision-making and patient care. For example, if a patient shows signs of bleeding or an arrhythmia, an algorithm would guide practitioners’ clinical decisions. Furthermore, there are expected pathways of recovery that map out expectations such as patient discharge on the 5th postoperative day and progressive return to normal activities and return to work within 2-3
months (Cheng & David, 1999). Nurses and other practitioners use these guidelines to track patients’ progress and ensure certain routines are followed. These discursive elements of the technological prompt patients to compose stories according to a particular script or plotline.

The complexities of storytelling can sometimes be at odds with how a scripted and linear narrative is purported by technological hegemony. Clinicians and the discursively-driven logics and practices of care inadvertently provide the raw materials or expectations for the ways that patients structure their stories (Kohn, 2000; Mattingly, 1994). For example, the intended outcome of heart surgery is laid out before patients enter the story. And yet, the course of illness, treatment and recovery is not always predictable and does not always result in closure (Nettleton, 2006). Experiences of illness and the compromised body often cannot fit a linear narrative structure (Kierans & Maynooth, 2001). When patients’ everyday experiences are incongruent with the technological discourses in heart surgery, narrative tension can ensue. Moral challenges may surface as the train, driven by a biomedical model of progress or cure, overrides the possibility of any other route (Kaufman et al., 2004). Those whose stories are non-linear or do not culminate in the scripted conclusion of restored health (or there is ambiguity concerning this end) may experience dissonance. The unfolding of these stories can reveal how individuals contest scripted endings and resist the medical regimens that claim and institutionalize them as patients (Kierans, 2005). Since stories can be complex and non-linear, it is important to understand how they are constructed by individuals and how they unfold. Looking at the construction of stories calls forth a discussion of narrative emplotment.

**Narrative Emplotment**

Narrative emplotment is the focal point of the theoretical foundations of this study. The structures and logics that underpin narrative are plot formation, which is the “thread of design and its active shaping force” (Brooks, 1984, p. 323). A *plot* is the circumstances that create the meaning and structure of a story by linking a series of disparate events and actions (Holloway &
Freshwater, 2007; Mattingly, 2007). Narrative emplotment is the active process in which the storyteller depicts how these events are related by developing a chain of causality (Holloway & Freshwater, 2007). It is a literary technique that links together events, characters, interactions, and outcomes into a meaningful totality, providing temporal unity of the story (Ricoeur, 1984, 1992, 1995). Narrative emplotment lends itself to analysis of the point of a story and how meaning is constructed in the act of storytelling (Brooks, 1984; Landsman, 2003; Somers, 1994).

Emplotment originated in literary theory (Mattingly, 1994). Frye (1957), a literary theorist and critic, established narrative emplotment outlining four basic plot lines (e.g. comedy, satire, tragedy, and romance). The notion of emplotment was developed in nuanced ways as it was imported into fields such as philosophy of history and phenomenology (Mattingly, 1994). Ricoeur (1984) developed the concept of emplotment further, claiming that plot lines are linked closely with temporality. Examining narrative emplotment is particularly useful as a way to identify the meaning and type of story told (White, 1975). Illness experiences are often complex and the act of storytelling and attention to narrative structures can facilitate the process of meaning-making (e.g. Crossley, 2003; Frank, 2002; Hyden, 1997; Kierans, 2005; Kierans & Maynooth, 2001; Kleinman, 1988; Kohn, 2000; Mathieson & Stam, 1995; Mattingly, 1994; Nochi, 2000; Thomas-MacLean, 2004).

The ways that stories are emplotted have significant temporal links (Good, Munakata, Kobayashi, Mattingly, & Good, 1994; Kierans, 2005; Ricoeur, 1984). Peoples’ life experiences unfold in ways that are situated and temporal. Emplotment is “the ‘grasping together’ of heterogeneous factors into a meaningful story that possesses shape (or figure) and a ‘sense of ending’” (Livesay, 1997, p. 27). It is posited that endings mediate meanings of stories (Good et al., 1994). However, the idea of an end is contentious with its restrictive influence on how narrators emplot a linear story of progress. Often stories are not linear and can be iterative and edited as they are retold (Holloway & Freshwater, 2007). Because of the temporal nature of
experience, emplotment takes on a shifting and fragile nature as stories are told and retold over
time (Mattingly, 1994). Narratives may be re-emplotted as storytellers continually retell stories
and reposition themselves (Hollingsworth & Dybdahl, 2007). Researchers must be adept to the
ways in which the emplotment of stories can unfold at various times.

Plot lines and narratives types are not used deductively in this study. The narrative
demplotment approach employed goes beyond Frye’s taxonomy of four plot lines. Frye’s plot
lines are narrow in breadth and defined as discrete. However, stories tend to be more complex
and resist singular classification. The temporal nature of storytelling and how a story unfolds,
often cross plot lines or narrative types. I draw upon Frank’s (1995) recommendation and
employ these plot lines and narrative types as a way to think with stories.

In order to examine how the narratives in this study are emplotted, I asked specific
questions of the text: What is happening? Who is involved? What are they doing? How do they
account for their place in this narrative? What are the outcomes of interactions and occurrences?
Why are they telling this story in this way? What is the technological part of the plot line? How
is the technological characterized? How does the emplotment fit in with pre-existing plot lines or
narrative types? How does it not? What is the interplay between storyteller/research participant
and the technological?

By employing narrative emplotment, I was able to explore the complex dimensions of the
technological, how it is characterized, and how it folds into participants’ stories. Phenomena
cannot necessarily be reduced to a definite and universal set of standards and practices (Law,
2003). Similar to other social and health science phenomena, the technological is complex and
manifests in a tangled weave of objects, people, logics, processes and routines, and pathways of
recovery. It is similar to a baby’s perception of the world as a “blooming buzzing confusion”
(James, 1890, p. 462) that Arthur Frank often refers to. People construct a sense of meaning,
pulling together dimensions of this confusion/complexity by telling stories. As nurses, we need
something to render patients’ experiences intelligible in order to inform our ways of knowing and practice. In this study, the technological was teased apart by examining the various patterns of emplotment in patients’ narratives of heart surgery. Understanding was enhanced as a result, while the complexities of the technological in participants’ narratives were acknowledged and enacted.

In this chapter I provided a detailed outline of the philosophical and theoretical foundations that frame this research. These foundations inform the methodological approach of this study. In the following chapter I provide an overview of narrative methodology, detailing the central tenets and the methods I employed in this study.
CHAPTER V: RESEARCH METHODOLOGY

Narrative Inquiry involves a focus on stories and storytelling throughout the research process.
In this chapter, I outline the methodology employed in this study. This chapter is divided into five sections. I first narrate the beginnings of my methodological story and why I situated this study in the qualitative traditions. Secondly, I discuss the use of narrative as a research methodology. In the third section, I describe the research methods. In the fourth and fifth sections, I outline the criteria of rigour and ethical considerations in this study.

Beginnings of My Methodological Story

Early in my doctoral program I aligned my inquiry with the qualitative traditions because of my interest in exploring the richness of peoples’ experiences. Qualitative research has the capacity to deepen and enhance understandings of human experience and behaviour (Madjar & Walton, 2001). Furthermore, qualitative approaches are beneficial when there is little known in a substantive area (Morse & Richards, 2002). Because patients’ experiential accounts of the technological in heart surgery have been largely neglected, qualitative methods were an appropriate approach to employ to bring understanding to a largely unexplored phenomenon.

Qualitative methodologies and methods are used to seek rich descriptions and value some level of interpretive and naturalistic approaches (Denzin & Lincoln, 2000). Initially, I could not claim a clear affinity with a specific qualitative methodology. I readily engaged in a scholarly search to determine how to best approach this topic. Qualitative research involves locating and situating the researcher as the observer (Denzin & Lincoln, 2000). Researchers working from a qualitative approach are encouraged to situate themselves, including their assumptions (which were discussed in Chapter 4), but also to provide a detailed audit trail of decisions. Qualitative research has underpinnings that assume findings can only be known as representations of the social world and a belief that knowledge is socially constructed (Denzin & Lincoln, 2000). Thus, situating oneself as the researcher is critical to rigorous research and to the process of knowledge construction. The decision-making process of choosing a methodology and methods were a conscious, critical and rational process, adding rigour to the conduct of this research. My
methodological decisions were based on what best fit my substantive research area and my way of thinking and being. The next section details the methodology chosen and provides the rationale behind the decision to choose narrative inquiry.

Narrative Methodology

The methodology employed in this study involved a narrative inquiry. Narrative inquiry is a contemporary and growing methodology (Aranda & Street, 2001; Conle, 2000a; Etherington, 2004; Skultans, 2000). It maintains an orientation to stories and storytelling that is embedded throughout the research process (Clandinin & Connelly, 2000; Conle, 2000a; Frank, 2002). Commonly narrative is used as a method or a way to represent qualitative findings, but this truncated approach neglects a theoretical and philosophical orientation. In this sense, narrative is only being used as a literary device. When methods are severed from their methodological assumptions, they violate some of the critical underpinning principles. Silverman (2005) indicates that methodology is an overall approach, which can be defined broadly as qualitative or quantitative or specifically (e.g., ethnography, phenomenology, grounded theory, narrative inquiry). Methodologies are grounded in an ontological and epistemological positioning or some kind of philosophical stance, which lays the foundations for decisions about methods of inquiry. Following, are 4 sub-sections in which I detail why a narrative inquiry was employed; narrative as a nuanced way of knowing; a description of the central tenets of this narrative inquiry; and an explanation of the types of narratives.

Why Stories?

Stories have a special way about them that allowed insight into patients’ experiences. Narrative inquiry is viewed as “unusually idiosyncratic” (Connelly & Clandinin, 1986, p. 308); yet, these claims are what make it life-like, meaningful and applicable. Stories can be powerful because they provide “a picture of real people in real situations, struggling with real problems” (Noddings & Witherell, 1991, p. 180). It follows that by bringing narrative into research, we can
better understand patients’ experiences and consider ways to enhance health care practices. Patients’ experiences of heart surgery have been explored before now, through phenomenology, hermeneutics, grounded theory and ethnography, but a narrative approach is absent from the literature.

It is through the telling and active listening of stories that researchers can better understand peoples’ experiences and the idiosyncrasies of human life. A narrative inquiry is appropriate for explorations of experiences and meanings (Conle, 1999; Reissman, 2002). Storytelling is a process through which people make meaning out of their experiences and make sense of their lives. (Bruner, 2002a; Clandinin & Connelly, 2000). Clandinin and Connelly (1994) suggest that narrative is both the method and the phenomenon. For example, it is through listening to stories and narrative analysis (as the method) that we can begin to understand peoples’ experiences/stories (as the phenomenon).

A narrative inquiry was chosen as the most appropriate methodology to be employed in this study because telling stories is a familiar way for individuals to talk about their experiences. Telling stories facilitates the relating of experiences using existing social patterns and practices of communication. Narrative is a practice of communication that is learned early in life and people gain expertise on how to tell stories, making this oral tradition feel natural. Nunkoosing (2005) states that the best method to understand a person’s experience “is to enable the person to narrate that experience” (p. 699).

Finally, a narrative inquiry was effective in this context because it elicited the intangible and the implicit with clarity. The stories told relating experience implicitly enclosed tacit knowledge (Conle, 1996, 1999). Polyani (1983) posits that tacit knowledge takes on a subsidiary character; it is so deeply embedded that it is implicit and often inaccessible. Stories are one way that provided access to some of this tacit knowledge. This was particularly important in this study because the technological emerged as implicit in the literature review. Part of this was a
result of how I conceptualized the “technological”. This research did not focus merely on object technology, but the interrelationships that link technology with people, knowledge and processes. It may be difficult for patients to understand what is meant by the technological in this way. But patients’ experiences (as is evident in my pilot study and the respective literature review) do include stories about the technological.

**Narrative: A Nuanced Way of Knowing**

It is only in the past few decades that narrative was drawn into the human sciences and disciplines, such as nursing, sociology, medicine, and anthropology (Riessman, 2002). In the past decade narrative inquiry has manifested itself as a more recognized domain in the qualitative traditions of health research. However, it is important to note that the emergence of narrative in medical- and illness-related literature in the early 1980s is actually a reappearance (Hyden, 1997). At one point in history the patient’s story was more valued. The patient’s story became progressively devalued because it did not align with biomedical values (e.g., objectivism). Objectivism values a static and ahistorical framework to which we can “ultimately appeal in determining the nature of rationality, knowledge, truth” (Bernstein, 1985, p. 8). An emergent focus on disease and objective ways of knowing moved health care research away from subjectivity and illness stories. Kleinman (1988) suggests that a focus on biological mechanisms of disease precludes attention to patients’ stories and meanings of illnesses. He advocates that health care research must incorporate humanities-based approaches. The technological focus of health care has triggered a need for stories in the 21st century (Bury, 2001), possibly as a way to re-focus on the patient. This increased acceptance of narrative in health care can be aligned with not only the qualitative movement, but also the re-emergence of a valuing of patient stories. This may in part be due to transformations that emphasize patient-centered initiatives which encourage patients to take active roles in their health care.
Narrative inquiry is a methodology that can enhance the many dimensions of knowing that inform health care. In the context of evidence-based practice, randomized controlled trials are highly valued. In the complex world of health care, practitioners and researchers tend to be more comfortable with objective modes of practical knowledge that suggest there can be one correct answer. Objectivism may be one strategy that is employed to achieve some kind of order in the chaos that can pervade with illness and disease. However, order and control can sometimes be elusive. Practitioners and researchers have increasingly recognized that understanding patients’ experiences requires different methods, and these methods are not necessarily aimed at truth. Conle, Li and Tan (2002) suggest the truth cannot be uncovered and presented, “no matter how truthful the account, but instead [offer] a narration about experiences” (p. 433). Narrative inquiry still aims to understand reality, but resultant knowledge claims are representations and narrations of that reality. This is analogous to qualitative approaches in general, which provide representations of social lives.

Narrative inquiry engages a different way of knowing, distinct from traditional methods of scientific knowing in that it is not objective and it does not aim to be generalized. A narrative inquiry attempts to access the depth, as opposed to the breadth of knowing. It is less aimed at finding a universalizing Truth than to reaching an understanding that is developed through attention to stories. Narrative inquiry accesses an experiential knowing. Readers are asked to feel the truth (Bochner, 1997) and engage in the story not just on an intellectual level, but on levels of morality, emotion and aesthetics (Richardson, 1994). By engaging in human experience through storytelling and allowing an emotional response to exist, emotion and intellect connect (Conle, 1996). Narrative inquiry opens up nuanced ways of knowing on these different levels. Engaging these various ways of knowing parallels the knowing that is embedded in social lives.

The purpose of narrative inquiries affects its practical implications. Conle (1996) suggests that it is a question of resonance. Resonance can be described as a process that involves
sharing in one person’s story and at the same time sharing in your own story (Conle, 1996). Conle (1996) states that resonance “is a way of seeing one experience in terms of another” (p. 299) or more specifically in terms of your own story. For example, does the story told affect you? Does it encourage you to personally reflect on a story of your own? Does it transform your thinking? Does it compel you to reconsider your nursing practice? It is not about generalizing the story to nursing practice. Recently, Nelson and McGillion (2004) criticized Benner for providing narratives as templates for nursing practice. Narrative inquiry is not about providing stories as templates. When a narrative is reduced to a template, it is at risk of becoming a hardened story that lacks context and temporality (Conle, 1999). Frank (1998) argues that narrative is a reciprocal and moral relationship to be entered into, not used as a mere method or tool. The focus of narrative is to bring forth understanding and prompt further thinking and storytelling and invite others into the story.

**Central Tenets of a Narrative Inquiry: Temporality, Contextuality and Identity**

Two central tenets of this narrative inquiry were temporality and contextuality (Conle, 1999; Czarniawska, 2002; Emden, 1998). People are temporal beings and live temporal experiences (Conle, 1999; Ricoeur, 1984). They are always a part of their past and always thinking themselves into their futures (Carr, 1986). Thus, narratives are temporal in that the story that people tell in the present is always connected and shaped by their past experiences and their anticipations of the future. As well, their stories are a series of carefully connected and goal-oriented sequences (Gergen & Gergen, 1988). Clandinin and Connelly (2004) state, “narrative inquiry is a multi-dimensional exploration of experience involving temporality (past, present and future), interaction (personal and social), and location (place)” (p. 576). The telling of stories is always situated within a cultural and historical place (Crites, 1971). Stories are told from a particular vantage point or standpoint (Conle, 1999; Frank, 2000a). Attention to contextuality crafts an understanding of this situatedness of the storyteller and his or her vantage point.
Context is the background and scene in which the story is constructed; it is the story behind the main story (Czarniawska, 2002).

Contextuality and temporality are important in order to understand why a particular story is being told and why in that way. A sense of morality emerges through storytelling about how one should live or conduct one’s social life (Frank, 2002). Often, storytelling results in a moral end (Abma, 2002). The moral end involves figuring out the meaning of the story, which is a co-constitutive process. Researchers can help participants reflect on meaning by drawing attention to and exploring certain facets of stories. Frank emphasizes that this morality is not static, but evolves with subsequent storytelling. Because of the close attachment of stories and morality, it was important for me to engage authentically, emotionally and dialogically with participants (Bochner, 2001). People tell different types of stories for different reasons. Hence, the underlying narratives were explored in order to further understand the meaning of stories.

A narrative inquiry can give researchers access to how people narrate not only technological accounts of heart surgery, but also how identity is constituted within the construction of these accounts. Explorations interested in aspects of selfhood, make narrative particularly attractive (Smith, 2002). Drawing on contextuality and temporality, it was critical to consider a person’s passage through this experience, but also how they were affected and shaped by this experience. Kleinman (1988) suggests that “illness becomes embodied in a particular life trajectory, environed in a concrete life world” (p.31). A person’s experience of heart surgery does not exist in a vacuum, but is embedded in his or her life world that existed before heart surgery and will continue afterwards, although shifting in ways. Bury (1982; 1991), among others such as Williams (1984), suggested that illness creates a biographical disruption of a person’s life in which there is a re-thinking of identity. Bury (1982) posits that there is a biographical shift of one’s everyday and projected life. Williams argues that peoples’ narrative reconstruction and biographical alteration provides a way for them to mitigate the assault on their
identity as a result of illness. Through this process of revision and resolution, storytelling can lead to a changed identity (Bruner, 1985). People tell stories to make sense of one’s own life (Makler, 1991). Taylor (1989) suggests that people tend to make sense of their lives and their identity through stories and that “we understand ourselves inescapably in narrative” (p. 51). Although we can never fully understand a person’s identity (because of epistemological reasons), stories can help us come close to knowing its many dimensions (Rose, 1998).

Types of Narratives

Many types of illness narratives have been identified, and these typologies can be useful as usable pathways to begin to enter into and listen to stories (Frank, 1998). Frank (1995; 1998) proposes three types of illness narratives: (1) restitution; (2) chaos; and (3) quest.

Restitution narratives are linear stories of being ill, and ultimately, being restored to health (Frank, 1998). They are the culturally preferred story because the telos of the story (health) represents expectations of successful medicine. There are beneficial and moral ends to a restitution narrative in that storytellers are provided with hope. Yet in these narratives, the ill person is a somewhat passive and objectified storyteller and their subjectivity tends to be absent (Frank, 1998). Instead, active voices of the practitioners are the heroes of the story (Frank, 1998). Problems associated with this type of narrative ensue when restored health is not possible or when illness persists.

Chaos is a second narrative type, but is not as well accepted by society or expected by the ill person (Frank, 1998). Chaos narratives occur when illness persists, when medical problems proliferate or when diagnoses cannot be determined (Frank, 1998). They are a telling of perpetual turmoil and disarray and can lack a narrative ordering (Frank, 1998). With this type of narrative, there is no end in sight that does not involve suffering and chaos (Frank, 1998). They have the potential to pull the listener into this chaos, making the listener feel helpless and hopeless (Frank, 1998). This may be another reason why chaos narratives are not as common as
restitution narratives; storytellers want to hold on to their listeners and chaos narratives make listeners want to disengage and withdraw. Thus, patients may tell the story that listeners/practitioners want to hear (e.g. a story of recovery and success).

Quest narratives occur when restitution is not possible, nor is chaos an option or a preference for the ill person (Frank, 1998). In this type of narrative, people talk about their illness as a quest in that they have learned something that they want to share and help other ill people (Frank, 1998). Frank suggests that these stories are about how illness leads to new insights about self and about life. He posits that these stories do not romanticize illness, but they do not flounder in the chaos. Quest narratives are one way that people can tell a story and “express an unflinching view of the reality of illness” (Frank, 1998, p. 8).

Many times, these various narrative types can be seen within one story in that the storyteller may go back and forth between the different types of narratives (Frank, 1998). It is important to be aware of these narrative types because it can illuminate where the ill person is right now (Frank, 1998). Frank (1998) argues “that people tell the stories they need to tell in order to work through the situation they are in” (p. 10). Letting people tell the immediate story can shed light on the ways that peoples’ experiences are temporally embedded, as well as help the storyteller and researcher find meaning.

Research Methods

Recruitment, Setting and Sample

_Inclusion and Exclusion Criteria_

The target population were individuals undergoing open-heart surgery. Both male and female individuals were included if they were: a) greater than or equal to 18 years of age; b) able to speak, read, write, and understand English; c) able to participate in a conversation (without the use of a translator); d) undergoing elective and 1st time open-heart surgery; and e) undergoing CABG and/or valve repair or replacement. Individuals were excluded if they: a)
were undergoing heart transplant, congenital surgeries, aneurysm of the heart muscle or Multi Vessel Small Thoracotomy; b) had a major cognitive or psychological disorder (determined based on their admission history); c) were urgent and emergent cases; and d) lived more than 50 kilometres west or north of the hospital or more than 100 kilometres east of the hospital (for feasibility of data collection).

Setting Description

The setting for participant recruitment was a large, community hospital. It was a regional centre for cardiac services, serving areas primarily in Ontario, Canada. Cardiac services at this hospital included two cardiac operating rooms, a nine-bed CVICU, and a 25 bed cardiac surgery unit, located in one single floor location. Following surgery, patients stayed in the CVICU for a period of 24-36 hours and then were transferred to the cardiac surgery unit. Length of hospital stay was usually about 5 days. Statistics indicate that there are over 1100 heart surgeries performed each year at this hospital.

Recruitment Strategies

Recruitment strategies were negotiated with members from the cardiac health services group. It was determined that the nurse in charge of the cardiac preoperative clinic would act as a point of contact for recruitment. Furthermore, it was negotiated that I would provide staff on the cardiac units with information pamphlets describing the study (see Appendix A). Recruitment commenced following the distribution of information.

All patients at this hospital attend a preoperative clinic 1-2 weeks prior to surgery. Ten to fourteen patients are seen every Tuesday in the preoperative clinic. Patients attend the preoperative clinic for 2-4 hours and are seen by clinic nurses and cardiac surgeons. I attended ten preoperative clinics to recruit participants. Recruitment commenced on October 31, 2006 and was completed on April 18, 2007.
A purposefully selected sample was employed with regards to ensuring a selection of participants that would adequately enrich the understandings of this phenomenon (Morse & Richards, 2002; Patton, 2002b). Purposive sampling involves critically seeking out participants who have experienced the phenomenon of interest (Denzin & Lincoln, 2000; Holloway & Freshwater, 2007; Silverman, 2005). This type of sampling was engaged in three ways: (1) recruitment of participants who were scheduled for heart surgery, an encounter with the technological; (2) recruitment of equal numbers of male and female individuals; and (2) approaching only individuals that met the inclusion criteria.

The preoperative clinic nurse initially approached individuals that met the inclusion criteria and briefly explained the study. She provided individuals with a pamphlet regarding the study (see Appendix B) and asked them if they would be interested in talking with the researcher. I approached individuals who agreed to speak with the researcher. I explained the purpose, expectations of participation, voluntary nature, potential harms and benefits, and confidentiality and the anonymity clauses of the study. Ample time was provided for individuals to ask questions and discuss the study with family member(s) and/or friend(s) in private. For those individuals interested in participating, I reviewed the consent form, provided further time for questions and obtained informed consent. I kept a signed copy of the consent form and gave a duplicate copy to the participant. Informed consent is discussed in more detail under Ethics.

*Sample Size Determinants*

The large sample sizes that are associated with quantitative research would be a weakness if used in qualitative research (Patton, 2002b). The logic of sampling is different in qualitative research. The goal of qualitative research is not statistical inference and generalization (Sandelowski & Barroso, 2003). Rather, the goal is to accrue a sample that will permit an in-depth understanding of the phenomenon (Patton, 2002b). There are a number of factors included
in determining a sample size including the scope, nature and design of the study, and the quality of data (Morse, 2000).

Discussions about sample size are rare in the narrative literature. A consistent recommendation is that sample sizes must be small in a narrative study in order to access rich data (Holloway & Freshwater, 2007). However, I also considered what Sandelowski (1995a) posits, which is that studies with notably small samples will not contribute to a rich and in-depth understanding of the phenomenon. Determining an appropriate sample size was a multiple step endeavour. I first referred to the qualitative literature and some of the studies from my literature review (Chapter 3). The most rigorous qualitative studies referred to in Chapter 3 obtained sample sizes that ranged from 4-22, which acted as a beginning range for this study. Furthermore, a second component of the decision was the multiple data collection methods (interviews and journals), and the multiple data collection points that were employed in my research. Considering that this would result in a rich data set, a smaller sample was required, perhaps as few as 6-10 participants (Morse, 2000). Because narrative inquiries amass a quantity of rich stories, I also estimated that a smaller number of participants were needed. A final consideration in sample size determination was the use of sub-groups (Kuzel, 1999). Kuzel suggests that 5-8 people per sub-group are required. Sub-groups in this research included male and female. For these reasons, a sample size of 10-16 was estimated.

*Sample Demographics: The Storytellers*

In this study, the storytellers were the research participants who graciously told their stories of the technological in heart surgery. Participants’ names and references to other people were replaced with pseudonyms to ensure anonymity.

Sixteen people were recruited including eight women and eight men with ages ranging from 59-85 and a mean age of 68 (see Appendix C for a summary of demographics). In terms of homogeneity, participants underwent heart surgery at the same hospital. The dimensions of the
technological in heart surgery were comparable with regards to the presence of objects and machines, teams of practitioners, processes of care and expected pathways of recovery. As well, participants underwent surgeries of a similar nature with regards to recovery and technological routines and processes of care. The procedures that participants underwent involved CABG (n=6), mitral or aortic valve repair/replacement (n=6) and combined CABG and mitral or aortic valve repair/replacement (n=4). Ten of these procedures were done on-pump and six were done off-pump. Thirteen participants were transferred to the cardiac unit within the standard 36 hours. Three participants had extended stays in the CVICU (36-72 hours) for reasons involving bed availability on the cardiac unit, hypotension, and hypertension with delayed extubation.

Data Collection Methods

The sequence of data collection is found in Appendix D. Data collection methods consisted of two interviews at 48-96 hours post transfer from the CVICU and 4-6 weeks following discharge from the hospital, participant journals and fieldnotes (each discussed separately below). Following the first interview in the hospital, a journal was given to participants to document experiences over a period of three weeks. A thank-you postcard was sent to each participant following completion in the study. A checklist form to ensure each step was completed with each participant was documented (see Appendix E). A demographic form (see Appendix F) was completed. The information for this form was retrieved from the participant and his/her chart. I discuss participant journals first as they provide a transition into the 2nd interview. The words journal and diary tend to be used by many authors interchangeably. For the purposes of this research, I employed the word journal.

Participant Journals

Participant journals were used for several purposes. Participants were encouraged to document stories as they were occurring or as close to the time as possible. In this sense, the journals were used as piece of data, but also as an elicitation device to provide guidance to a part
of the discussion in the 2\textsuperscript{nd} interview. Lastly, the journals were used to construct a more well-rounded narrative.

Use of journals has been shown to elicit rich data (Burman, 1995; Jacelon & Imperio, 2005). Journals are used to seek out the everyday experiences of individuals (Burman, 1995; Fleming, Tolson, & Schartau, 2004; Francis, 1997; Miller & Timson, 2004). In nursing, journals as a research method have been shown to be beneficial in exploring individuals’ experiences with illness (Burman, 1995). Individuals can chart their experiences on their own time, at the moment that the experience is occurring. Specifically, journals have been used successfully in the heart surgery population to gain insight into patients’ views and experiences of recovery (Goodman, 1997). Particularly beneficial to a narrative inquiry, journals can enhance understandings concerning context and temporality within peoples’ experiences of illness (Milligan, Bingley, & Gatrell, 2005).

Journals were given to participants at the time of the 1\textsuperscript{st} interview (which is 48-96 hours post transfer from the CVICU). Participants were encouraged to write in the journal for their remaining time in the hospital and for the first three weeks following discharge. Burman (1995) found that 2-4 weeks was the typical duration for journal keeping in health research. I retrieved the journals from participants’ homes three weeks following discharge from the hospital.

Clear instructions are critical to ensure participation (Burman, 1995), therefore both oral and written instructions were given to participants by the investigator. Participants were given ample time to ask questions during the oral instructions, which were given following the interview. Written instructions (see Appendix G) appeared on the first page of participants’ journals. Telephone contact is suggested to ascertain any problems with the journal keeping (Burman, 1995). An initial telephone contact was made during participants’ first week at home. A second telephone contact was made during the third week, at which time arrangements were made to retrieve the journal. Furthermore, participants had access to the researcher’s office.
phone number in order to discuss any questions or issues with the journal keeping. If participants began telling their story during the phone calls, I urged them to write this in the journal.

Open-ended questions are useful in journals as they allow for participants to structure their own responses (Miller & Timson, 2004). A short list of open-ended questions were provided at the front of the journal to provide participants with direction (see Appendix H). As such, the journal was semi-structured in order to give participants some guidance, but also provide enough flexibility to write openly and freely. Participants were asked to use the journal in any way they liked. It was discussed that they could write in point form, sentences, stories, poetry and/or drawing. Thus, participants’ stories were represented in the journals in ways they felt best fit or in ways they were best able to articulate.

I reviewed the journal prior to participants’ 2nd interview. I identified certain areas to be further explored with the participant at the second interview. These topic areas contained specific questions concerning the content and the format of the journal. Journals were used to elicit further discussion about areas that participants documented.

*Interviews*

Two interviews were conducted with each participant. The 1st interview was conducted at 48-96 hours post transfer from the CVICU on the cardiovascular floor. The 2nd interview was conducted 4-6 weeks post discharge from the hospital at the participant’s home. The purpose and process of each interview is detailed below. Interviews were audio-recorded. Point form notes were documented during interviews to guide further probing and form preliminary fieldnotes.

Interviews are a common and beneficial data collection method (Fontana & Frey, 2000; Holstein, 1995). They have been used successfully to explore patients’ experiences of heart surgery and recovery (Angus, 2001; Hawthorne, 1993; King & Jensen, 1994; Radley, 1996; Raholm, 2002; Theobald & McMurray, 2004) and patients’ experiences of technology (Anderson et al., 2002 to 2003; Beery et al., 2002; Lindahl et al., 2003; Murphy, 2001).
Data collection consisted of narrative interviews in that participants were encouraged to tell stories recounting experiences of heart surgery, the technological, and the recovery period. Narrative interviews are dialogical, involving a negotiated conversation about what is to be talked about between the researcher and participants (Mishler, 1986, 1999). Narrative-based interviews can resemble conversations in that dialogue focuses on interpretive talk; the researcher and the participant attempt a mutual understanding through conversation (Conle, 2004). I began to interpret and theorize about participants’ stories during the interview. I shared my interpretations with participants and engaged them in reflecting on these. Although narrative interviews are open and dialogical, a semistructured interview guide was employed. Semi-structured formats provide a set of pre-established questions along with prepared probes based on emerging dialogue (Morse & Richards, 2002). This format allowed for general topics and questions that were open-ended, but also left room for dialogue and unanticipated probing according to participants’ accounts. Morse and Richards caution that the interviewer should be careful about guiding the interview without leading the responses of participants. It was important to not limit the interview with a priori categorization (Fontana & Frey, 2000). Rather, the use of a narrative inquiry allowed for storytelling to emerge inductively.

Because narrative inquiry is interested in a personal and subjective phenomenon, it was important that I develop a trusting rapport. Trust was initiated with prolonged engagement and listening authentically to participants. The use of multiple contacts through the initial meeting, two interviews and multiple phone calls was helpful. Also, Frank (1998) suggests that the best thing we can do is to enter into the person’s story in ways that we just listen. Nurturing change in the storyteller involves accepting that the story needs no change, honouring the suffering that is occurring in the moment, and helping the storyteller reflect on the story they are telling (Frank, 1998). By encouraging reflection and a dialogical approach to interviewing, both participant and researcher engaged in the interpretive nature of understanding.
**Interview one.**

The importance of the 1st interview was to access participants’ experiences of heart surgery and the early recovery period as close to the experience as possible, but also at a reasonably safe time with regard to patients’ health status. This interview was conducted at 48-96 hours post transfer from the CVICU. At this point in the heart surgery trajectory, participants had been transferred to the cardiovascular floor where they no longer required the 1:1 constant nursing care that was provided in the CVICU. Participants were beginning to increase their activity (e.g. sitting in a chair, walking, showering). The health care team was still monitoring them, but the frequency and the intensity had decreased.

I was interested in participants’ thoughts, imaginings, anticipations, expectations, and understandings of the experiences of the technological in heart surgery (some of which was co-constructed with their family, friends, health care professionals). Nevertheless, this co-construction of knowledge still constituted participants’ experiences and interpretations of the events associated with heart surgery and recovery. A semi-structured question guide using open-ended questions was employed in the first interview (see Appendix I). In addition, many questions emerged in the course of participants’ storytelling. Length of the interviews varied depending on participants’ ability to articulate their story. Furthermore, length of the interviews was negotiated with the participant and was continually re-negotiated during the interview, so as to not overtire the participant. The first interviews lasted approximately 10-30 minutes with a mean length of 20 minutes. The first interviews occurred in the hospital and were purposefully kept short as participants were in the early recovery stages from surgery. A few times interviews were cut short because the participant had to go for a test or they were not feeling well.

**Interview two.**

The 2nd interview was at a purposively timed period of 4-6 weeks post discharge. Moore (1994) found that the first three weeks at home were the most distressful. King et al. (1998)
found that more disruption occurred at 1-month than at 6-months for heart surgery patients; generally patients were well recovered by six months. Therefore, having the 2nd interview at 4-6 weeks allowed the participants to be in a less stressful state and on their way to recovery at the time of the interview, and also allowed the journal to capture the most potentially distressful experiences that occur following heart surgery.

A semi-structured question guide was employed in the 2nd interview (see Appendix J). The guide allowed for certain questions to be addressed in an open-ended manner, although many questions emerged during the course of the interview from careful listening to the participant. Furthermore, questions emerged from a discussion of the participant journal (discussed in the previous section). The second interviews lasted approximately 45 minutes to 1 hour and 50 minutes. The mean length of interviews was 1 hour and 10 minutes. These second interviews occurred in participants’ homes.

Fieldnotes

Fieldnotes were taken to document observational details, and beginning theoretical and analytical notes. Observation remains a central feature of research as a way to document the context in which research interactions occur (Angrosino & Mays de Perez, 2000). Contextuality is a central tenet of narrative, and a detailed description of the context can enhance understanding of stories. I documented the physical setting, body language of participants, and gestural cues that emerged (Angrosino & Mays de Perez, 2000). To systematize fieldnotes I employed Spradley’s (1979) framework, which suggests taking short notes in the field and expanded notes as soon after the fieldwork. These notes included problems encountered in the field, ideas that arose with each encounter, and provisional analyses and interpretations (Spradley, 1979). Fieldnotes were recorded following each contact with participants. Fieldnotes were open and flexible with the regards to the format, including point form, diagrams, sentences, stories, and poetry.
Data Analysis

Data for this analysis were drawn from multiple sources including participant interview one and two, participant journals and researchers’ fieldnotes, lending itself to a multi-layered exploration of narratives. The focus of the analysis was on participants’ interviews. Journals were used as an elicitation device during the interviews, but were also referred to during the analysis to construct a well-rounded narrative. The fieldnotes were particularly useful following the first interview and provided preliminary analytic ideas that led to tailored second interviews.

Narrative analysis provided the overarching analytic framework, which began by thinking with stories (Frank, 1995) and led into a systematic process. These steps are discussed separately below. This narrative analysis revolved around emplotment and attention to the processes and activities involved in how stories were put together. Although emplotment involved bringing meaning to the story as a whole, this did not necessarily mean that uncomplicated and linear stories were told or the complexity and messiness of stories were disregarded. Narrative analysis does not seek to articulate a simplified and straightforward story, and it is not necessarily interested in conceptual themes, but instead values the messiness, depth, and texture of life’s experiences (Etherington, 2004). The analysis and resultant narratives were attempts to capture the various components of participants’ stories and represent the story the way it was told, rendering all of its complexities.

The following procedures were completed prior to analysis:

1. Audiofiles were transcribed professionally as soon after each interview as possible.
   Transcription involves rendering oral data (audio-tapes) into a written representation (Lapadat, 2000; Sandelowski, 1994). Transcripts are never strictly verbatim, although this is a common claim. This is because there is an interpretive character to transcription associated with linguistic nuances (e.g., speed and tone, silences and pauses).
   Establishment of conventions were important to improve consistency of the process
Thus, the transcriptionist was provided with a transcription guide to ensure reliability measures (see Appendix K).

2. Reliability was further built into the process of analysis by verifying the accuracy of transcripts with the audio-recordings following transcription. Accuracy was verified of the transcription process by reading transcripts while simultaneously listening to the corresponding audiofiles. I made corrections as necessary.

3. Transcribed audiofiles were formatted in a word document.
   - single spaced with wide margins for preliminary analysis
   - line numbers and page numbers inserted

Thinking With Stories

Narrative analysis involved an immersion in and steadfast attention to stories. Frank (1995) suggests that researchers need to refrain from thinking about stories in a deductive and analytic way that reduces the story to mere content. He suggests that researchers need to begin “thinking with stories” (Frank, 1995, p. 23). This involved a process of personally dwelling within stories as the researcher and avoiding the immediate inclination to theorize and analyse (Bochner, 2001; Frank, 2000a). As such, the analytic phase commenced by just listening (Frank, 1998) to participants’ stories and hearing and feeling what is happening. It was a process that began during the interviews and continued into the analysis and writing in that I actively listened and engaged in participants’ storytelling. I engaged on a personal and emotional level by entering into the story and documenting my feelings. This engagement allowed me to think with stories and focus deeply on the storyteller.

Systematic Process

The aesthetic engagement did not negate an approach that was systematic in which specific principles pertaining to narrative analysis were addressed. Data were analyzed systematically according to the principles of narrative analysis in which the object of analysis is
the story (Frank, 2002; Fraser, 2004; Ouellette, 2003; Reissman, 2002). It was not just about analysing the content of stories, but also the form and how stories were put together and what structures storytellers draw upon (Lieblich, Tuval-Mashiach, & Zilber, 1998). The process of narrative analysis was one of immersion in the text in that I looked at the whole story with attention to facets of temporality and contextuality, plot, scene and characters (Atkinson, 1997; Clandinin & Connelly, 1994; Reissman, 2002). The objectives were to avoid imposing external criteria or fragmenting the story. Narrative understanding requires researchers to see the storyteller on the storyteller’s own terms in a way that keeps the experiential whole intact (Clandinin & Connelly, 1994). Keeping the story wholly intact provided a way for a complete and meaningful narrative to emerge.

Narrative analysis does not resemble traditional deductive and categorical analysis and coding that is typified in quantitative research and some qualitative research. Although coding was used for the purposes of drawing attention to prominent components of stories, it was not used to reduce the narrative into categories. It was not about identifying common themes in and between stories. This narrative analysis revolved around emplotment and I explored how stories were put together and the various processes and activities that underpinned the unfolding of narratives.

A focus of the analysis was on the culturally constructed nature of stories, which involved attention to and constructing meaning through an exploration of the metaphors used (Fraser, 2004). Narrative analysis involved interpreting the text with careful attention to the dominant ideologies that frame stories and the intrapersonal, interpersonal and cultural aspects of the story (Doucet & Mauthner, 2008; Fraser, 2004). Cultural aspects evolve over time and involve those values and beliefs that are shared amongst a group of people (Rodney, Pauly, & Burgess, 2004). Specifically, this refers to the culture of heart surgery and led to an understanding of the discursive elements of storytelling. Atkinson (1997) argues that stories
require intense analytic work to examine the narrative structures and understand the meanings. Drawing on Frank’s (1995; 1998) narrative types (e.g. restitution, chaos and quest) allowed me to consider patients’ stories in relation to culturally constructed narratives. Considering these narrative types shed light on the ways that stories were culturally constructed (Thomas-MacLean, 2004) and the ways that patients’ experiences were shaped in the technologically-mediated context of heart surgery. Following Frank’s lead, others have considered these narrative types as a way to understand peoples’ illness experiences (e.g., Smith & Sparkes, 2005; Thomas-MacLean, 2004). Attention to these narrative types enhanced understandings of the context from which participants’ experiences were shaped.

Steps of the analytic process were pretested and refined in a pilot study conducted in 2005 for the methodological restructuring purposes of this doctoral research. The analytic process included two phases:

*Phase one.*

Phase One of the analytic process involved preliminary analysis of participants’ first interview and review of the journal. This phase was conducted early in order to provide a tailored focus to conducting participants’ second interview. As a result of the preliminary analysis, the second interview guide was enhanced with particular prompts that emerged from participants’ first interview and journal. Along with the proposed questions provided in the second interview guide, participants were asked to elaborate on components of the story plotlines that were highlighted in the preliminary analysis. Furthermore, elements of contextuality and temporality were attended to as stories were told from a different time in the recovery period and a different setting (from hospital to home). This phase involved the following steps:

1. *Just listening* to the interview with attention to the whole story. This process involved documenting on the actual transcript and in reflexive notes details about what I am hearing and feeling when listening to the story.
2. Documenting how participants emplotted the technological in their story of heart surgery. This was done by highlighting narrative segments with attention to Barnard’s characterological definition of the technological. Attention was given to the people, events, situations, outcomes, and plot lines.

3. A visual map was constructed that documented the narrative flow and sequence of events in participants’ stories. The map acted as a way to keep the story wholly intact, but also highlighted the emplotment patterns and the components of narratives (e.g., characters, events and various scenes and outcomes. For examples of these maps, see Appendix L.

Phase two.

Phase Two involved an in-depth analysis of participants’ first and second interview. Steps included were:

1. I listened to audiofiles, while following the transcript.

2. I attempted to hear stories and personally experience the emotions within the interviews. I documented on the transcript and in reflexive notes my own feelings and responses and ideas that emerged about participants’ accounts. Beginning with my own experience of the text allowed me to account for own subjectivity and provided insight into the participants’ account.

3. I documented emerging ideas about participants’ experiences and feelings.

4. I highlighted important segments related to how the technological of heart surgery was emplotted in participants’ stories. This involved highlighting the structured underpinnings of participants’ stories (Frank, 2000a). These structures included plot lines, characters, events, rhetorical devices (e.g. metaphors) that shed light on the personal and cultural aspects of stories (Doucet & Mauthner, 2008; Kleinman, 1988). Metaphors were examined within the context of how the technological was emplotted, but also in relation to the dominant and cultural discourses (referring to existing literature).
5. I developed a visual map that documented participants’ stories with particular attention to how they emplotted the technological in heart surgery. A map was developed for participants’ second interview. Also, the map that was previously developed based on a preliminary analysis for interview one was refined based on a more in-depth analysis.

6. I identified patterns of emplotment. This was an iterative process of reviewing participants’ visual maps and transcripts to identify how the technological was emplotted.

7. I explored how gender folded into participants’ emplotment of the technological.

A reflexive and analytic account was also documented throughout the data collection and analytic phase. This account included analytic thoughts, linkages to theoretical ideas and literature, and reflexive questioning and resonance. It was used as part of the audit trail in order to track my thinking and analytic decisions throughout the research process.

Rigour

Rigour refers to the worthiness of research (Morse et al., 2002). It is not something to be considered at the end of a study, but is something researchers should actively strive for throughout the research process (Morse et al., 2002). It is important to clarify how rigour was conceptualized in this study. The term rigour is often associated with criteria of validity and reliability and literally translates to a strict and inflexible adherence to a set of rules. However, criteria of rigour have evolved, particularly in the qualitative traditions, incorporating more dynamic characteristics that are specific to the type and purpose of the research being conducted. Although goals of research in the quantitative paradigm are aimed at generalizability, in this study the outcome was aimed at understanding.

The methods to obtaining rigour are widely debated between and within the various research traditions and methods. Universal standards or criteria have yet to be established in the qualitative paradigm and in narrative inquiry. It has been argued that research should be critiqued within a method (Morse & Richards, 2002) or at the minimum should be contingent on the
theoretical and philosophical stance of the study (Patton, 2002a). Although the development of standards in narrative research are not complete at this time (Louden & Wallace, 2001), many scholars in this field have conducted rigorous work and provided guidance on how to do so.

Reflexivity

In order to address criteria of rigour it is necessary to begin with a discussion of reflexivity because it is a nexus of the multiple approaches in which I engaged. Traditionally, a researcher’s journey into an inquiry demands that self is subtracted from the equation, in order to uphold a logically-based technique and epistemology that is scientific, certain, rational and objective. However, narrative inquiry “would most likely be hindered by the traditional distance between inquirer and objects of inquiry” (Conle, 1999, p. 11). We cannot step out of and objectify our personal history, experiences and the world in which we live—thus, interpretations permeate the research process (Conle, 2004). A reflexive approach is critical within an interpretive study (Patton, 2002b). Morse and Richards (2002) state that whether one’s personal and professional experience will affect the research is not the question—they will. The more relevant question is how to place that experience (Morse & Richards, 2002). Etherington (2004) suggests that reflexivity “opens up a space between subjectivity and objectivity” (p. 37). By being a reflexive researcher, one can engage self in the research process, accounting for subjectivity and ensuing interpretations of research.

Reflexivity entails an awareness of how the researcher shapes the research process (Mays & Pope, 1999). Reflexivity is not merely self-awareness, but is an exploration of the dynamic interaction within and between the self (researcher), others (research participants) and the emergent data. It involves a conscious, critical and active exploration of how the self influences the research and how research influences the self. The idea is to acknowledge and examine what you bring to the interview as a subjective researcher and use that knowledge to help understand what the participant is trying to tell you. It involves a deep focus on the storyteller. As
researchers, it is important to be epistemologically mindful and continue to raise questions throughout the research process (Louden & Wallace, 2001). What is knowledge? How did I come about this knowledge? What is the relationship between self as the researcher and what is known? It is important to understand how our personal responses as researchers and the context that we live affects the ways we interpret our research and the social worlds we are attempting to represent (Etherington, 2004).

A reflexive approach to this research was implemented by first keeping a journal, which was initiated during the conceptualization phases of this study. I maintained an audit trail to track decision-making and choices (Patton, 2002a). Included in my journal were personal responses and reactions during the research process, and evolving understandings of the phenomenon. Furthermore, in this journal two additional questions guided my reflections throughout the research process: How have I affected the research? How have I been affected by the research? A part of this reflexive process was poetry, which I crafted based on my reactions to the research and based on my understandings of the phenomenon. Elsewhere, I have demonstrated how poetry can be used effectively as a method of reflexivity in the research process (Lapum, 2008; Lapum & Leung, 2005; Leung & Lapum, 2005). Because I have already identified a knowing and knowledge that is situational and contextual, reflexivity was critical to the rigorous conduct of this narrative inquiry. It provided an understanding of the context from which knowledge was constructed (Etherington, 2004).

**Criteria of Rigour**

Rigour in this study was determined by drawing on criteria from qualitative research broadly and narrative inquiry specifically. Narrative inquiry is both a science and an art, therefore criteria concerning coherence and consistency are important, as well as aesthetics. In addition to reflexive engagement, rigour was achieved in this study by focusing on four main criteria: (1) methodological coherence; (2) dynamic and grounded in stories; (3) comprehensive
understandings; and (4) employing Richardson (2000)’s standards as a framework of reflexive questioning.

First, methodological coherence was salient to achieving rigour (Morse et al., 2002). It was important to logically employ the narrative methodology throughout the research process. This is marked by a logical and consistent relation of the various phases of the research process. This began with what Frank (1995; 2004) calls thinking with stories. Because this was a narrative inquiry, it entailed a research process that involved staying close to the story. It was essential to engage in ongoing reflection and stay wakeful to stories and the various decisions a researcher must make during the process of data collection, interpretation and analysis, and writing (Clandinin & Connelly, 2000). Narrative researchers need to be constantly thinking in a storied way and attending to the story. Although theorization and analysis are components of a narrative inquiry, I constantly returned to and engaged in participants’ stories, transcripts and even the audiofiles. This process ensured closeness to the story in which data collection, analysis and writing procedures involved an iterative process.

Another aspect of methodological coherence involved issues of legitimation and representation. The double crisis of legitimation and representation refers to the problematic of interpretation and that text is created and never a direct reflection of reality (Denzin & Lincoln, 2000). The interpretive nature of qualitative research and narrative inquiries must be addressed when considering rigour. Issues of legitimation and representation in a narrative study can be addressed by being epistemologically mindful (Louden & Wallace, 2001). In this study, this involved a critical and logical audit trail that tracked the knowledge that was constructed. It was a method directed at coherency, so the reader would be able to understand the logical trail of thoughts from the story to the interpretation and analysis to the final representation of data. For example, the reader should be able to track my interpretive and analytic thinking through the writing and the selected participants’ quotes.
The second component of rigour that follows from methodological coherence was to ensure that the research was dynamic and grounded in participants’ stories. A central aspect is that of investigator responsiveness (Morse et al., 2002). For example, researchers need to engage in an iterative and flexible process that imbues creativity and sensitivity during sampling, data collection, analysis, and theorizing (Morse et al., 2002). Thus, researchers should not engage in a linear and fixed research process, but be open to the emergent nature of qualitative and narrative studies. It involved a process in which the researcher is open to change in ways that the relationship between sampling, data collection, and analysis is dynamic. For these reasons, it is essential that researchers document their procedures in detail (Kirk & Miller, 1986; Mays & Pope, 1995). In this study, I was attentive to not become rigid in my thinking or interpretations. This involved constantly being open to change and always questioning: Is this what I am really hearing? Is this really what they are trying to tell me? I was attentive to not become transfixed on specific emplotment patterns, but always questioning how others were emplotting it differently? Again, this involved a constant return to the story.

The third component of rigour was to develop a comprehensive understanding of narratives of the technological. The research design was first directed at achieving a multi-layered understanding through prolonged engagement in which a sufficient level of rapport and trust was developed with participants. The research design involved multiple methods (interviews, journals, fieldnotes) and multiple data collection points (two interviews and multiple journal entries). This process can be compared to triangulation, which entails a wide range of data sources and methods (Mays & Pope, 1995; Silverman, 1993). Triangulation is suspect by some in the qualitative traditions because its aim may be interpreted as an attempt to converge on the Truth (Silverman, 2005). It is also argued that triangulation leads to new data and interpretations, not validation (Seale, 1999). However, I employed multiple data collection methods in order to enhance the multi-layered and comprehensive understanding of how the
technological entered into participants’ stories and how narratives were constructed. In this sense, triangulation was not used to validate claims in the traditional sense, but to enhance the scope and depth of the knowledge claims (Flick, 1998).

A critical aspect of achieving a comprehensive understanding was iterative and multiple discussions with my supervisor and PhD committee. During the period of intensive data collection and analysis, I met with my supervisor bi-weekly. Each visual map that I constructed during the preliminary analysis of participants’ first interview was discussed with my supervisor. These discussions resulted in a tailored and comprehensive question guide for each of the participants’ second interviews. Furthermore, there were consistent and iterative discussions of data and the patterns of emplotment that appeared in participants’ stories. In addition, there was considerable engagement with my PhD committee in which various iterations of my analysis and writing were shared. Committee members asked questions about my interpretive and analytic ideas and provided guidance about future steps in my research process.

Finally, Richardson’s (2000) standards were employed as a method of reflexive questioning to strengthen the rigorous process. The questions associated with these standards were continually reflected on throughout the study. The standards included substantive contribution, aesthetic merit, reflexivity, impact, and expressions of reality (Richardson, 2000). These standards have been chosen because they imbue an appreciation and a place for both the arts and the sciences (Patton, 2002a; Richardson, 2000). Patton (2002b) argues that both science and art play a role in qualitative research and analysis. As previously evident, I used stories and poetry as a way to creatively enhance the knowledge that is framing nursing practice and science, and to open up different ways of knowing. These criteria correspond to the many facets of my being, as you may recall the struggles that I narrated in the first chapter of this proposal regarding the ostensibly antithetical worlds of the sciences and the arts.
Richarson’s (2002) criteria and questions as a reflexive framework were adapted to this research as follows: (1) Was there a substantive contribution to our understanding of the technological experiences of heart surgery? Was the research and writing situated and demonstrative of an inquiry grounded in the social sciences/narrative? (2) Does this narrative inquiry have an aesthetic merit? Was the writing artistically shaped? Does this narrative inquiry draw the reader in and evoke further storytelling? Does the researcher open up the text dialogically? Is the text inviting? (3) Does the research impact others on an emotional and intellectual level? Does it stimulate reflection and change in practice? Does it bring forth new questions and academic and clinical pursuits? (4) Does this research have an embodied sense of the lived experience? Does it seem true? Is it a credible account of the real? (5) Does the researcher embrace a reflexive approach? Is the researcher aware of epistemological issues? How has the researcher accounted for her subjectivity? Is there sufficient self-awareness evident in the research process?

These criteria provided a way of achieving rigour in a narrative inquiry that was grounded in science, but also embraced and opened up space for the arts. Narrative inquiries should attempt to draw the audience into the story and grip the audiences (Bullough & Pinnegar, 2001; Clandinin & Connelly, 1991). The aim was not to provide linear and objective findings that are aimed at certainty, but to shed understanding on a phenomenon, evoke reflection, and trigger further storytelling. The knowledge claims that emerged from this narrative inquiry need to be considered dialogically and critically examined in order to purport their relevance and applicability in nursing practice. As a researcher and nurse, I have begun my own process of storytelling to achieve rigour. This process of allowing self to enter into the research through storytelling and letting subjectivity literally be, has further called forth the need for reflexivity and storytelling.
Ethical Considerations

Ethical considerations were an ongoing process. I continually considered the ethical implications throughout the research process. Certain questions were employed to ensure the study aligned with ethical principals, particularly those that have been highlighted by narrative methodologists. Such questions were framed using a dialogical perspective (e.g., have I engaged in dialogue with participants compassionately? responsibly? morally? have I foreclosed on participants’ stories? have I left the inquiry open? have I remained open to research participants’ capacities to change?). Furthermore, consent, privacy and confidentiality, and potential risks and benefits are discussed below.

Informed and Ongoing Consent Process

Informed consent was based on the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 1998) and Guidelines on Use of Human Subjects (University of Toronto, 1979). Recruitment and informed consent occurred at the heart surgery preoperative clinic. A third person (not affiliated with my study) provided participants with an information pamphlet and told them briefly about the study.

Individuals who voiced interest in the study, were then approached by me and provided a full explanation of the study including its purpose, methods of data collection, the expectations of participants, and the benefits and harms of participation. Often, there was a family member or friend present with individuals. Participants were given ample time to ask questions and the option to discuss their decisions with a family member or friend. Participants were assured that they were free to participate or not to participate, and their decision would be kept confidential. Participants were assured that if they agreed to participate and provide informed consent, they could still withdraw from the study at any time with no consequences. It was emphasized that if
participants were not well enough to participate or concluded that they did not want to participate following surgery, this would be acceptable and no questions would be asked. After verbal consent, I reviewed the written consent form (see Appendix M) with potential participants, provided time for participants to ask questions, and obtained written consent from those persons interested in participating. Individuals were also offered the opportunity to take the information pamphlet and the consent home to consider it further.

**Privacy and Confidentiality**

The first interview at the hospital was conducted in a place that participants felt most comfortable. Primarily interviews were conducted in the patient room at a time when participants did not have visitors and the door to their room was partially or fully closed. One interview was conducted in an end hallway where the participant deemed to be most private. The second interviews were conducted in participants’ homes to ensure privacy. To ensure confidentiality participants were given or chose a pseudonym that was used for all documents that may identify the participant, including data, audio-files, transcripts, and publications and public presentations of the study. Participants’ real name only appeared on the consent form and on the master list of names. A master list with participants’ real name and pseudonym was kept separate from all data. All data was kept locked in a filing cabinet at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. Password entry was used on computers containing research data.

**Potential Risks and Benefits**

Although participants did not directly benefit from this study, many participants found it enjoyable to share their experiences with someone else. This research involved engaging participants to tell stories, which may have been therapeutic and lead to insights and understandings for the participant (Etherington, 2004). Interviews were interactive and open, allowing participants time to discuss their personal experiences, which may have been cathartic for some participants. Participation in this study provided greater knowledge for health care
workers caring for persons undergoing heart surgery and understanding of the experience from patients’ perspectives. Participants may have enjoyed contributing to the possible enhancement of future patient experiences and nursing practice.

Inherent to any research process is the potential to cause harm to respondents. A narrative inquiry involves developing a close relationship with participants in that they reveal personal and emotional stories. The telling of these stories was outwardly emotional for some. Participants were informed of their right to stop the interview at any time and/or to withdraw from the study or reschedule the interview at another time. I was attentive to the participant and reserved the right to stop the interview at any time if I felt it was in the best interest of the participant. Cognizant of the potential for participants to become upset and require further support or a consultation, I was prepared to discuss pathways to engage further help and discuss these available options. As well, all participants were given a support information sheet providing contact information for the Heart & Stroke Society of Canada and the Ontario Society of Psychotherapists.

Summary

The methodology employed in this study involved a narrative inquiry to explore patients’ experiential accounts of the technological in heart surgery. Sixteen individuals undergoing CABG and/or valve repair or replacement were recruited at a preoperative clinic in a large, community hospital. Participants took part in two semi-structured, narrative-based interviews at 48-96 hours post transfer from the CVICU and 4-6 weeks following discharge from the hospital, as well as completing a journal between these two data collection points. Narrative analytic procedures were employed that focused on both the content and the format of the story.

Narrative inquiry involves a different way of thinking and being as the researcher than what many of us were initially trained in and familiar with. The methodological foundations of this study point to how knowledge is constructed by listening to and attending to stories. The
following poem was constructed during my journey through this narrative inquiry and represents the methodological foundations of this study, setting the scene for the results that follow in the next chapter.

Her uncertainties will never be certain
the knowledge she strives for is not static
nor does it foreclose on the one telling
she celebrates a knowing that does not exalt boundaries
a knowing that is not cemented in place
like The Thinker who was sculpted in bronze and left to meditate—

She celebrates a bound-less being
that can shift and change
a final act does not seem to exist
she has surrendered her search for, the Truth
but still has an aspiration for truth
the acid test has been blurred
conclusiveness replaced
by uncertainty
possibility
she is still wrapped up in
understanding
dialogue
nearing closer to reality
but never fully capturing it
she has learned to feed
off of the (un)painted
(un)sculpted
an un-fixing of mere watching
becoming part of the picture
what's the prognosis … I’m finding my way with stories

(Lapum, 2008)
CHAPTER VI: RESULTS SECTION ONE

THE AUTHORIAL VOICE OF A TECHNOLOGICAL DISCOURSE

The discursive elements of the technological acted as a dynamic force that structured participants’ stories, creating possibility and disjuncture.
In this chapter, I provide one of the two sections of the results of my analysis. Represented is an examination of how the technological was emplotted in participants’ stories. The focus of this chapter is on participants’ stories related to the hospital period when the technological was strikingly present. Discussed in this chapter are detailed descriptions of three patterns of emplotment that were strongly apparent in participants’ stories, including: (1) the technological “fix”; (2) claimed by the technological; and (3) the experiential contrarieties of the technological.

A prefatory discussion is crucial to establish the backdrop for these study findings. With regards to narrative emplotment, issues of authorship surfaced as particularly relevant. A prominent finding was that stories of the immediate moments leading up to and the early postoperative stage of surgery unfolded in notably similar ways. Although participants were the narrators, the technological acted as an authorial voice shaping and structuring their stories. Authorial voice is the controlling influence of how a story is told. Often, the authorial voice reflects the dominant discourse (Duffy, 2007). Individuals are influenced by and internalize the voice of the dominant discourse and its prevailing meanings of values, identity and behaviour. The dominant discourse of heart surgery manifested through technological objects, practitioners and their logics and routines of care, and expected pathways of recovery. This technological discourse provided the raw materials of participants’ stories and became the authorial voice channelling their stories into particular trajectories and patterns of progress. These discursive elements of the technological simultaneously provided participants with a resource and a limitation. The discursive provided a pre-existing pathway that structured hopeful expectations of cure and an eventual positive outcome despite current experiences of discomfort. As well, discursive elements provided participants with permission and security to surrender to the technological. Since heart surgery and the associated environments and practices are unfamiliar to patients, the transferring of agency outside of the individual is particularly important.
However, at times the discursive elements of the technological acted as a limitation particularly when expectations and actual trajectories were not congruent.

The Technological “Fix”: Setting the Scene

Discourses of medicine positioned heart surgery as providing a solution to a problem and set the scene for how participants’ narratives unfolded. Narratives of surgery were framed according to an “ending” of cure that was mapped out before the particular patient entered the scene. It was apparent in participants’ stories that they generally felt comfortable and even relieved to let the authorial voice of the technological discourse prevail. Because of their unfamiliarity and lack of expertise to understand what was going on, participants surrendered agency to the technological in hopes of what it could offer them. Participants immediately incorporated the prospect of a technological “fix” into their stories. Four female participants and three male participants specifically referred to having surgery to “fix” the problem with their hearts. The technological fix manifested in participants’ stories as sub-plots revolving around the following: scientific advancements; nearing death to be saved; and mapped out pathways.

Scientific Advancements

There was an immediate emplotment of the technological as a science with its many advancements that provides a potential for cure. Because participants were unfamiliar with the environments and processes of heart surgery, they talked about the technological in nebulous ways. For Bob, who was 71 years of age at the time of his quadruple bypass, dimensions of the technological included the science and logics that led to heart surgery being a possibility, the practitioners with the knowledge and skill, the machines that are programmed to keep bodies functioning, and the routines that are enacted by practitioners. He described this intricate and complex mesh of the technological as creating possibilities to repair his heart and avert death:

"technology, knowledge, science, the human intellect has been able to take what is a life threatening thing, a blockage in an artery going into your heart, and make it better by simply doing something that’s very simple, just re-routing the blood. And they can do
that, patch you up and say, “you’re going to be okay.” …. we all think mortality, but you
learn that you know, invasive as it was, it was sure, the alternative was much worse.

Many of the participants’ stories unfolded in ways that demonstrated how they revered
the historical advancements of science and resultant procedural innovations in surgery. Greta,
who was 65 years of age when she had a double bypass and an aortic valve replacement, referred
to the historical progress, stating “With what they can do with the operations, what they can do
now. Ten years ago, fifteen years ago, and now, what they can do now.” Joseph, who was 72
years of age at the time of his mitral valve repair, positioned himself in his story as the
breadwinner and a symbol of strength in a large extended family. He referred to the “knowledge”
and “science” that led to the “design of instruments for an operation” such as this. The
 technological was emplotted as particular devices that revolutionized the operation to the extent
that it had become routine: “now it’s just a procedure,” but continued to refer to the seriousness
of heart surgery. Underlying his narrative was an intimation that he may be downplaying the
seriousness of surgery as a way to avert his vulnerability and preserve self and masculinity.
Kristi, who was 58 years of age at the time of her aortic valve replacement, particularized the
scientific advancements that led to her being saved. She indicated an understanding that
experimental procedures in the past probably would have resulted in some patient deaths:

Unbelievable. That they can stop your heart, do all this surgery on it and have you still.
Because you know, if you don’t get blood supply and you know, you get brain damage
and die, and then they bring you back, I mean you actually don’t leave, you’re still
functioning, but they actually do that and that’s unreal. I was saying to the doctor that
somebody figured how to do this and I’m sure there’s a few people before me that have
passed away just so I could be at the point that I am at.

Nearing Death To Be Saved

Underlying participants’ narratives was the irony that in order to be saved, an individual
had to risk death. The emplotment of a technological fix appeared in participants’ stories as they
described struggles of reconciling the possibility of death. Experiential accounts revealed that
dwelling on the possibility of death was averted by the mere possibility of being cured/“fixed.”
Authorial voice of a technological cure provided them comfort and appeared in their stories as focusing on positive outcomes.

The technological discourse acted as a resource that opened the possibility of a probable, positive outcome. The technological appeared in participants’ stories as manifesting as a set of logics and risk calculations that often emanated from practitioners. Participants often interpreted the technological discourse in ways that resulted in favourable outcomes. As well, underlying participants’ narratives was a revelation that the healing process was more than technological. Stemming from the surgeon’s logics, participants characterized their own self-healing powers as critical to the process of being saved. Kristi was readily aware that death was a possibility, but she was also able to envision a positive outcome. She stated that her surgeon indicated that he was responsible for the technological operative procedure, but he also reassuringly cited the patients own attitudinal power over the healing process. She characterized her surgeon as instrumental to being able to envision her own role in being saved:

He made it sound like “you do your job, we know how to do it, very comfortable in it” … for him to be that confident, I’m glad he is because then I have confidence in him … He made me feel comfortable with the surgery so I wasn’t worried that I might die. There’s always that possibility and that lingers in your mind, but I wasn’t going, “well, I think this left 90% I’m going to die, 10% not.” I just went into it. I know what he’s doing and he’ll do the best he can and the rest is, like he said, “you know your body heals itself.” He can only do the structural part of it and the rest is up to you, whether you want to heal yourself or not. So you have to go in with a very positive outlook. That’s how I look at it.

Edwin was 81 years of age when he had a mitral valve repair. He indicated that he had confidence in the practitioners and their progressive techniques, but he began to cry as he talked about his fears: “it’s a bit worrisome because that’s all you have to get you going. You just hope the pump doesn’t stop.” He counterbalanced his fears by constructing risk calculations based on his doctor’s claim of a 5-10% mortality rate. A component of being saved also laid outside of the technological as he referred to his physical hardiness. He indicated that he felt his odds were good because multiple doctors had told him he was in good shape and his lungs were clear. He
described that he heard through word of mouth that these surgeons had not yet lost a patient at this hospital, stating: “I don’t know whether that’s true or not, but I took it as gospel anyway.” Joseph’s story was nested in a discourse of dissonance. There was a simultaneous and vacillating expression in his story that the surgery was nominal, but also rendered as something quite substantial. He attributed a special significance to the heart and was more concerned about morbidity issues (e.g., stroke) than mortality. Underpinning his narrative was a construction of the technological as a set of logics and risk calculations that emanated from what the doctor told him. He expressed confidence and the probability that he would not die based on his doctor’s identification of a 3% risk of mortality.

For some, the surgery was considered a death because the heart is stopped and their bodies are not functioning autonomously. Ashur, who was 61 years of age when he had an aortic valve replacement, described not just nearing death, but actually undergoing death to be saved. Underpinning his narrative were his religious beliefs that “you die every night when you go to sleep, you’re dead.” He aligned his understanding of the surgery in the same way. Although his surgical death was constructed as technologically-induced, he attributed waking up to God’s will. For him, being saved was not merely a technological intervention:

Technology is such an excellent, that give the surgeon the capability to do such surgery, very, very delicate with all the equipment he has today, the more, the right equipment the more he can make miracles more or less …. [but, it is] my faith that our lives are in the hands of God than with the surgeon who did the operation. The surgeons, no matter how good, if my time is gone, that’s it. That’s what I believe.

Participants recounted stories that backgrounded the possibility of death. To some extent death is characterized as an offstage player that is waiting in the wings. The technological enabled optimistic plot lines to be built around the positive outcomes offered by practitioners. Underpinning Greta’s narrative was the sense that mortality was on the edge of her thoughts: “You’re scared of the unknown. It can happen … you never know if you wake up again … you just have to let it go and hope for the best.” Raz was 63 years of age when he had a quadruple
bypass. He implied an understanding of the risk of death with surgery during his first interview, but seemed to distance this thought and was indirect in how he talked about it. He described being aware that some individuals may not come out of the surgery, but he indicated not thinking too much about this on the morning of his operation. Referring to his heart, he stated that he just wanted “to get his business fixed.” At the second interview, he had sufficient temporal distance from the event to speak of the surgical risks in a more personal and categorical way:

It is scary. Today, it’s not scary, but if you’re going in tomorrow, when you go in they tell you that you could die, you could get a stroke, all those things. Your life start reflecting in front of you. You start seeing your family, what’s going to happen to them. You trying to make arrangement …. I could come out there with a stroke, I could get a stroking on the table, I could die, this is when you start thinking about it, whether you should go through with it. If you didn’t go through with it, you could die in any case.

Another participant, Abbey, who had a triple bypass, was similarly aware of the risks for death. She turned 80 years of age the week after her surgery, but directed the risk at older and more feeble patients. She stated:

I look at people around here, how they seem so slow, I think, I’m not so bad. Because there is a lot of old people in here and you hear “Code Blue, Code Blue,” and you know what that is? But if it’s meant to be it’s meant to be. I guess they thought the same

It was common for participants to indicate that if death occurred on the table, they would not be aware of it anyway. For example, Jack, who was 56 years of age when he had an aortic valve replacement, hoped the surgery would turn out, but stated “if it doesn’t turn out good I won’t know the difference anyway.”

**Mapped Out Pathways**

The technological was emplotted in participants’ stories as a pathway that structured their options in terms of the decision to have heart surgery. The decision to have surgery was discursively driven by a pathway that effectively put the plot in place before the patient entered the story. Because heart surgery is technologically possible and considered effective, it is constructed as the only pathway to “fix” the problem when one is diagnosed with a coronary
artery blockage or a valve problem. The only other “option” to heart surgery is to live with the problem until you die, which is not constructed as a viable choice within the technological discourse. Bob’s doctors recommended that he have bypass surgery. Quite bluntly, he wrote in his journal, “My wife and I talked it over and concurred. Was there really a choice?!” Joseph stated that having surgery was not a choice, but a necessary solution. He explained his belief that advancements over the last 50 years inevitably led to this surgical possibility for survival. Edwin indicated that death was for him, a real consideration. Referring to the operation, he stated that “they said if I don’t have it, I only have about a year to live…” [voice trailed off as he was crying]. Velinka was 66 years of age when she had a single bypass. A set of logics was woven into her story as she indicated that the doctors explained to her what had to be done. She recognized that surgery was a necessity, stating: “I know I have to do it. And I just did it.”

The technological discourse shaped a scripted narrative that focused participants on the end results of averting death and being cured. Although this plot line at times acted as a coping resource, it also had limitations. At times, these discursively-driven narratives focused participants on the expected outcomes, but neglected the realities of the surgical and recovery process. Linda, a healthy 84-year-old woman who had a mitral valve replacement and a single bypass, portrayed herself as being optimistic and was focused on being saved. Referring to the surgery, she stated: “It is a miracle that they are able to do that. Otherwise I would have had a stroke or something like that. So I am hoping that it will help my lifespan.” Underpinning her story was the expectation of a linear and progressive recovery. Her path of recovery diverted from the script she was previously prepared to follow, and she had to reconcile this non-linear actuality of what she experienced:

You have to focus on the end result, it is all a bit traumatic …. It was more difficult than I thought it would be, but maybe I am an optimist to start out with. It went well before I went into surgery, it was more difficult in the recovery stage. There are a lot of things that you have to do that you don’t really count on. Wearing a pace maker, wearing oxygen in your nose. And these are complaints that you don’t understand before. I just
looked at the end results and I thought “that would be good.” Well, that they would fix my heart and I would be able to live a longer life.

There was a purposeful indeterminacy in participants’ stories due to the complexity of the technological dimensions of heart surgery. Many of the participants indicated that they could not possibly understand the process and indicated they would not be conscious for the surgery anyway. To some extent, participants’ agency had already moved outside of them. As a coping mechanism to distance the bodily trauma, participants described focusing on the end result of being saved. Margaret, who was 72 years of age at the time of her aortic valve replacement, described being uncertain of the process of being saved. Underlying her story was an emplotment pattern that was shaped by an expected pathway of cure. She explained that she suppressed her fears by distancing what was going to happen, attempting to not think about it, and just focusing on the end result:

I just didn’t allow myself to focus on the fact that they were going to put this thing down my throat and have all these tubes and everything and I still haven’t really thought too much about it …. I remember kind of turning my head off. My thought process was I have to have this done so you just go ahead and get it done and you leave what happens to a higher power and, hopefully you come out the other end.

Claimed by the Technological

Participants told stories wherein they were progressively claimed and standardized by the technological. The technological involved a pathway that was implemented by practitioners with a myriad of object technology and skills. The authorial voice of participants’ narratives was shaped by the complex interrelationship of the technological (e.g., practitioners, logics, objects, practices, standardized procedures and routines, expected pathways of recovery). These dimensions of the technological resulted in the unfolding of stories that were invariably similar. As well, these dimensions actually pre-existed before the particular patient entered the story. To some extent, the universal patient also existed before the particular patient entered. Being
claimed by the technological emerged as three emplotment patterns in participants’ stories, as follows: being “plugged in”; relinquishing of agency; and an “absent 24 hours.”

*Being “Plugged In”*

Patients are inevitably drawn into the complex interrelationship of the technological because they are the principal person that practitioners and their process of care are focused on. Being “plugged in” is a metaphor that describes a process of becoming part of the complex interrelationship of the technological. Joseph described feeling like the centre of attention with the big lights above him and all the people around him ready for his surgery. He exclaimed, “I thought I was a star on the operating table.”

It became more apparent how participants’ stories were discursively informed as they described the process of becoming part of the technological. The technological discourse standardized the processes that participants experienced, consequently their stories held marked similarities. Participants themselves even recognized how all patients were prepared for heart surgery in the same way. Bob described this universal process:

> Whatever you call that drug was, Ativan, lulled me into a you know, I’ll be all right you know … I remember before being, you know, getting dressed in that wonderful hospital garb they put around you, and watching the other people in the beds being prepared for surgery as well.

Although he described confidence in the practitioners’ skills, he also intimated concerns with becoming the universal patient. His story revealed the tensions inherent in becoming part of the technological in that the processes including the routines of care objectified and standardized patients. A marker in Bob’s narrative was the concern that this standardization masked his individuality. Routine meant inattention to unique features of his body and disease process:

> There was a certain confidence in that, this operation has been done hundreds of times. Basically it comes down to the skill of the surgeon with the knife, so that’s a very, if you understand, that’s a very primitive technology, but a very important part … people said it’s routine, but it’s not routine for me. This is the only time I’ll do it, “please God.” It’s routine for Dr. L, in that he does this on a monthly basis, 24, 25 up, and he has a skill to keep focus on his patients, that it doesn’t become routine and I think his machine helps
him do it. I’ll draw an analogy between this and my own profession. Teaching looks routine. Teaching is not routine because every single day the kids are different, even in the same class, what’s happened the night before, what’s gone wrong, you’re different, the most routine job becomes putting the notches on the poles and moving along, so every time Dr. L incises a patient, it’s a different patient and he doesn’t know what’s going to happen when he makes that incision. Everything can turn upside down. I’m serious, this happens, so the danger is becoming routine.

Authorial voice of the technological was apparent as participants’ stories were orchestrated according to similar events and situations that they experienced. Ishani, who was 63 years of age when she had a single bypass, provided a catalogue of these events. She described being put in a gown, getting shaved, being given a couple of pills, and losing consciousness at some point while she was being wheeled to the operating room. Although some participants could recall only vague descriptions of what happened preoperatively, their stories were still structured according to the technological processes that practitioners enacted. Abbey recalled:

Well, there wasn’t much to it because they just come in, and I wasn’t awake when they put all the iodine all over you. And that’s all they did. I was awake. It was so fast … I didn’t remember too much of anything. I was given a pill and I was dozy, I just sort of, it didn’t matter, you know …. It just seemed like I just went to sleep.

As the technological became more prominent through the processes and routines of care, a sense of passivity appeared in stories. Margaret described not thinking at all when she was lying in the operating room being prepared. She stated: “I’m just there. I’m here.” Joseph described a similar set of preoperative procedures as Abbey and Ishani did earlier. In his story, authorial voice of the technological appeared as characterizing practitioners as taking an active role and the abundant use of third person pronouns (highlighted in the excerpt).

What they did as soon as you enter the hospital they take all the information then you go to the room, they give you a robe to put on and put you in bed and the nurse comes in, they want to prepare you, to shave you…she gave me a pill, she said “put under your tongue,” she put it under my tongue and after a while I’m talking with my family there, until the nurse came in and she said “okay, we’re going to take you to the operating room.” “Thank God” I said, “we’re finally going.” By the time I arrived there, I was half dosed up. All I remember, two big lights, not lit, the fixtures above the operating table, and then they lift me up to the bed and that was it.
The abundant use of third person pronouns and the decrease in first person pronouns became prevalent in participants’ stories as the technological became the authorial voice. Also, associated with this passivity was a shift in identity. The technological, in terms of the processes and routines of care enacted by practitioners, was emplotted in ways that stripped participants of their previous healthy identities. From the moment patients walked into the hospital, their subjectivity was progressively eroded to the point that there were no distinctions between them.

Raz recalled this experience:

> We drove to the hospital and we get there for 6:30. They took me, and that was it. I guess it was good because it took me, I changed into the gown, they took my clothes, put in a bag, and they give it to my wife and she bring it home. Of course they shave all the body hair. So they did all that, which was very good. The nurses and them were brilliant.

Being “plugged in” or “hooked up” were recurrent metaphors of how the technological was emplotted in participants’ stories and how they became part of the technological. In their stories, the physical act of having their bodies attached to technological objects was referred to as a fairly normal occurrence or at least a part of the process for heart surgery. Wayne, who was 64 years of age when he had an aortic valve replacement and a single bypass, described wishing that he was more aware of the things he was “hooked up to” in the operating room. Jack described the routines and processes associated with the preoperative preparation as eventually leading up to being “plugged in.” He stated:

> you’re just done and gone …. they were very efficient there. I don’t have anything to complain about and then right away in bed and then after the bed you know, half an hour, as soon as they did everything that they needed to prep me … I just remember getting on the gurney. And I had already my IV on the side in which I was plugged in.”

Although the physical act of being “hooked up” was narrated as quite normal, being unhooked from these technological objects was marked as a critical juncture in participants’ stories. The importance of being unhooked suggests that being “hooked up” may not have been taken as lightly as first described by participants. The temporal changes in how these metaphors were used are examined later in this chapter.
Participants’ stories of nearing the surgical event revealed various technological processes and being progressively plugged in that resulted in a suppression of awareness. Ashur stated: “the way I experience it, it’s so gradually nothing, because nothing. The nurse was shaving my chest and at the end she gave me a pill under my tongue. So that’s it. That’s all. That’s the last thing I remember.” Referring to the intravenous being inserted, Raz stated “by the time they scratch my arm, I was gone. I didn’t see, I didn’t know who he was. By the time, I was, they didn’t tell me, I count backwards and by the time I get to nine, I was gone.” Ishani, indicated that the nurses “came and said ‘Mrs. E, we’re going to take you in’ and they did give me two pills, and they said ‘take your time’ and that was it. I think they were wheeling me and I was going to the operating room, but I can’t remember anything else after that.” This phase of becoming part of the technological was a similar process that led to a temporary biographical suppression. However, Bob was adamant about the experiential differences that may follow:

It’s not going to turn out exactly the same way because you are different and your doctor is different, the circumstance is different. Where it was on my heart is different than for somebody else’s so, it’s not exactly the same thing, but all that lead up to the moment of the first incision, which was the last piece of information I had, was very positive.

Relinquishing of Agency

The technological was emplotted in participants’ stories as a presence that influenced them to relinquish personal agency. As participants became more physically passive, dimensions of the technological were characterized as becoming more present and active. These dimensions of the technological involved practitioners, the processes and routines of care, and the presence of object technology. The relinquishing of agency involved two critical junctures, as follows: preoperative and intraoperative relinquishing; and waking up on “stand-by.”

Preoperative and Intraoperative Relinquishing

Relinquishing of agency involved a level of understanding for participants that their bodies would not be able to function as normal and machines would do what their bodies did
naturally. Often, participants would narrate a shifting of agency to the practitioners. Jack made
note that his body would be dependent on machines, but he was careful to explain that that his
agency was transferred to the practitioners. He indicated that people are at the forefront:

It’s still the people to drive it, technology is nothing innovative in itself … I think about
the physical act of what they did, the cuttings, shutting the heart off and re-routing the
blood supply, make myself aware of it. It’s kind of a big deal, that I wouldn’t be
responsible for doing it myself. It’s pretty amazing that people are doing this kind of
thing for other people, being able to help them by doing stuff with things like that.

Graham, who was 59 years of age when he had an aortic valve replacement and triple bypass,
compared the surgery to a “football game.” He indicated that each team member had a job with
specific intricate measures:

The team, there must have been about eight of them, to do all the things that they were
doing at the same time as, on-off the pumps and all of that stuff, and I don’t remember a
damn thing …. I presume somebody’s working on this part, somebody’s on this part.

Edwin also acknowledged that entering the operating room involved giving control to a team of
people. He described feeling like a passive object confined to the operating table where control
over what happened was not in his hands. He recognized just how non-agential he would become
and the various things that would be done to his body:

They undressed you and you put the gown on, which makes you worried a bit, you think
you’re a guinea pig. They’re going to experiment on you. You’re going to lie out on this
table for four or five hours and they’re going to stop your heart [his voice trailed off as he
began to cry]. Do lots of cutting and sawing. It’s nasty to think about … it is a little
apprehensive, you’re going to be stuck there on the gurney and about half dozen people
will be doing a very tricky operation. You hope the knife doesn’t slip.

The technological was emplotted in participants’ stories in ways that revealed aspects of
anthropomorphism. At times, participants recounted a relinquishing of agency that was shifted to
the various machines. The technological objects were emplotted as characters with attributes of
an animate quality. Participants characterized the technological as an active moving force that
they themselves were caught up in. Referring to the machines, Bob stated in his journal that “the
technology was replacing and supporting the vital functions of my body …. if they weren’t
working you would be dead.” Without identifying the various machines and just referring to them as “things,” Bob attributed agency to the machines. He indicated the importance of “all the things that keep my chest open, keep my blood flowing.” During his second interview, he was able to clearly identify some of the objects that kept him alive:

I think technology around all of the heart surgery is all the machines that I can see which is around the operation table, that pumped oxygen into me, kept me asleep and kept me from feeling pain … the technology took over then when they put in all the tubes that sucked out all the bad stuff and put morphine into me to keep me from feeling pain.

Although object technology was characterized as agential by some, it was apparent that Bob understood that practitioners activated them. He indicated that machines are tools that provide information, but it is the practitioners that “turn that into knowledge … it’s a skill, a skill. It’s as good as the skill as the person that is using it, because the machine is infallible.”

In participants’ stories, the technological became an increasingly dominant player as the preoperative events unfolded. There was an inevitable surrendering of participants’ agency. Two participants, interestingly, repeated the same phrase: “whatever happens, happens” (Joseph, Greta). They both indicated that practitioners knew what they were doing and you just had to hope for the best. As well, Abbey and Greta indicated that they were not in control. They described it as scary to see the machines, Greta stated:

It was scary because you don’t know what to expect. But it’s okay. So long as the doctors know what they’re doing. You just have to let it go and hope for the best …. you have to trust the doctors because you’re under …. they know what they’re doing.”

Margaret described having to change her mindset and do what the practitioners told her. She described turning her head off and stated that when she was pushed into the operating room, “I just closed my eyes and figured let them do what they’re going to do.” She described giving up control and just hoped she would “come out the other end.” Joseph openly stated, “I left it to the guy that had the knife … I’m in your hands.”
As participants talked about what they had imagined was going to happen and what they thought happened during surgery, they described the technological in ambiguous ways. The technological became very abstract and foreign, to the extent that its dimensions could not even be named. The technological was something that took over the normal functioning of the body, but participants did not fully understand how it actually worked. There was an understanding that they would not be in control of their bodies or what happened during the surgery. Raz struggled to imagine how the doctors opened his chest for surgery:

I want to know how they cut me. How they cut this centre bone? I [was] trying to think if it’s a saw or some kind of a drill with a blade in it that they use …. It’s not my field …. I didn’t even know, when they cut me this way, how did they get inside? If somebody tell me that they open my ribs to get inside. Even thinking about it, I say well, how do they get it apart from here [points to sternum], this like is from here they cut it, right? The heart is down there, how much space. I don’t know. How did they pry it open?

He described struggling with the lack of knowledge about how particularities of the surgery were performed. Distress over his lack of control gradually diminished over time. He described wanting to know, but recognized that he probably did not want to know exactly what they were going to do prior to surgery: “I want to know. Now, had I known that before I did it, maybe I might go in there with that kind of stress on my mind. It might have caused the operation not to go right. I don’t know.”

Waking Up on “Stand-By”

Participants’ stories of the early postoperative period continued to show how the technological acted as an authorial voice. Underlying participants’ narratives was the sense that the technological still claimed the body and agency was not fully their own. At times, many of the machines, tubes and wires had already been removed when participants woke up. Nonetheless, they still described being dependent on practitioners for what they were not able to do or what they did not yet trust themselves to do on their own. Agency was in a state of readiness to act, but they still could not enact full control of the body and its functions. Joseph
indicated a passivity, stating that they “take us, me for a walk.” There is an intimation in his statement that he is not able or ready to initiate a walk on his own. Emplotting the technological in a way that its many dimensions still claimed him, he elaborated on how he was on “stand-by” during the early postoperative period in the hospital. When describing walking, he stated:

[I was] very tired, very tired. Of course the drugs make you insecure when you’re walking so you have to have, you’re, how can I say, you’re on stand-by. You’re careful. Like if I miss something I kind of hesitate till I get it.

Graham described being more “out of it than in.” He indicated that at times he would just go “down for the count for a while.” Raz indicated that he would like to go home, but did not think he could walk on his own yet. Being on stand-by was technologically induced, Kristi described waking up from surgery and reacting to the morphine:

The morphine really took a toll on me. I was trying to pull everything out and they still had a tube in my nose and one in my throat and one in my neck and I think a catheter and I was trying to pull it all out cause the morphine was not making me feel good. It was making me very agitated so when they took me off of that, is when I calmed down but that is the first thing I remember and I remember saying in my mind, “I’m going to find out who tied my hands and I’m going to beat the crap out of them” ’cause I was not comfortable. I remember my hands being tied and I couldn’t get to my face.

The state of being on stand-by was found to undermine masculine identity. Ashur found himself questioning his identity as a man when he was lying in bed on the third postoperative day:

Because of the pain and because of the weakness, as a man, as a human-being sitting there, to what? What’s tomorrow? What am I going to achieve from this operation? I was doing all the activity that I wanted [before]. I mean, the doctor doesn’t feel I could go on. I did everything a man can do. I mean anything a young man can do, running, jumping, swimming, go with the kids, play soccer. Why do I have to do this operation if I’m going to be an almost useless human being lying down. What did I do to myself?

Edwin portrayed himself as normally strong and athletic, yet he indicated that the wires contradicted this robust embodiment. The unfolding of his story indicated a disruption to his identity that shifted to an almost child-like person who required assistance to walk:

I was a bit depressed the first day because I’d already been in here a week. I hate being confined to a bed. I’ve always been very athletic. I like doing athletic things. I can’t do
that here so there is loss of control .... a little bit depressing. I’ve got all these wires. I feel strong, physically I could walk around unaided. I’ve done a walk, they started off this morning with a walk. But I’m sure I can manage without it. To me it’s a bit of a problem with pushing these all around, but you have to get somebody running behind you.

The emplotment of the technological as being on stand-by revealed a continuum of presence—absence. Participants described a bodily presence and a state of fluctuating consciousness. Abbey’s description of waking up revealed a sense of dissociation:

I wasn’t quite myself and I remember seeing all these people. I said, “Don’t touch me, you’re not a nurse. You’re too young to be a nurse.” I don’t remember, but I remember seeing these people and it was almost like as if I was in a kitchen somewhere. You know how you just see a picture of it, you don’t feel like anything’s real, because I never take any kind of drugs, I don’t even take Aspirin half the time. It’s weird, it’s like you’re looking through more like a movie, but you’re not there. I was trying to think who these people were. I didn’t know it until he [husband] told me all of this and I thought, that’s who the people were, I guess they were nurses.

Present in Jack’s story was a vague awareness of waking up in the ICU. There was a complete sense of passivity: “I just remember being worked on in the ICU. I really can’t remember what I was seeing.” In his second interview, he added that he thought that he remembered tubes everywhere, and felt the urinary catheter and the endotracheal tube come out, but barely noticed.

Greta was vaguely aware of her bodily and environmental presence, and she could not fully enact her agency. The practitioners and their processes of care were more instrumental over her body than she was. She still described herself as a passive and partially inanimate object. She recalled waking up in the ICU and seeing nurses, but did not know what they were doing:

I don’t remember feeling much of anything, I was sort of there, and then not there. Just [saw] machines. I don’t see them putting them on or anything. I don’t know remember anything, but seeing them. Just the machines, yeah. But otherwise I don’t know nothing.

Like others, Ishani reported a sense of passivity and disregard for technology. She indicated being vaguely aware of the ICU environment and only recalls nurses coming in and out of her room. She described equipment all around her and tubes in her, but she indicated that she did not really think about it, nor did it bother her. She stated that she “didn’t even know what was going on” and could only recall seeing glass doors, a clock and “just looking up at the ceiling.”
Participants’ stories of the technological involved a sense of not being in control of the body and their behaviours. Dimensions of the technological that claimed them, also suppressed their memories. A number of participants indicated that they were awake and talking when transferred out of the ICU, but explained that they do not remember. Wayne stated: “My wife says I said to whoever was pushing the stretcher ‘thanks for the ride.’ So I must have been semi-conscious but I have no memory.” In addition, Graham (who had postoperative issues of tachycardia) described it as a loss of control over his body and wondered why his heart was racing. There was the intimation in his story that his body was controlling him, specifically the functioning of his heart:

The valve decided that it was going to take on a life of its own and my heart for almost two days was in the 160, 180 degree rate, and knowing that, being asleep is one thing and knowing that is another, when you have to sit there and literally watch your chest pound. It was very disturbing .... it was like somebody was inside with a hammer trying to get out, and more or less they were .... they’ve given me some Sotalol [beta blocker used to treat arrhythmias], whatever that is. It slowed it down and allowed it to get into a sinus rhythm, get its own beat going. There were a couple of times yesterday when it would get out of sinus rhythm and get into its own tango. What was causing that, they didn’t know, but again, it’s not something they were worried about. Of course it’s not their chest.

Despite his concerns, he indicated that the nurses seemed to downplay the tachycardia:

It was normal for them to see that. It scared the shit out of me ... well, I just had all these things done inside of me and now it’s pumping even that much harder and I don’t think I want to spring a leak. I think that was more along the lines of I didn’t want to spring a leak or cause this, a layman’s way, cause this valve to come unglued or come unsewn.

“*The Absent 24 Hours*”

Underlying narratives of the perioperative period including the actual surgery was again a continuum of absence—presence. This continuum appeared in participants’ stories as an “absent 24 hours” that was represented as simultaneously distressing and comforting. The surgery time was represented as a temporary biographical suppression wherein participants were uncertain of what happened to their bodies. Bob indicated a struggle about this time when his sense of consciousness was completely repressed and he did not know what exactly happened. However,
he described that he was in “good hands” which indicated a sense of comfort as well. Bob’s story unfolded in ways that the idea of an “absent 24 hours” in his life, led to a composite of comfort and distress with the latter being more prominent:

I kept reflecting a lot on the 24 hours I mentioned, the absent 24 hours. The 24 hours in my life when I didn’t know what happening to me …. I was totally out. Thank God for the morphine, but you realize that there was 24 hours of my life that I had no clue. The only thing you can do is kind of conjure up what they must have done, if they were to saw [made the noise of a saw] and that’s not good so, the only 24 hours, it’s 24 hours of my life that I will never remember. I don’t lose sleep at night, but this was a whole day in my life which I have no memory. It’s a whole kind of day gone and you just knew that you were in good hands. So I have no memory of it, no memory at all, and all I can think about, I keep asking my wife, what did I look like in the Intensive Care Unit?

Similarly, Greta stated, “you go under and that's it. You wake up and you have all these tubes out, you don’t know what happened to you.” Raz wondered how they cut the sternum, he stated: “do they use a hatchet? I don’t know. I would like to know about that.” At times, the technological appeared in participants’ stories as a provision of comfort through surveillance of the functioning of their bodies during this absent 24 hours. For example, referring to the presence of object technology, Wayne described it as comforting to have it there during his surgery, so that the practitioners could monitor everything that was happening to him:

I think it’s comforting. I think that new technology can probably keep the doctors on top of what’s happening, right up to the moment instead of reacting to something that they can see when something’s going awry or remaining stable, so it, gives them comfort too.

An element of this absence—presence involved a change in embodiment. It was not necessarily disembodiment, but a sense of being physically present and yet absent (e.g. unconscious or semi-awareness). In participants’ stories, a sense of bodily disconnection emerged as the technological became more present (with regards to the practitioners and the object technology). Describing the preoperative preparation procedures, Joseph clearly stated, “you’re just done and gone … I was gone.” The technological was emplotted in Ishani’s story as taking over her body. The actual taking is activated by the practitioners in her story. She described being put under anaesthesia in order for the surgeon to open her up. She stated, “I
wasn’t there, the technology, I don’t know what they really did. I was under.’” Graham described
a sense of distress in not remembering what happened over a couple of days. He indicated that a
number of people came in to visit him whom he does not remember. Furthermore, there was a
mind-body disconnect in that he was awake, moving and talking, but does not recall any of it:

I think I lost a day somewhere and that kind of bothered me … Where did Tuesday go? It
Apparently I was awake and I was talking to my wife but I have no idea. I don’t
remember seeing her at all. Then again, that could have just been me, my reaction to the
anaesthetic. What do I know? But it bothered me that I had lost a day. It was no big deal,
it was just, where’d that day go? … They took me to the ward on Tuesday. I must have
been awake. My body was awake. My mind didn’t seem to be, doesn’t remember that.

The continuum of absence—presence continued in participants’ stories as they began to
come out of the anaesthesia, but had no ability to do or control anything. It was a liminal space
between the technologically-induced sleep in when they had no control and a beginning
awareness. Kristi stated that it was “like you’re not even there.” Underlying her story was a sense
of tension as she talked about imagining what happened during the surgery. As her story
unfolded, there was a sense of being present and yet absent. She stated:

you never get a chance to get nervous ’cause they’ve got you out so fast. The next thing
you know they’re wheeling you back and saying the operation’s over. It was just like
you’re not even there and now you’re here. To bring you back, [pause] when he said that
he has to stop my heart and I said “you’re not going to like go for a coffee and come back
and forget about me” … that was unbelievable. That they can stop your heart … and then
they bring you back. I mean you actually don’t leave, you’re still functioning.

There was a shift in embodiment for her in that there was a bodily presence, but her
consciousness and any sense of agency were technologically suppressed. Upon questioning
whether the doctor might go for coffee while she was under, there was the emerging sense that
she was captured and at their will.

The absent 24 hours was described in ways that participants enigmatically woke up and
were unsure of what really happened. Although they were told what was going to happen, they
were told in a less graphic way than what actually happens. Abbey indicated grasping onto the
postoperative physical sensations to try to understand what happened:
when you go into surgery, you don’t know anything after that. It just, blocks it out …. it just seemed like I just went to sleep and I’m out again …. I’m trying to figure in my mind, what happened, what were they doing? They were doing something probably to prepare me, but what? I guess put the iodine on me. That stops the infections. But the hardest part I think was, when I woke up, I felt like somebody had cut my chest and put something so heavy there I can’t move. It’s like holding me down and to move was just painful, you couldn’t move …. I just went to move and oh, what’s wrong?

Wayne indicated that he preferred not to think about what they did during those absent 24 hours, but the rubbing together of his bones acted as a reminder:

I would probably prefer not to dwell on using a circular saw to cut me open or what, I’d just as soon not know what he did. I obviously was aware, especially the first few days of the fact that the bones are, every time you move or cough or sneeze, you can feel the bones kind of rubbing together. I did think of that and I dreaded when I had to cough or sneeze, but as far as sort of doing a play-by-play of the surgery, no, I didn’t really think that much about it. I can’t think that many people want to think of the fact that the surgeon is in there up to his elbows, fiddling around inside you. It doesn’t appeal to me.

Dianne described being content not knowing what happened during the operation. She stated, “just as well. I’m not a nurse. I wouldn’t want to know … as long as I came out okay.”

Stories of the absent 24 hours were also constituted with patients’ family and friends. From what Ashur was told by his family, he described a horrific scene of coming out of the operating room, and then began wondering what actually happened. It was apparent that he was aware of the invasiveness of surgery, but he held it at bay in order to protect his sense of self:

My wife tells me that she was overtaken by the equipment. When the door slid open and she saw the equipment there connected to me. I don’t know if it was in the operating room or, maybe. The moment that they brought me out, she fell down. She couldn’t take it. My sister also started to scream. It’s a major thing. It’s major scenery, when you see the equipment and blood moving, this and that, tubes in my system and it’s all hanging like it’s an operating room that’s moving around. But to me, I remember nothing …. When I come to the point that I want to know then I switch my mind. I don’t want to know. No. Not at this stage while I am still not well. Maybe later on, I’ll find out. And I’m not afraid, it’s just, I know whatever happened, it was very severe. How did it happen? Cutting through bones and how they put it together.

Experiential Contrarieties of the Technological

Underlying participants’ stories were two antithetical and closely interwoven patterns of emplotment. As participants interpreted and brought meaning to the technological dimensions,
various experiential contrarieties appeared in their stories (e.g. comfort and discomfort, objectified and subjectified, adherence and resistance). Participants told stories of experiencing these types of contrary feelings when describing the presence of technological objects, practitioners and their routines of care, and the expected pathways of recovery. These contrarieties were woven together so that they were simultaneously present and highlighted in a temporal fashion. Three patterns emerged that represented the experiential contrarieties of the technological, as follows: dualism of (dis)comfort; human touch versus patient “number 161-302”; and resistance versus “go with the flow.”

**Dualism of (Dis)Comfort**

Stories of the technological revealed a dualism of (dis)comfort. The term (dis)comfort is used purposefully to emphasize how two paradoxical patterns of experience exist concomitantly and temporally. The technological dimensions that were related to (dis)comfort involved the presence of object technology and nurses, the constant monitoring and tests, and pathways of recovery. Participants’ accounts revealed emotional, physical and psychological comfort, as well as descriptions of security, reassurance and hope. The paradox of these descriptions were feelings of physical, emotional and psychological discomfort related to dependence, restriction, fear, unfamiliarity, and disruptions to bodies and expected pathways of recovery.

For some, this dualism of (dis)comfort manifested as a disruption to the body juxtaposed by the positive outcome of life. Abbey questioned whether there was something wrong because her chest was so heavy. As well, she was not expecting such extensive incisions, but her physical discomfort was balanced by the emotional relief of being alive:

hardest part was when I woke. I felt like somebody had cut my chest and put something heavy there I can’t move, like holding me down and to move was painful … didn’t think it would be heavy. I thought it would be sore, but it felt like somebody put a big TV on here. I thought, what is in there…start feeling the pains and you think, oh, my goodness, I looked at my arm, all those stitches, I don’t know what I expected. I knew I’d be cut … I didn’t think it would be that big … It didn’t matter. I don’t care, as long as I’m alive [voice trails off—crying], but he [surgeon] was good. He said, “you know, we’ll do this,
we’ll do that,” and I think it worked. People said weren’t you scared. My daughter come in, “Mom, you’re all cut.” I said, “Don’t worry Mandy, I’m alive.” [teary-eyed]

Stories of the technological revealed (dis)comfort associated with practitioners’ monitoring routines in the hospital. Kristi indicated that the constant tests and monitoring imparted a feeling of comfort because there was security that her body was responding the way it was supposed to, and it would be treated accordingly. However, fear was juxtaposed with reassurance in her story:

It’s overwhelming. It’s scary ’cause you don’t know what they’re going to come back with. They really don’t tell you that much other than the doctor coming in and saying everything’s fine. Your blood pressure’s fine, you’re healing fine, you’re eating fine. Your urine out-take is fine, and for what you’re drinking, so it’s scary but at the same time it’s also very reassuring that they do do it that many times. ’Cause if they didn’t, say they only did one in the morning and one at night and something else happened in between, they have to rush you back to surgery so, no, that was fine and it was relaxing once you’ve found out the reason why they do it.

Graham, who had been experiencing tachycardia, identified the monitoring as part of the technological system. A sense of surveillance underpinned his narrative, as he described how closely the nurses monitored him and that they knew each time he moved. Although he indicated that he would have liked to have been more involved, the monitoring generally made him feel secure. He indicated that he needed and wanted to be monitored because of the bodily discomfort that he was experiencing caused by the tachycardia:

It was hard to get comfortable in bed. I’m a stomach sleeper and when you’re sleeping on your back and you want to do something, it took me three weeks to get on my back which is the first great sleep I had but every time one of those things would fall off they’d come in. They’re watching me, it’s on the machine … I felt good that they were there on top of it. I knew when a lead fell off because this other thing up here [the monitor] would kind of go flat too and I’d go, well I know it’s not flat because I’m still here and end up I was sitting waiting for them to come in. There’s not a hell of a lot I can do. I don’t know where, which one it is that’s fallen off. I’d like to have been a little more involved. Every time they came in to take my blood pressure, blah, blah, blah, I’d ask what it was. Blood pressure was something I was having some trouble with before. I didn’t have any trouble with it until last week again. Again it was up a little bit and that could have been just an anomaly. It didn’t bother me to be monitored. As a matter of fact I felt very secure.
Edwin indicated that nurses were well equipped with technological devices and found that the processes were a normal part of postoperative recovery in the hospital. However, he still emphasized a feeling of discomfort associated with the unfamiliarity of the mechanical devices and the constant routine monitoring:

they have all these gadgets for regulating everything and what’s the other one, where they put all the stickers on the body? [Interviewer: ECG?] Yeah. At one time I’m sure that used to take quite a bit. Today they do an instant read out. They have these little things they clip on your finger and tell you, I guess the heart temperature. I don’t really know what most of these things do and if they stop working they beep … It’s a whole succession of people. They seem to come in about one an hour. Twenty four hours they’re giving you pills or taking blood samples, like Dracula. I had my blood sample taken three times in the last 24 hours. They keep doing EKGs …. as I say, they must have taken my blood on average about half a dozen times a day. You know, I was quite sore on my arms from there. I think there’s a bit of overkill there.

Underpinning Velinka’s story was fear juxtaposed with comfort. She described being fearful because she did not understand the medical domain and did not know what she needed in order to recover. However, she stated that she felt “comfortable” because she trusted the nurses and they were always there, monitoring her heart and blood pressure, giving her what she needed, and were also very careful when changing her intravenous and bandages. She indicated that it was important to follow the practitioners’ instructions because they know what you need. Linda indicated that it would have been more “comforting” if the nurses had explained what they were doing and what was going on. She emphasized that it was particularly difficult to understand the “technical things.” Bob echoed this sentiment indicating that the technical language by the health care professionals was a bit challenging to understand.

At times, dimensions of the technological specific to object technology were emplotted as disruptive. Underpinning Ashur’s story was a dualism of (dis)comfort. His story unfolded in a way that he described an abnormality to how he looked, such that his own child could not recognize him amongst “the pipes.” However, this was balanced by knowing that the surgery was possible and that he felt “looked after.” He stated:
The little one, he didn’t want to see me. He saw all the pipes and he start to cry and he
to go out. He went out. But, as I said, the surgeon, the staff, fantastic. Excellent. We
are lucky to be in such a place, such a time when the care is, you’ve been looked after.

Underlying Bob’s story was a disruption to his embodiment. He referred to the various tubes and
wires as a hindrance:

It was draining all of the fluid from inside my body which was most painful to watch.
Big, big chest tubes, removing them was the most awful time. The nurse advised me that
it was going to be a little painful and she was as careful as possible. It was anticipation of
these things that far surpasses the realization. She told me to take a deep breath. I did and
it was gone. It was a funny sensation, then it was gone and that was a godsend, yeah. The
catheter the same thing and, I’m glad they removed all the other hindrances.

A dualism of (dis)comfort underpinned Bob’s story as he characterized the mechanical devices
as providing him a sense of comfort (kept him alive, aided recovery) and discomfort (sleepless
nights, pain):

I was grateful for the fact that all of these mechanical devices were keeping me alive and
aiding in the recovery. I didn’t feel strange by them. I was just glad they were there. I
initially wasn’t really conscious of those two there [points to chest tubes] but then as the
morphine wore off, I was conscious of it. That sleepless night, I thought they were on my
back, but that didn’t make sense at all, because I thought it was my back that was hurting
but it was here [pointed to chest]. I knew that sooner or later they would all be removed. I
didn’t find them invading my body, I knew they were there for a good purpose so if you
want to call that technology, yes. You need that. Otherwise this couldn’t have happened
and these were all part of the process, so I knew that, that part of the technology, it’s vital …
It’s not pain. These ones [the chest tubes] kept me awake and they certainly weren’t in
there just for a laugh, they were needed, they were doing the draining. [Researcher’s
question: You said it didn’t look like it was invading your body?] Something invading
your body, it’s like a pathogen invading your body, it gets in there and causes you
distress. But, they were invasive in the fact that normally you don’t have them … they
weren’t invasive in a sense, as I explained, not something like a thorn. They were there
for a function. They wouldn’t have been there if I didn’t have the surgery so they were
part of the whole surgical procedure that in order for me to survive the surgery and to
recover from the surgery, these were needed, so you don’t argue.

The simultaneous presence of (dis)comfort in participants’ narratives appeared in
descriptions of object technology as unfamiliar and enigmatic, but also beneficial. Wayne
described the various machines as good tools because they were efficient and provided digital
readouts. He indicated that he appreciated what the machines could offer even though he did not
really understand them. However, he provided the following caveat: “That has a downside too
because they seem to leave it [the machine] here and it starts beeping when it gets lonely and nobody comes to rescue it, so the damn thing is still beeping. It’s very annoying especially if you’re tired.” Although he did not specifically verbalise it, there was an undertone of annoyance throughout his story and there was the sense that the nurses did not rescue him either. Linda also described a sense of discomfort in terms of how busy the unit was when she indicated just wanting quiet and rest. Parallel to Wayne’s description was Jack’s story. He stated that he “never really had such a technological experience” referring to various “contraptions…wires stuck to him.” There was an enigmatic sense in his story in that he did not really understand the “high tech stuff” that was going on, but he stated that he was appreciative to have the various technological objects present. Nevertheless, there was a sense of discomfort. He stated: “the nurses station was abuzz with people yapping away all the time, which is really annoying because it kept you awake.” Margaret also indicated a magical sense to how some of the various “gizmos” work. She referred to how they provide measurements of your body “almost like hokey pokey” but indicated it was a normal part of heart surgery. It was common that participants described a number of mechanical devices without an understanding of their function. Kristi described a number of tubes and wires that she was attached to and finished by saying, “I don’t know what they were for.” The unfamiliarity of the technological with regards to the objects can be discomfiting. Nonetheless, participants described a sense of comfort because they understood to some degree that these devices provided capabilities to monitor and access the body. Upon describing the pacer wires and generator, Ashur stated:

There’s a small well intact inside the heart that in case of a failure, immediately they can use this meter. That’s something that was not done in my time when I was born and definitely makes life easy for the surgeon and for the staff to dig into that heart.

The technological appeared as an optimistic force in some stories. In this sub-plot, descriptions of discomfort were downplayed or just outweighed by comfort. However, I add the qualification that the idea that a participant needed comfort suggests that there was some level of
discomfort present. Joseph described waking up in the ICU and seeing machines, making him feel reassured. He indicated that machines are reliable because they are thoroughly tested before they are used. In light of the common discourse about patient safety and medical error, there was the possible inference in Joseph’s story that human beings were not as reliable. Greta described the constant monitoring of the nurses as comforting because they ensured a sense of safety and were always there to help her:

> They took the blood pressure and the weight and all the other vital signs, everything every couple of hours. They always checking to see if everything is working fine …. [I felt] good because they’re there to help me. And I thought well, if anything goes wrong, they’re there, they see it right away, so they’re there to help. They know how to help.

When asked specifically about whether she had any tubes or wires in her, she replied: “It’s just normal. Normal, but they have to, intravenous that I have enough energy that they can take it out. Just the arm. I didn’t have a band-aid on my body, nothing. Everything was gone.”

Dimensions of the technological related to expected pathways of recovery also led to (dis)comfort. Participants described a sense of disappointment when the recovery process did not conform to the expected pathways of recovery. However, the expected pathways of recovery also provided a sense of comfort. Underpinning Linda’s story was a need to not dwell on the present but to focus on how things will be when she is recovered, as a way to not become overwhelmed. Underlying her story was the emplotment of a pathway of recovery as an image that gave her comfort in terms of the expected end result. During her first interview, she described a sense of discomfort in terms of physical pain and also referred to the tubes and wires as “bothersome” because every time she moved, they had to come with her. She explained that “you have to focus on the end result, it is all a bit traumatic, but if it is [pause], I’ll feel better in a month’s time.” Margaret did not explicitly indicate discomfort, but discussed how her recovery in the hospital was slow. She indicated she was not feeling “up to snuff” and asked herself “is this never going to get better”? She described singing songs from her childhood as a strategy to help her during
times of upheaval. She indicated that in the hospital she repeated these songs in her head and also, recounted that it was something she did at her mother’s funeral (another period of discomfort). When asked to explain these strategies further, light was shed upon how these songs were linked with a biographical continuity:

You really want me to tell you? Okay. I belong to the United Church and back when I was a kid so to speak I played the piano for Sunday school and back then the hymns were altogether different and so what I do is I go over a lot of those really old hymns that are in my head … to be honest with you it isn’t necessarily what these hymns say. They aren’t necessarily what I think, or how I think so-called religiously today but they’re very comforting. Like even something as simple as Jesus Loves Me. What was another one? Oh, Blessed Assurance, that was my mother’s favourite hymn and we sang that at her funeral and that one I know two verses to. But that’s my way of, when I didn’t know what was happening or how fast things would be happening, when I was coming down for the angiogram, I was concerned. And so that’s what I used the night before I came down to get to sleep in the hospital and that’s what I used on my way down here.

It is a common practice to give patients a small pillow during the postoperative period to splint the chest during activities such as walking, coughing, sneezing, or getting out of bed. This technological ritual was incorporated into participants’ stories, taking the form of an allegorical object that represented comfort and security. Often, in times of discomfort, participants related stories of the pillow. Dianne described being scared to leave her room for the first time by herself, and related an anecdote when she forgot to bring her pillow. Underpinning her story was a sense of feeling stranded without the pillow. Later in her second interview, I asked her what she thought of when I said the word “comfort.” She immediately stated:

My little pillow. That was always right there with me to hold in front of me. Whoever thought of that, that was pretty good. Well, if you had to cough or anything and you held it on, then you could cough better. It didn’t seem to, it seemed to cushion everything.

She continued to explain that she no longer needed her pillow when she was walking at home because she now trusted herself. There was a backgrounding of the technological that emphasizes the temporal aspects of storytelling. Participants indicated various points when they realized that the pillow that provided protection was no longer needed. Dianne stated:
I don’t carry my pillow the same as I did. But that was a good idea. They said, the first night I think I had to sit up and sneeze. Oh, gosh, I was afraid all the stitches and things were going to go popping. I must have sneezed at least five times. It’s scary at first.

The technological was also emplotted as (dis)comforting related to the issue of dependence. Joseph indicated that the nurses were excellent and followed stringent routines of constantly monitoring him, inspecting him and taking care of him. There was a sense of comfort in his story because he knew he could depend on them. He described one experience: “I remember you have to cough to clean your lungs and I was trying to, ‘I can’t’ I told the nurse. She try and she kept on rubbing me on my back. She didn’t give up, as long as I cough.”

Joseph’s description also indicated discomfort, which was fraught with issues of gender identity. Earlier, I mentioned that he had positioned himself as the breadwinner of his large family in which traditional masculine roles of independence and strength were important:

The worst part was after surgery, that you are drained of any strength. Not a pain, but body wise you’re just drained, no body strength at all. You walk your steps and you have to stop, take a breath, another step. That was the worst part. That you feel dizzy. Because you must have pain but it’s camouflaged with the medication. But the strength can not cover it, camouflage it. You want to go in bed, somebody has to help you, you know, and that was the biggest, I would say, to me, to me. And somehow I don’t want anybody to baby me around, but they better baby you because you don’t have the strength, really.

Similarly, Abbey indicated that she was dependent on the nurses to assist her to get out of bed and the pillow that “holds everything in place.” Greta also described reliance on the practitioners for their expertise:

They [the nurses] were always very friendly and very helpful. That’s the only one you can rely on. They know what’s supposed to be good for you because you yourself don’t know what is the best way. Because they see so many patients, they know. I relied on the doctors and the nurses and everything.

For some participants, the safety that the technological dimensions provided created spatial repercussions. Dianne described her room as a safety zone wherein the nurses monitored her and responded promptly when she rang the buzzer. However, she wrote in her journal: “I was scared to leave the room and venture off on my own.” When probed about this further in her
second interview, she explained that she had become dependent on having the nurses walk with her as a safety measure while in the hospital:

I kind of remember the first experience of having to get up to the bathroom. I wouldn’t get up until somebody was with me in case I didn’t make it. Then, I remember finally venturing on my own to get there. It’s scary, when you haven’t walked after something like that … I hadn’t been out [of my room]. I can remember looking down the hall. Then I ventured across, there was a wall out there, so I managed to get out there and walk down to where the bridge was, and back. That was my first venture out.

In Wayne’s story, there was a sense of being restricted by the technological processes that structured his hospital stay. He described his recovery in the hospital as a set of routines that were a drudgery. It was evident that his agency was still partially claimed by the technological:

I find it in most ways difficult to just lie in bed and do nothing and on the other hand, I’ve been so tired, it hasn’t been so bad. I don’t sleep that well here, I think I’d sleep a lot better at home. Other than that, it’s just a routine, I guess you could call it a drudgery that you have to go through … It feels good to get going. I used to, I’d walk for up to two and a half hours before, so I’m used to walking. It starts to break the boredom a little bit when you’re starting to walk a bit, move around, but you’re still in the same place. I’m anxious to go home. I don’t do well in situations like this with other people, I’d just as soon be home, do what I want, instead of being subject to somebody else.

**Human Touch Versus Patient “Number 161-302”**

Nurses were repeatedly characterized as critical players in what type of plot emerged in participants’ stories and as determining whether patients felt like a number or a human being. The importance of balancing humanistic care with the technological routines surfaced in participants’ stories. Bob thoroughly described the importance of the human touch, he stated:

If the nurse came in and looked at all kinds of computer graphics, and never said a word to me, I would not have doubted that I was just a number. I was number 161-302, a number, not a patient, not even a being who was in need of healing … I didn’t have any experience of negative feedback with the technology they were using in the hospital, because the nurses and the people that took care of me were human beings. But I could see an introverted nurse or doctor, who was dependent on the fact that the thermometer, you just stick it in your ear and doesn’t say anything to you. Or just relies totally on the technology. When you’re ill, and you’re in a hospital, it’s not just your body that can be in trouble, it can be your mind and your spirit, so you need the human touch. I mean, the physical human touch that says you’re all right. We want to be with our family you know, sometimes a hug is better than an injection.
At the end of his interview he indicated that technology incorporates “wonderful tools,” but stated that health care professionals must incorporate a humanistic side:

I want to feel that you are hearing me and that you recognize that I am a human being and that machines are wonderful, but I need the touch of a human hand. I need that personal touch. I want you to look at me, I may be the 7,024 patient that you have, but at this particular time, I’m the one that’s the patient and you know, I don’t want you to kind of sit at my bedside all night long and hold my hand, but I want you to smile at me, to assure me that everything is going fine and lay your healing hand on me, you know, if it’s just to touch my face, my hand, just to show that interest in me, even though you’re being run off your feet, which is asking an awful lot of you …. I’m grateful for the human minds that produced that technology and my only caveat is that the technology doesn’t replace or try to replace the human being …. never tell me that you can put a robot beside my bed to pump all the things that the nurse put into me. I’m not interested. I want someone to say “hi, how are you? Can I get you anything? Even if it’s only two or three minutes.”

There was a repersonalization that occurred, which seemed to be initiated by the ways that care was provided by nurses. Jack stated, “it seems that it’s not an assembly line.” He explained that

they helped to talk to you a lot about what was going on and what to expect and why they were doing this and what you were getting, so that was good, not that they were just pumping medicine down me but they were telling me this is that and that’s that and we’ve changed your medicine from this to that. They were good people, very attentive and they cared about, you could tell they cared about their patients so that was good.

Velinka indicated that the nurses were constantly coming in and doing things for her. She explained that was when life re-started. She described the nurses as compassionate and stated, “if I have something, problem, nobody, I never see a face like, uh-no.” Following her second interview she explained that it was important not to be treated like a number and she indicated that she did not feel like she was. She indicated that the nurses and everyone made an effort to make her feel like an individual.

Object technology can be impartial and was not capable of recognizing the particularities of patients. However, nurses, with their logics and processes of care, often humanized patients and recognized their subjectivities. Kristi indicated how nurses’ behaviours can ensure that patients do not feel like passive objects:
they’ve done everything to help, and explain everything to you. They just didn’t give you
the pills. They explained why you were getting a particular pill so that’s very nice …
there was a thing in my neck too connected to my heart. That I remember and the
catheter. There was a nurse, he was a sweetheart, he came in and he told me, what I
enjoyed or appreciated is that when they were doing anything, even though you’re kind
of like this [motions that she is stretched out and docile], they still explained everything
they were doing, so they just didn’t flip you and touch you and everything else without
telling you what they were doing. They would tell you exactly what they were doing so
you were expecting it so it wasn’t a surprise and you weren’t scared so that was good.

There were parts of participants’ stories that were put together around a plot of
depersonalization. Linda described the nurses as wonderful and knowledgeable and indicated
that they were constantly and busily taking tests, giving her medication, and monitoring her
breathing, oxygenation, and intravenous. However, underlying her story was an indication that
the processes of care were mechanistic and not personalized. She stated:

my friend gave me comfort because I wrote her a note and I said, “you know, I’ll never
forget the moment when you came in” because I said, “I was just wanting to complain to
somebody and you were there.” You know, the nurses are too busy. They’re in and out, in
and out and they see this sort of thing all the time.

Wayne emplotted the technological in ways that the nurses were procedure-oriented. He
indicated that they neglected personal contact and that there was a sameness that reigned in their
practices, making patients feel like objects:

Nobody ever came and just said “how are you? do you need anything?” That doesn’t
bother me, but on the other hand it would be nice if they did. I’m kind of cynical about
the whole health care system in Canada and I just see that as a product of it …. But as I
say, as far as the nurses go, you’re there, and if you ever want to feel exactly like a
number, that’s what you feel like. Just another, whether you go, there’s someone else in
the bed who will get exactly the same treatment and not to say, I don’t put them down for
it … generally I found the staff very nice, really caring but I found them to also be what I
would say, overworked. Like you’d see somebody and they’d say “oh, I have to bring
you something” and they’d be back, “here it is, goodbye.” They have no time to spend
with the patient …. these people are overworked to devote any time to bedside manner.

He continued to describe a number of incidents where the technical care was not humanized and
provided in a rushed manner. However, he also moved back and forth between representing the
care as good and not so good. It seemed he was attempting to represent himself as trying to be
honest, but did not want to seem like he was trouncing the good care that he received. He
described another incident in the night when he rang the call bell because he could not reach to
turn the light off. He stated that the nurse walked in:

[she stated] “You’re not my patient, I’ll get someone else” and she walks out. Somebody
came in a while, but another ten minutes and thought, I mean, something stupid like that,
you know, you’re not my patient but I’m here, what do you need? For all she knew, I
needed the thing to pee, but generally they’re very nice and I was quite pleased with the
care … [but] you’re left kind of to your own devices. They don’t really explain what the
medications they are giving you are, some of them would tell you the readings they got
when they took the blood pressure and pulse rate and things like that.

Resistance Versus “Go with the Flow”

The experiential contrarieties of the technological were also highlighted as an adherence
versus a resistance to the processes of care and pathways of recovery. Graham indicated that you
have to “sit back and enjoy the ride. They have nothing but your own good will in mind. They
want what’s best for you.” Abbey portrayed herself as a strong 80-year-old woman and
suggested that she never looks sick. She indicated that her doctor and family said she looked as
good postoperatively as she did before the surgery. Underpinning her story was a struggle of
adhering and yet also resisting. She described an abnormality to being in the hospital wherein she
felt “upside down” and yet indicated that it is important “just to go with the flow and don’t think
about it.” She explained:

The day I started walking there I knew I’d be okay. I had the railing to hold on to. I could
walk just like I did before. I wasn’t nervous to walk, the lady said slow down, don’t go so
fast and I said, “Okay”, I realized I was going fast … [But] I feel restricted because I
can’t go around and look at things. I can’t get some fresh air, things like that. Just the
atmosphere of all these machines and stuff around, you feel well, you can’t go there,
they’re doing this or they’re doing that, so you’ve got to go around with all of this stuff.

Participants emplotted a resistance to the technological, particularly in terms of the
routinized nature of medications following surgery. Edwin recalled questioning the quantity and
constant provision of medications that he was given in the hospital for pain management. He
indicated passively resisting:
They kept giving me these Tylenol. They would give me two at a time and I would just take one. I used to just hide them. I didn’t think I needed them. I kept them around in case I had some pain but, I think they’ve got fairly high standards, but worried about pain. Every time they came in they asked me if I had pain and whether or not I said yes, they still feed me all these Tylenol. I think I had a big bottle when I came from the hospital.

In contrast, Abbey actively resisted the medications:

I said, “Don’t give them to me, I won’t take them.” I said, “Once in a while I take an Aspirin, but that’s all.” And today they gave me six pills. I question them all. She said, “this one is for high blood pressure.” I said, “I’m not taking them. I don’t have high blood pressure.” … I said, “I haven’t. I’m not taking a pill I don’t need.”

The technological was often emplotted as a set of routines and a particular pathway that participants were expected to follow. Referring to his experience in the ICU, Joseph stated: “the nurses, they continuously, as I was ready to fall asleep, wake me up. I didn’t like the idea but it has to be done.” Greta described a specific pathway that she had to follow in order to get better. She indicated that the nurses helped her with walking and bathing, and instructed her how to get up properly with the pillow and deep breath and cough. She indicated that it hurt more when she tried to do things on her own. Underpinning her story was a purposeful dependence on the nurse as patient agency was restricted by the physical body:

[you just have] to do everything they say. Yes. Don’t push it if you can’t. Just let them tell you what to do. That was very important. Don’t do it on your own. No. I was pushing it a little, yeah. Yeah. But that’s when I notice I couldn’t do it myself. I needed help. Yeah, you need help …. The patient has to listen. They have to listen, that’s all.

Edwin indicated an inclination to move faster along the expected pathway of recovery. He described how he was instructed to walk right away:

They took me around the ward and showed me how to do it. My wife, she used to walk around with me, and all the stopping and deep breathing. Then we did stairs after a couple of days. They only let me do one step at a time. I think they’re excessively cautious because I can do seven or eight no problem, but they insist on one at a time. Because there was nothing wrong with my legs. I guess it’s just exertion.

At times, the resistance to the standard protocols was not purposeful. Underpinning Graham’s story was an emphasis on how personal agency lies more in the control of his unruly body. He
had been experiencing some issues of tachycardia, and described an occurrence when the nurse attempted to keep him on track of the expected pathway:

Following standard protocol, they got to talk to you about breathing. She said “we’d like you to walk two or three times a day.” So we did. At the end of every one of them, the heart would be pounding and at the one, at the end of the night, it wouldn’t go down. If anything, it went up. That was really an indicator to them that it needed some more time.

Summary

In this chapter, I examined how a technological discourse led to facets of scripted narratives. Participants’ experiential accounts demonstrated how they were drawn into a dominant discourse that shaped and structured how the technological was emplotted in their stories. The technological discourse became the authorial voice of participants’ narratives. Although there were particular nuances in their stories, there was a strong homogeneity in the plot lines. The scene was set by the representation of the technological as something that would “fix” them. As the technological became a stronger force and progressively claimed participants’ bodies, they relinquished agency. Stories of the postoperative period revealed the experiential contrarieties of the technological showing how participants struggled to reconstitute identity and re-establish agency. Of critical importance was that the discursive elements of the technological acted as a dynamic force that structured participants’ stories creating possibility and disjuncture. This is further elaborated in the discussion chapter. In the next results chapter, findings are presented regarding the ways that the technological discourse progressively became backgrounded (although never disappeared) and the authorial voice returned to participants.
CHAPTER VII: RESULTS SECTION TWO

THE TECHNOLOGICAL RECEDES: REGAINING AUTHORIAL VOICE

The technological was emplotted as becoming backgrounded in the plot line like a character in a play would move back stage.
In this chapter, I provide the second section of the results of my analysis. Similar to the first chapter, I examine how the technological was emplotted in participants’ stories. Unlike those discussed in the first chapter, these stories were temporally situated in a space where the influence of the technological was progressively receding, as was the operative period. These stories were related to the later postoperative period of hospitalization and the recovery period in the home. By focusing on narrative patterns of emplotment, an examination of how the technological influenced authorial voice, but notably shifted to the participant is explored in this chapter. This chapter is divided into three overall sections based on an interpretive detailing of three patterns of emplotment that were strongly apparent in participants’ stories: (1) un-“plugged”; (2) the absence; and (3) indefinitely present. Each of these three sections are followed by a short summary of the key ideas. I close the chapter by pulling together the main ideas concerning narrative emplotment of the technological and pinpointing the importance of authorial voice, agency, identity and the body.

Critical to this chapter are the ways that authorial voice, agency, identity, and the body appeared in stories. To reiterate, agency is the capacity and process to make decisions; it is always located within and contingent on the circulating discourses (Hardin, 2001). Specific to this study, it was important to consider the ways that discourse shaped agency. In the first results chapter, it was examined how the technological acted as an authorial voice in participants’ narratives. Parallel to this was a relinquishment of agency to the technological. In this results chapter, it is emphasized the ways that discursive elements of the technological lessened, but they never fully disappeared. The technological continued to shape stories in subtle ways influencing how participants characterized themselves and how they engaged in their everyday logics and practices. However, there was a notable shift of authorial voice from the technological to participants. As the surgical event receded, participants increasingly characterized themselves as active players. They described ways that they personally interpreted and incorporated the
technological, in terms of logics and practices, into their daily lives. Although discursive elements of the technological lessened, it appeared that part of the aftermath of surgery and recovery involved ways that participants became technologized. Participants’ stories reflected ways that identity was reconstituted; they developed a subjectivity and embodiment that was co-constituted by their experiences with the technological. Linked into these elements of agency, identity and the body were ways that authorial voice shifted from the technological to the participant. Participants became more instrumental in how the technological entered into and ebbed and flowed in their stories. Although there was still a polyphony of voices (including the technological) that influenced how stories unfolded, the shift of authorial voice to participants became increasingly present as the surgery receded.

Un-“Plugged”

In the first results chapter, I detailed how participants narrated the events of being claimed by the technological. Part of the context involved being “plugged in” (Jack). As participants progressed in their postoperative recovery and moved further away from the actual surgery, they described being gradually unplugged. The metaphor of being unplugged represented how the technological no longer fully claimed the body and to some extent participants’ agency. Underlying these narratives were ways that participants re-established agency and reconstituted identity. Although the technological still shaped their narratives, it was apparent that more personal aspects of storytelling emerged. Narrative emplotment of being gradually unplugged is presented based on the following two sub-plots: “released”; and “thrown to the wolves.” These plots lines were not mutually exclusive, but elements in each participants’ story. However, the former plot line was most common and emphasized in stories.

“Released”

Getting further away from the surgery and the progressive backgrounding of the technological was often conceptualized as being “released.” Embedded in stories of release was a
progressive shifting of authorial voice to the participant. Participants not only became more active in shaping the course of recovery and the unfolding of their stories, but they began to re-establish agency. Linked into this were ways that identity was reconstituted through bodily capacities and practices. There were multiple layers of being released that are each depicted below: removal of technological objects; resuming activities of daily living; the discharge event; closure on a problem; and characterization of self as an active player.

Removal of Technological Objects

The events of having the various technological devices removed were emplotted as significant markers in participants’ stories. These events were narrated in ways that the technological no longer physically claimed the body. Referring to the removal of the pacer wires, the urinary catheter and the central intravenous, Ashur described these events as a “release.”

These events marked a transition wherein his biographical course moved to recovery:

It was a release, mentally and, physically. Mentally, because they would not remove it, if I wasn’t okay. That’s my preparation, mentally … When they start to take them out, it gives me the real joy that it is done and that it’s okay. That it’s going towards recovery.

Margaret indicated that she had been distancing what she was going through by not thinking about it. With the events of having the tubes and wires removed, it appeared that she was regaining who she was because her body was more recognizable. Referring to these events, she stated that it meant: “[I was] getting back to being myself.” In Kristi’s story, the events of having the tubes and wires removed provided her with freedom because she could engage in activities such as bathing. Associated with this was a return of previous parts of her identity as evidenced by being recognizable to others. Not only was the way she looked more familiar, her narrative pointed to strong biographical associations. Removal of the tubes and wires prompted her to consider the near prospect of discharge and the familiarity of her home space:

You could brush your teeth ’cause your teeth and mouth felt like, “yuk” and a fresh shower, even though it was kind of where you were just going like this [motioned sponge bath movements], it was still, your hair wasn’t all greasy …. They all come in and they
say “I can’t believe this is you” because I guess on Thursday I really looked bad. They
said “you know I didn’t even recognize you.” …. It means that I’m getting closer to
getting home which is a good feeling because there’s no place like home, home is your, I
guess having familiar things. People around you and you’re in your comfort zone. So that
really means a lot to me when they start pulling stuff out.

In Bob’s story, there was a component of re-establishing agency linked with the discontinuation
of the machines and removal of tubes from his body. These events prompted him to recognize
that he was regaining control of his body. Strikingly apparent in the excerpt below is a linguistic
pattern that reflects that the technological remains the authorial voice, although there is the
initiation of it shifting to the participant. Highlighted is this pattern in which there is sparse use
of first person pronouns and abundant use of second and third person pronouns. Particularly
interesting was the use of “we” towards the end of the excerpt indicating that he was still a part
of the complex interrelationship of the technological and had not fully re-established his agency:

Whatever they [referring to the object technology] were doing, your body is now able to
take over that function. They were draining the chest. It meant that you were, these great
big things, you were restrained by them. When they took out all, it meant that you had
gone from being totally dependent on these tubes which kept me alive for 24 hours to the
fact that now your body was taking over these functions, that I could breathe on my own,
urinary tract could work on its own. When they took out those tubes it meant that there
was no more drainage coming out of my chest, which meant we had moved onto phase
one of recovery … taking out all the tubes meant that you were that independent of all of
them again …. You feel like you’re getting close to being back to normal. Each one, is a
step in the right direction, that you don’t need this thing, you don’t need this thing, you’re
going to survive on your own because you are moving forward.

Resuming Activities of Daily Living

Being released often involved a temporal process in that participants were still partially
claimed by the technological as they described being strongly prompted by the nurses to engage
in particular activities of daily living. Prior to surgery, it was evident that participants had
relinquished agency (as discussed in the first results chapter) and part of this still lingered. For
example, Ishani described being made to get “back to normal.” There were elements of power
imbalances as she described being at the will of nurses. To some extent her agency remained
external because the desire and capacity to determine her course was rooted within the discursive
elements of the technological. She described a sense of passivity and indicated ways that practitioners took responsibility to initiate activity for her:

It was hard, “walk a little,” I did walk a little and she said, “just go back down” and they put me in a wheelchair to take me to the shower, so I didn’t walk. I just stood up and went in the chair and the nurse gave me the shower, I didn’t stand much. She did most of it. I didn’t have to do much physical. So I came back, she dressed me. Like you’re [referring to nurses] making me getting back to normal. Made me feel good, a step in the right direction. [Interviewer’s question: It’s interesting you use the words “make me,” so the nurses were sort of making you do certain things, do you think?] I think yeah. They say you have to do it. If it was me I would just lie there. I wouldn’t do it.

Linked with participants’ descriptions of engaging in activities was a beginning shift of authorial voice. This shift was reflected in how Kristi characterized herself in her story and her usage of first-person pronouns. Kristi recounted an anecdote wherein the nurses compelled her to begin standing and also eating. In this excerpt, she no longer portrayed herself as completely passive because she was negotiating how much she would eat:

I remember one of the nurses coming in. They pulled most of the stuff out and it was lunch time and she made me stand up and she said “it’s time that you started eating,” so she brought the food in there and I remember having, it was some sort of a broth for lunch and a banana and something else and I just went, “ugh.” She said, “well, you’ve got to eat the soup,” so started eating the soup and I think that was the only thing and I think I took a bit of the banana and that was it.

Underpinning Margaret’s description of getting up for the first time was the idea that her agency was still partially external as her body was still claimed by the technological. Evident in this excerpt was that the nurses initiated her activities because she was physically unable:

The first time I stood up, they had me stand up and I didn’t walk very far, I think I went out as far as the door, because I was totally drugged and I know that I had mentioned to Dr. S and I had also mentioned to J, who interviewed me in the pre-op clinic, that I was sensitive to a lot of drugs, that I really probably only had to take maybe half of what anybody else might take, but they gave me full dosage and it knocked me for a loop.

What became noticeable was that reconstituting identity involved an embodied capacity to do activities. Bob described an incremental return of his physical strength and stamina in that he was first able to walk with the walker and then with the railing in the hallway. He stated that “it
felt good. I felt like it was one more, not giant steps, little baby steps. Each time that you move
along you get a bit further and it’s coming back to what you were before.” He quickly qualified:

I feel fine. But fine in the sense as fine as, when I came out of the operation I wasn’t
ready to play a football game, you realize when you start to move, just what weakened
condition you’re in. This is very serious surgery. You have to take it very gently and you
can’t rush into it and it’s got to take four or five weeks of taking it slowly.

The Discharge Event

The discharge event was generally characterized as a “release.” The release involved
participants feeling more involved in their own care and regaining a level of activity. The
activities were precursors to participants reconstituting identity. Participants described having
more control and self-determination in the home environment in contrast with the hospital. In
their narratives, they characterized themselves as being more agential in their homes. Within
Abbey’s story was the sense that she was restricted in the hospital by the protocols she thought
she was supposed to follow and the surveillance practices of nurses. She stated:

I couldn’t do what I wanted to do. I felt like I had nothing to do. I’m not used to having
nothing to do. I do lots of things. I got up and wandered around. Kept looking to see if
anybody was watching me to make me go back to bed …. Like I say, I could get out of
bed, so it wasn’t like I was tied in … nobody told me not to get up, so I got up …. I
wanted to go home. I couldn’t wait to get out. I can’t stand being in a room or in bed.

Although she began to re-establish agency in the hospital, going home was analogous to being
released in that she could now do what she wanted to do and get back to “normal.” She stated
that when she got home, “[I] just took off my things, put on my night gown and housecoat and
slippers and relaxed, had a cup of tea. I had to come home and make a cup of tea.” In Joseph’s
story, being discharged was akin to being released from the technologically-structured routines
and the environment of the hospital. The comforts and social connections at home instantly
prompted a psychological response of no longer being sick:

You can heal a lot better at home because of the environment. You have family and
friends and you are in your own kingdom more or less. Like I say that you’re not cooped
up in one room and you’re waiting for the nurse to come in, give you a pill, check your
blood pressure. Here, at home, you can do what you want, you can go to the other room,
you can talk to your wife, you can talk to your mother, which I have my mother too, my family, they can come and see you, I mean, you can do what you please, really. Like, you are not sick. You are sick, but you don’t feel like you’re sick because you’re in your own home. Then I said “oh, I guess they are right,” and I felt, as soon as I came in here, although I had problems with sleeping, I felt a lot better, psychologically. I am at home.

Similar to Joseph’s descriptions above, Raz indicated a release from the technologically-structured routines of the hospital. Both of their stories were characteristic of re-establishing agency: “I was happy to get out of there. Because, when you’re in your own home, your own place, it’s better than in the hospital. You could get up and walk, you could have a drink, you could do whatever you want.” For Kristi, the idea of being “released” was juxtaposed by her early recovery period that was akin to being confined. She was at the will of the practitioners to the extent that her body was physically restricted and “tied down.” Conversely, she recounted the discharge process as a positive experience in that she felt prepared. Underpinning her narrative was that she was re-establishing agency, although to some extent it was still external. The excerpt below is filled with an abundance of third person pronouns including what “they” did to prepare her. Interestingly, the last sentence in this excerpt involved a more personalized note employing the first person pronoun of “I,” indicating what she had to do:

They came in and told me what time I was going to be released. I did all the paperwork. They had somebody waiting with a wheelchair to get me downstairs. They told me everything, what to expect, what to do when I get home if there’s, the person from physio came in and told me what to do. They all said goodbye. They were really nice. They filled out everything for me. All I had to do was just get dressed.

As the excerpt above indicates, the release involved conditions in that particular pathways were to be followed once they returned home. A part of the technological involved pathways of recovery that outlined what activities participants should and should not engage in. Participants indicated that they could not return to their previous ways of living or activities. Ishani indicated that going home would “be something new. I mean you are not going home like you were before, they’ve done something to you. You will have to adjust.” There was the sense in Ishani’s story that she was physically altered and she had to respond by readjusting her
activities of daily living. Ashur indicated that being discharged was “the same” type of physical and mental release that he felt when the tubes and wires were removed. He continued to describe a new regimen that he had to incorporate including medications:

They told me, “You’re okay. You can go home.” The day before I went to that ultrasound and the doctor had already read the report, which means it’s okay. They gave me a list of the medication I should take and I followed the medication that they gave me.

Upon indicating his worries about going home, Bob described a conditional return to his normal activities of daily living. He was restricted from doing certain things as outlined by the expected pathways of recovery. This restriction involved a disruption to his agency in the home space because of the discursively-driven elements of the course of his recovery:

I would want to go out and do the leaves. I would want to go and do all these things that I should be part of. But you know, I can give up that too. And the fact that I can’t, you know, drive for a month [voice trails off].

*Closure on a Problem*

For some participants, being released provided evidence of cure and transitioning in their biographical course. Implicated in this release were how participants became acquainted with new sensory experiences and a re-familiarization with their body. Graham described a feeling of being “released … a real sense of closure on the problem that I’ve had for 50 some years.” He indicated that he could now focus on recuperating, as opposed to always having to think about his heart. The release that he described involved a shift in his biographical course:

Looking forward to having a whole new bill of health. The valve’s going to last for a lifetime, literally, figuratively. The bypasses are going to give me, keep them clean, don’t clog ’em up, maybe get another ten years …. I feel like I’m bullet-proof, for the next little while and stop worrying about it. Get down to the business of getting better, getting some energy which I was lacking over the last year. Got some air back. Fine on a daily routine but I’m sure as soon as I start my rehabilitation I’m going to find stamina’s not there. Fine, let’s build it up … This time I’m doing it for the rest of the body … I felt a release on being released.

There is an indication in both Jack’s and Joseph’s excerpt below that the body can now move into the background again, as it would for a person with no health problems. Their bodies were
no longer prompting them with various cardiac symptoms to be attentive and concerned. Jack indicated an immediate relief: “The moment I woke up I knew right away that things had changed. I could feel right away that I didn’t have a problem breathing any more.” The body moving into the background and becoming unnoticeable prompted a reconstitution of identity for Joseph as a “new man”:

I’m happy the whole operation went through. It’s something you don’t have to worry about. Now look forward and try to recover, so you have a new life …. There’s no concern about my heart. I feel very good. I don’t have angina. So that relieves me. I feel like a new man. Mentally I feel like nothing wrong with me. I don’t have to think about it, it’s done, cured, water under the bridge …. Not only the doctor can see, now, I feel a bit better because at the time I used to lay down on my left hand side and, my head on my pillow, I could hear all the thumping, irregular thumping through the pillow in my ear. Now I don’t hear that. That kind of soothes your concern.

Characterization of Self as an Active Player

Part of being released was narrated in ways that participants re-characterized themselves as active players in their stories. The technological discourse in the hospital had led to practitioners being characterized as the active players. Now, it appeared that the backgrounding of the technological discourse involved a progression of participants regaining authorial voice. The shifting of authorial voice was also evident through participants’ increased usage of first-person pronouns. Linked into the shifting of the authorial voice was the restoration of agency in that participants personalized their own self-determination. Although there were glimpses of this self-realization with men, it was a characterization that tended to be more associated with women. At the core of Velinka’s description of waking up from surgery was the idea of shared agency. She described faith in the doctors’ and nurses’ knowledge, stating: “You [the nurses] give me what I need. You know what I need. I don’t know. But they know. And that’s why I trust them.” Upon characterizing her own role to play, there was recognition that dimensions related to the technological were not fully responsible for her recovery: “I’m alive. Now, it’s my turn. You have to help yourself. Nobody can help, like you.” Similarly, Abbey stated: “You’ve
got to do it for yourself. If you don’t care for yourself, who does? And that’s what I always tell the kids. You should always help yourself because nobody else can do it for you.” Kristi also indicated that she had a significant role to play in her recovery. Upon describing being “released” from the hospital, she wrote in her journal: “I am taking a journey that I have not travelled before, how I come out of this, is all up to me.”

“Thrown to the Wolves”

The process of being unplugged from the technological was generally regarded as being released and viewed as a positive association with getting better. However, for some, the loosening of the technological structures involved elements of feeling like they were abandoned. As participants moved further away from the surgical event, the technological was backgrounded and some described feeling stranded. For example, it appeared that Dianne had become dependent on the nurses and she was unsure if she could rely on her own body and strength. Her identity was reconstituted as someone who could not function without assistance:

They got me up and they put me in the chair and they walked away and left me. I was just beside myself, “you can’t go away and leave me.” … I was afraid I wouldn’t be able to get back to the bed, because I hadn’t walked, other than when she helped me to get over there. When you haven’t used your legs for a while, you’re not sure how strong you’re going to be …. I was afraid of falling or my legs wouldn’t hold me, ’cause I hadn’t been up on my own without somebody holding onto my arm and when they went away and left me in the chair, what happens if I have to go to the bathroom, like over there in the chair in the corner there’s nothing to ring a bell or anything.

She continued to describe her first night at home as being on her own: “I guess it was the first night maybe, rolling around in bed and not having the rail of the bed to hold onto to help pull you over. You had to kind of fend for yourself.” Similarly, Raz described feeling “alone” while in the hospital and indicated that he did not see the nurses very often. He asserted that it would be beneficial to have someone continuously at your bedside:

It is to tell you to keep someone with them all the time, it costs money. Yeah. Uh, this bell, right, right. If I would have to go to the bathroom, I ring this bell, by the time I would get to the washroom, the accident already happen. There’s less hope, right?
The discharge event was narrated as a significant transition in which being unplugged from the technological was sometimes associated with a feeling of desertion. For example, Wayne indicated a need for the hospital to “update the release procedures so that there’s a little more, you’re not just thrown to the wolves when you’re released, there’s somebody who is going to keep track of you.” What surfaced in the excerpt below is that the monitoring of his bodily responses outside of the hospital was not done in a competent manner. As a result, part of reconstituting identity involved the emergence of a technological consciousness that prompted self-surveillance and self-advocacy. Wayne had gained sufficient information about therapeutic measures to interpret his lab values in response to medication:

They boot you out. They tell you to go see your family doctor. You’re thrown back into this person. One of my beefs about my doctor was that I didn’t think that he was very technologically advanced … they’re prescribing stuff in the hospital, throwing it to the family doctor to monitor. He admitted to me that he didn’t know what some of these were for. So I went for a blood test, the INR [International Normalized Ratio-blood clotting test] was like 2.4, so he tells me to up the dose [of Coumadin—a medication that reduces formation of blood clots]. Right away I’m thinking why would I up the dosage when it’s in the range that it’s supposed to be? … he eventually got it up to 4.0, and 3 was supposed to be the top, then he finally tells me to cut back. I started this coughing and I felt really lousy, so eventually I called the surgeon … he sent me to the hospital and they did an x-ray and they said “you’ve got fluid in your lungs,” that’s because the INR was so high. He said “I’ve got to drain that,” so he sticks a needle in my back and takes out a little over a litre of what looks like blood …. I just think it’s unfair to the family doctor and if he’s not aware of all of this stuff, there needs to be some other way of doing this. I mean, had I not taken the initiative and called the surgeon, who knows where I’d be now?

He continued to describe the discharge process as substandard and interpreted it as superficial. It appeared that the procedures associated with the rapid dispensing of information left no time to absorb or discuss the material:

I felt that they went over things in a rushed manner …. the impression I got was, “get out!” … A nurse came in and went over the medications. I got dressed by myself … It was just kind of funny that for a couple of days I couldn’t get out of the place. Then all of a sudden it turned around where they couldn’t get rid of me fast enough, they asked me to go sit in this room so they could change the bed, they needed the bed.

The discharge process was described by Raz in a similar way. He claimed that the practitioners were attempting to provide him with information about the activities he should and should not
being doing. The process of discharge was narrated as an event when the technological routines that occurred in the hospital were being transferred from practitioners to participants.

Underpinning Raz’s narrative was the sense that he was being handed over the responsibility to provide self care and self monitoring. This event was marked as a transition point, however Raz described not being ready to understand the logics and initiate the practices:

They talk to you about what you should be doing when you get home, “don’t do this, don’t do that.” They shouldn’t be telling me this, the patient, because I can’t take on all that. I can’t remember anything. They should be telling that to somebody, what I use the term “sober.” Telling me how I should walk up stairs, how I should take deep breaths, inhale and exhale, somebody should be there, instead of telling me. The day they discharge me, it was like a rush to get rid of me. To come and do it that way was bad. They should have a little more ample time to explain. As I say, you on so much drugs, you really can’t remember. As a matter of fact, they took me out of the ward and they, I was feeling tired and they send me down the hallway in a TV room. So I lie down on the couch. I waited for my family. Anything could have happened to me and nobody was there. I guess the rush was just to get the room empty to place somebody else in.

To summarize the first section of this chapter, being un-plugged was a metaphor that represented how the technological was emploted in participants’ narratives. This pattern of emplotment involved instances that participants commonly described as a feeling of being released and paradoxically a feeling of being “thrown to the wolves.” The physical and metaphorical act of being un-plugged from led to a shifting of the authorial voice from the technological to the participant. Participants began to position themselves as an active character in the plot line. Although the discursive elements of the technological continued to shape the course of recovery, participants were central to how these elements were interpreted and how they entered their stories. Participants’ bodies were no longer physically claimed by the technological and they began to re-establish agency by shaping the course of their recovery. The reconstitution of identity was linked with their bodily capacities and engagement in activities.

The Absence

There were temporal and dynamic transitions when the technological was emploted as an absence in participants’ stories. The story scenes of this absence involved a number of shifts that
resulted in the discursive elements of the technological shifting into the background of story plot lines. Participants began to position themselves at centre stage and take control of how the technological ebbed and flowed into their stories. This was linked with authorial voice shifting from the technological to participants. The structured absence of the technological in the home led to a number of repercussions with participants’ identities, how they related to their bodies, and how they determined what was normal. The absence became most noticeable as participants described leaving the hospital and returning home. The visual presence of object technology and practitioners and their routines of care instantly disappeared, and there was a discontinuation from the perceived safety associated with just being in the hospital. Narratives were underpinned by a sense of vulnerability that prominently emerged at homecoming. Also, as participants left the unfamiliar and structured technological environments of the hospital, they described returning to the comforts of their homes. Home was a space where they could engage in their everyday logics and practices of living. However, a new set of logics and practices stemmed from exposure to the technological elements in the hospital and unfamiliarity with new bodily sensations. Participants described various ways that they incorporated technological ways of knowing and self-surveillance into their daily lives as ways to personally manage the absence of the technological. In this section, two sub-plots are examined: the familiarity of home – the unfamiliarity of the body; and bodily “tune” – surveillance.

_The Familiarity of Home – The Unfamiliarity of the Body_

The event of discharge involved returning to the familiar space of home. Home was a space of comfort because it was not only familiar, but also signified progress and recovery. However, the familiarity of home was juxtaposed with an unfamiliarity with the body. Returning home was linked with an absence of the structured place of the technological. This absence resulted in feelings of vulnerability and anxiety that were often rooted in unfamiliar and new bodily experiences. The unfamiliarity and vulnerability led to the development of a new
relationship with the body. The technological remained present albeit in the background, but
authorial voice shifted to participants. Shifting of authorial voice within the familiarity of home
and the unfamiliarity of body is examined as follows: dualisms of going home; uncertainty of
bodily sensations; bodily worst-case scenarios; and the body as a source of knowledge.

Dualisms of Going Home

The event of going home was narrated with dualistic components. Kristi described
leaving the hospital as a “two-edged sword.” The hospital space was associated with comfort
while the home space was conceptualized as familiar with strong biographical associations. What
is evident in these two excerpts below is the way that the familiarity of the home space involved
the entrance of authorial voice that was uniquely her own. She regained confidence in the safety
of her own home while juxtaposing it with the reassurance of resources offered by the hospital:

It was a relief, as well as a kind of like I’m going to miss it. It was a two-edged sword. I
wanted to go home. I felt good about coming home. I didn’t want to go back to the[hospital]
room, even though that’s where my comfort zone was, because everybody was
taking care of all my needs. I think it’s the comfort of everybody monitoring you. You’re
coming home and you’re going “there’s nobody going to be monitoring, what about if
something happens? What do I do then?” Nothing happened and you’ve got to reassure
yourself that everything’s going to be the same as it was at the hospital.

She further contrasted the technological environment of the hospital with the organic familiarity
of her own home:

There’s no place like home. When you get home, it’s almost like [sigh] … I thought that
when in my home, it was the things that I enjoyed.. You know what it was? It was the
smell, that made me feel, “ahhhh.” I think it was the first night that I was home, I just
said to myself, “I always thought it was the things,” it was that thing, it was this thing, or
it was this thing or it was that thing [motions to a number of objects in the room], but it
wasn’t. When I walked in I just went “it’s the smell! It’s your own smell.”

Ishani described being happy to go home because it meant that she had returned alive. It
appeared that returning home was an event that prompted her to consider an optimistic
biographical course: “You leave home on the morning of surgery and you don’t know whether
you’re coming back. I thank God to be home. Happy that I’m alive, to see my home again, see
my family.” Like others, she qualified her feelings of relief by indicating that she was worried because there was no one to monitor her at home. There is an indication in the excerpt below that identity was reconstituted as technologized. She indicated that she could not trust her body and that she was now a person that needed to be monitored because she was vulnerable to harm:

Being in your own home is so much nicer, your own bed, family around, but I was a bit worried, in case anything should happen. Always on my mind. Never know what’s going to happen. I figured I would stay there, but I guess with technology, I guess it’s sort of better now. They knew everything was fine, so they let you go. Still in the back of your mind you worry about it. [Interviewer’s question: So when you say you were sort of worried at home, what sort of things were you worried about that might happen?] Oh, whether the incision, whether anything would happen, if it would bleed? Is it properly healed? Will anything go wrong if I do something wrong that might affect it? Because in the hospital, the nurses are there and you can call them quickly, right? You push a button and they’re there. But here, there is no button to push! Right?

On the other hand, a number of participants referred to a hospital monitoring process that occurred when participants were at home. For example, Edwin stated:

I have an automatic phone thing which asks you questions. I think the first or second day I said “no” to one of the questions and within half an hour I had a nurse, a public health nurse call me up, just checking what the problem was so that’s very good, the follow up.

Margaret described being well prepared and well resourced to go home. It appeared that she had the comforts of home, as well as some of the technological elements that may be more associated with a hospital. Underpinning her story was a re-establishing of agency as she had control over her recovery in the home. Although the technological discourse was still present, she began to regain authorial voice as she outlined how she personally incorporated the pathways of recovery into her home and what adjustments she made:

We’re going to have a homemaker, and my daughter will be there for the first two nights. She’s going to be doing cooking, washing dishes, and the washing. She’ll have lunch ready and supper. John’s a diabetic and has other health concerns and I am sensitive to many things, so this way we’re going to be able to eat what we choose. I also have a bed, the head and feet’ll lift up so if I need to make myself sit up or lay down, I can. I’ve got my little clicker beside my bed that turns on my music. And the lamp that’s on the table beside my bed, I don’t have to reach out to turn it off and on. It has one of those clickers. I have a telephone there. It’s almost as if I’ve got the best of both worlds.
Uncertainty of Bodily Sensations

The absence associated with backgrounding of the technological at home was linked with an unfamiliarity that stemmed from new bodily sensations. Participants described feelings of uncertainty about how to determine whether these physical sensations were normal. Once home, Velinka explained that she did not know if her pain levels and breathing were normal, which frightened her. She explained that having her family near-by provided reassurance. Authorial voice of her story flowed from her own efforts to relate to and interpret her bodily sensations:

One time, I just scared of being alone. I don’t know why, but I can’t help myself, and then my family I say “oh, please, stay here a little bit” because I’m so nervous, I’m so, it’s gone, it just happen two hours, like little bit scared and nervous, and then it’s gone. You have to be with people, I think not too much, not too much telephone, they all call me, but it’s very painful. But now it’s better and better. Now, I breathe almost normal. I don’t know what is normal now. No. I don’t know. This [points to chest] I don’t know. I always imagine this is something wrong, pain. Muscle, and I think it’s the bone.

There were elements in her story where she characterized herself as in control because she knew how to access information: “I was really in control. Every time when something happens, I just asked the doctor that is very close to us. I go there and ask her, ‘what can I do?’” Often the familiarities of the home provided comfort and happiness, but these surroundings also involved uncertainty about invisible, internal changes. Ishani indicated she was happy to be home, but described being worried about still feeling pain after five weeks. She described wondering whether she was healing on the inside because it was something she could not see:

It heals on the outside good but the inside maybe still a little raw, who knows? … Very worrisome. You want to know, what to do. I still want to know where they took that one vein out from. They took it out from inside [touches chest], but where?

Dianne also described feelings of uncertainty about her body and what was going on inside. She stated: “If I lay on my side and then I lay on my back I can feel it [heart beat] pounding up in my hand for a while. I don’t know why.” As she was regaining the authorial voice, she was attempting to incorporate a new set of logics to figure out what happened to her body. When asked about whether she thought about her surgery, she stated:
No. Not so much the surgery, as the scars and things they wire you together, I don’t know how they do it. How do you know it’s going to hold? If you fell, would that jar or bend the wires? Does it heal and you don’t need them? I don’t understand that. I mean, it’s going to be a permanent wire in there, but those bones have to heal together, don’t they?

Her bodily sensations not only became a source of uncertainty, but a reminder that she had surgery. She explained that she thought about her bypass surgery when she was rolling over:

Sometimes they click. Or something clicks. I’m not sure what it is. I hope that’s not going to keep on! One night I was laying there and it’s quite a click, click. Then it went away. I was wondering if they were going to keep clicking or what happens, do they settle down? …. It’s getting better but, I’ve got imagination. The arteries. You roll over, and you think “oh, am I getting enough air? Maybe I’m squeezing them too much?”

As well, Jack indicated some unusual bodily sensations. The uncertainty associated with these sensations made him question the physical alteration of his body:

I’ve had no problems with my chest, a couple of things that strange, it seems there’s more room in my chest cavity than I had before. When I turn around it feels like my organs are all shifted around inside, that’s a weird feeling. I can just feel the organs moving past my ribs, making funny sounds when I do it. So I mean, that will go away eventually, I guess.

Worst Case Scenarios

Participants indicated a sense of vulnerability about the possibility of worst case scenarios. Often, participants would juxtapose the safety that was associated with the hospital with the safety and the comfort of their homes. It appeared in Bob’s story that he characterized the comfort and familiarity of his home as a different safe, which revolved around the loving companionship of his wife and son. He initially described being told by the nurse that he was going to be discharged and immediately thought it was too soon and recalled reassuring himself:

“You are in no position to judge, for once in your life, just put your head down and hand it to the professionals who are running the show” but I knew when I came home that I would get equally good care. The one thing was that if something really goes wrong, like if the whole thing [chest] bursts open, and I thought “that’s stupid of you so don’t go there” …. I was ready to be dispatched home. That was their decision … I beat the record by a day, you know? See how stupid and pathetic you go about things …. I was very happy to be home again. I was very cared for and loved and I didn’t realize how much coming home would mean. I mean, I felt awfully safe, and that first night, sitting here and my wife was there and my son was here and we watched TV and you know, it was wonderful and you felt that you felt safe in the hospital but it’s a different safe at home.
Greta indicated that she felt “good” and looked forward to getting out of the hospital. However, she described a number of fears that were related to thinking about worst case scenarios. Although her bodily sensations created fear, the familiarity of the home space tended to alleviate these feelings. Her narrative was underpinned by a sense of liminality marked by close attention to improvements in bodily sensations:

As soon as I got in [home], I got undressed and laid down. I went to sleep right away. It was just too much. The next day was much better. I guess I relaxed because I notice it went fine. You didn’t have to be afraid. Everything just worked fine. You’re in a familiar surrounding again …. So long I was in hospital I depended on the nurses. As soon as you’re on your own you get scared. Then you realize you can do it. You have no choice. You have to get up and do it yourself. [Interviewer’s questions: And what were you scared of those first few days?] Maybe it rips open, that I damage something, do something wrong. Even though they say nothing can happen, you never know. It’s an operation right? Even now, with the pain, sometimes I just hope that everything goes away. But I find out when I see the cardiologist. The family doctor says “everything is healing up fine. Don’t worry,” but you know, so long the pain is there when you move, and so, you’re still scared. The day that is all gone then I believe everything is fine.

The Body as a Source of Knowledge

The unfamiliarity associated with participants’ new sensations prompted them to re-align their relationships with their bodies. Participants engaged in various sets of logics and practices to figure out what was normal. Relying on their bodily sensations as a source of knowledge was helpful, as well as incorporating other technologized forms of knowledge. It appeared that just the knowledge of understanding that these sensations were normal would have alleviated participants’ concerns. Margaret indicated a need to know whether the physical sensations in her chest were normal for the healing process:

I wish I could have talked to somebody with what I’m feeling in here [touches chest]. I’m hoping this is healed. I’m assuming it is. One of the reasons I assume it is, at one point I felt a sneeze coming on, so I grabbed my heart [pillow], put it against my chest and then I sneezed. It was a really big sneeze but, oh man, did that hurt. It was excruciating. Now I have sneezed and I cough sometimes and it’s okay. There’s a little bit there. All I want to know is, is what I’m feeling part of the normal getting over this process? Because it doesn’t say anything about that in the book [discharge booklet], ‘cause I’ve gone back to that book a couple of times, thinking I might see something else that I didn’t remember.
Although Bob indicated being happy and felt safe to be home, he identified concerns that stemmed from abnormal sensations. It appears in this excerpt that incorporating technological ways of knowing and understanding the body was a temporal process that was reinforced by practitioners:

I had some concerns and fears when I was at home. I talked to K [nurse practitioner], that’s when it was two weeks, that’s when I was getting these pains in my back and neck, then what she said makes all sense. Then the pains completely disappeared. I think knowledge can overcome stupidity. I should have intellectually known that you just can’t continue normally after they put a little slit in your sternum. I had to realize, they forced your chest cavity wide open and, the body was actually revolting against that.

Greta, who had a valve replacement and bypass, recounted an anecdote where she was focused on hearing and physically sensing her heart beat:

I couldn’t sleep, so he [the doctor] give me sleeping pills. As soon as I lay down I felt the heartbeat and I told him. He says “it’s because it’s quiet. At the beginning you weren’t so sensitive and now all of a sudden you get sensitive to your feelings.” No matter which way you turn, you hear your heart. As if something is knocking in your throat, steadily. [interviewer’s question: how does that make you feel?] Scared. It’s a funny feeling, don’t know how to explain it. But it’s just weird, very strange. I never even noticed before … It depends how you lay at night time, you feel the pounding more. It’s a strange feeling.

Similarly, one month following discharge, Kristi, who had a valve replacement, wrote in her journal that she felt “fine.” However, the unfamiliarity of her sensations led to fear. Her narrative pointed to a need for knowledge that outlined what is supposed to be normal:

When I am in bed and everything is quiet, I hear my heart beating loudly, it keeps me awake for a long time, it something I have not gotten used to, it beating so loud. I will be seeing the surgeon, I will ask if this is quite normal. I am having a very tired day, I slept most of the day yesterday, I felt like my heart was racing so bad and so fast, it was scaring me, then it would slow down but I could still heart it in my ears beating.

_Bodily “Tune” – Surveillance_

The absence of the structured place of the technological and the unfamiliarity and vulnerability associated with the body resulted in participants initiating self-surveillance of their own bodies in the home. Although the technological was backgrounded in plot lines, at times participants’ stories would reflect how it shifted to centre stage. For example, in the hospital,
technology acted as a nexus of practitioners’ logics and practices of care. Participants’ exposure to these dimensions of the technological and the introduction to pathways of recovery in the hospital influenced participants’ everyday activities at home.

Self-surveillance was one way that participants incorporated the technological into their recovery (reflecting how the technological could move to centre stage). Margaret indicated that she listened to her heart to ensure it was “in tune.” The ways that participants personalized these logics and practices into their own contexts were reflective of how they regained authorial voice. For example, Kristi indicated missing the constant monitoring that was provided in the hospital and described a process of now sharing this task. There was the sense in her story that she had learned to draw on varying knowledges and self-monitoring practices to reassure herself:

Sometimes my heart would race if I go up the stairs, and if I don’t hear it, I’m going “okay, I’m still breathing, obviously my heart is still going,” so that kind of gets scary. It does bump loud. I had a hard time falling asleep at first because you can hear it and you can feel it on your neck .... At times you miss it [the monitoring in hospitals]. When you’re heart is racing you’re going, “I wish there was somebody just to tell me what my heart rate is.” I have seen doctors. I will be going for physio and they’re going to be putting me through a faster pace, so again, I’m going to be monitored by a nurse. She’ll do a weight check, find out how much body fat, check your heart, blood pressure. They’ll give you a set of exercises to do ... I do check my pulse and I know when I listen to my heart if I’m just sitting back, in a quiet room, my heart will go back to a regular pace and I just stay there until I feel reassured that it’s not skipping or running.

It appeared that exposure to the technological led to new bodily relationships. Initiation of self-surveillance provided reassurance about their bodies. For example, Linda described a combination of technologized self-surveillance measures that involved a balance between medical monitoring and attending and responding to the particularities of her own body:

I found I would do something and well, “I think I’ll have a little nap,” that’s when I didn’t have the endurance. You find that you recover quickly if you lie down and have a rest. You have to listen to your body, if your body says “I’m tired” I better go and have a rest .... I don’t have a lot of things to worry me, other than all the medications I have to take, blood thinners, that’s monitored. I have to go have my blood checked every week, so that’s a plus because that tells them how I’m doing .... I sometimes take my pulse and I can tell that my heart beat is very strong. And if there is anything irregular, there is a place I can go and I can wear a monitor which records your heart beat.
The body became a source of knowledge that participants described having intimate access to. This was linked with re-establishing agency. Joseph indicated that part of self-surveillance was being attentive to your own body and communicating what it says to your practitioners:

You got to listen to your doctors and nurses, those are the experts. They know what they’re telling you. But, you got to be a judge of your body. Your body can tell you, and you got to communicate with the doctor or nurse, but he’s not in your body, he doesn’t know how you’re feeling, so you got to have communication with them.

By incorporating logics and practices of self-surveillance, participants became permanently marked by the technological. The technological became part of their everyday lives. Although participants retained authorial voice, the technological still ebbed and flowed into the story. Joseph indicated that he had atrial fibrillation and described having to monitor himself in conjunction with his doctor:

The doctor experiments, certain drugs that they give and I’m taking. The pulse are regular. I get 60 pulses in one minute, and my blood pressure is fine. So the doctor said, I forget the name of the drug [Amiodarone], he said “minimize this one and inform me if the pulse will be staying the same level” … I have a machine. I take the blood pressure. And what do you call this numbers? [Interviewer: “systolic and diastolic.”]. That’s right. It goes below the minutes and the pulses. I get that and start keeping track, I write it at certain hours, how long before I take the medication, how long it goes normal as the medication dies down, if it changes, I keep a record and I give it to my doctor.

Linked in with self-surveillance practices were how meanings about their heart and body changed. The body and sensations became a prominent component of the plot, setting the pace for recovery and the extent of activity. Abbey’s story revealed a feeling that she now needed protection and that her heart let her know what her limits were:

At first when it started, I said to Robert, “Oh, oh. I hope I’m not going to have trouble.” I said, “It’s sort of kicking up a little bit [referring to pain]. I’ve done a lot of work today, so it’s probably that.” But then I take my pillow and it’s okay, it calms it down. So, it’s just like everything else, you’ve got to wait, whether you want to or not, because it [your heart] won’t let you do it. It’s just that little pain. It goes away. It’s just telling me to stop being so rambunctious. It’s something I probably shouldn’t be doing so I don’t do it.

Although Graham indicated that he had reached almost complete recovery, he described himself as physically changed and potentially vulnerable to harm:
I think I’m 95% complete. Some numbness and some weird things going on with my bones in here that are still knitting. I guess the muscles that got all stretched out of place …. the hair grows back in thicker, it’s wirier, feels like every time you put on a shirt, it feels like a bunch of Velcro. You never know when that hurts. My wife happened to hit me. She said, “oh, you all right?” I said, “that was fine.” Somebody, the next week that I was home came to see me and bent down to give me a kiss. Put her shoulder right into my chest. I can’t say that it hurt. It was surprising, startled, but didn’t hurt.

Awareness of new bodily sensations were quite prevalent in participants’ stories. For Wayne, the body became something he had to now pay attention to:

[I am ] more aware of any pain or unusual thing. I figured I’d do some vacuuming. The next day I could feel pain, but I actually put it down to I hadn’t used the muscles for six weeks, so I can vacuum again, but that type of thing I think you’re very aware of. Any little pain that you wouldn’t really think about beforehand, “oops, what’s that?”

Often, bodily symptoms that arose in the hospital prompted participants’ actions and behaviours at home. Bob described an incident in the hospital that prompted him to be careful at home:

They told me I could leave. I was in my street clothes, went to the bathroom, came back and broke out into a cold sweat and had to sit down and my wife buzzed the nurse and the nurse said my blood pressure was way down and put me on oxygen immediately until I recovered. The nurse said that “tall people,” the blood pressure can drop quickly, and then I was there for another five hours to stabilize it. I am very conscious now not to stand up or do sudden movements.

Participants not only became technologized, but the body and emanating sensations were central to the self-surveillance practices. For Jack, the body became a component of the plot in which bodily sensations acted as a “status” report of his recovery:

I’m not sure if I’m just becoming conscious of different things healing at different rates. Sometimes I have a little pain. I don’t know what it is, but I imagine I’m just becoming aware of tissues in different states of recovery. You feel things, nerves start to connect, so it’s like a status in the way you feel because something old is going away and something new is coming up. I expect that it’s going to go away …. Like I said, they’re all coming to life, things that haven’t really moved before but because of the healing, those things are going up and you start to feel them, so, how can you not be aware from that point?

To summarize the second section of this chapter, the technological was emplotted as an absence in participants’ stories of recovery at home. It no longer appeared at centre stage in participants’ stories (like it was in the hospital), but it had moved into the background like a character in a play moves backstage. Participants described returning to the familiarity and
comforts of their home space where they could begin to engage in their normal activities of daily living and further re-establish agency. Although backgrounded, the technological still remained present in the plot and would be called back on stage at any moment by particular events, characters or situations. Often, participants’ bodily sensations acted as a prompt to shift the technological back on stage. Part of this shift involved ways that participants incorporated a set of logics and practices that were rooted in the technological into their everyday lives. They described engaging in variations of self-surveillance, re-reading discharge information and seeing a doctor or talking to a nurse. Part of the aftermath of heart surgery resulted in ways that participants’ identity was reconstituted. Participants described ways that they became technologized through a technological embodiment and consciousness that structured their everyday lives. It appeared that their identity was in a liminal state as they described themselves as vulnerable to physical harm and lack of knowledge, but retained the belief that they were healing and improving. Nevertheless, the familiarity and comforts of home and the absence of the structured place of the technological constituted a space wherein the authorial voice was retained by participants. The ways that participants personalized the technological into their own contexts were reflective of how they retained authorial voice. Of course, the technological remained a circulating discourse that would ebb and flow into the plot. However, the ebbing and flowing was contingent on participants and their bodily sensations, again reflective of how authorial voice had shifted from the technological to the participant.

Indefinitely Present

Although I have provided an examination of how the technological was emplotted as an absence in participants’ stories, it also appeared as indefinitely present. This indefinite presence was most prominent during participants’ stories of recovery at home. Thus, this section is primarily related to participants’ second interviews and their journals. The presence was narrated as an emerging technological consciousness in that participants described continually
incorporating and interpreting pathways of recovery into their lives. These pathways involved details about activities participants should and should not engage in and information about medications and follow-up appointments. The information concerning these pathways of recovery were provided to participants verbally in the hospital and also in the form of a discharge booklet. As participants returned home, what emerged was a technological embodiment that involved being physically technologized and marked. Interwoven into their stories were layers of how participants reconstituted identity, specifically how they conceptualized their logics, practices and bodies as technological. Because the technological elements were less prescriptive in participants’ stories of recovery at home, subjective tellings emerged in which authorial voice was more so located within participants. The third and final section of this chapter involves a discussion of the ways that the technological was narratively emplotted as an indefinite presence. This section is based on the following two sub-plots: “walk that fine line” – pathways of recovery; and “wired together … forever.”

It is important to preface this section by identifying that the technological indubitably marked participants, leading to an indefinite presence. The presence was linked in with ways that their identities were framed as the same and yet different. Heart surgery was a significant marker in participants’ lives that led to a reconsideration and reaffirmation of their values and priorities. For example, Velinka indicated that family remained important to her, but she described feeling “different.” She explained that she was now a person in which material things were no longer of significance and she was “grateful for every day.” Furthermore, part of the way that identities were reconstituted included anticipated biographical changes often related to spending more time with families. For example, Joseph indicated that his character had not changed. However, he identified that he had previously worked incessantly and now, he was going to make the time to take his family on a trip. Edwin indicated a presence of the technological in terms of restrictions to his normal activities, but explained that the memory of surgery fades with time: “It makes me
thankful to be alive. But once I’m back to normal then I won’t see any big change. You’re very
aware of it at this time. It gets dimmer in your mind.”

“Walk That Fine Line” — Pathways of Recovery

The indefinite presence of the technological was emplotted in participants’ stories as
pathways of recovery involving expectations of what participants were and were not supposed to
do. Although the technological discourse appeared as indefinitely present, the authorial voice
shifted to participants. The shifting of authorial voice to participants was linked with narrative
accounts about how they shaped their own course and interpreted and adjusted the technological
pathways. Although pathways of recovery were mapped out for them, participants retained
discretion over how they incorporated these and how their biographical course would be shaped.
In addition, a discourse of self sufficiency appeared to influence the ways participants engaged in
the recovery process and the course of these pathways. The pathways manifested as a “line” that
participants described following, resisting, falling off of or losing track of, as well as ambiguity
about how to stay on the line. The indefinite presence of the technological as manifest through
pathways of recovery are discussed in this section according to: a fine line; abiding by the
pathways; the support of others; attempting to get back to normal; progression in recovery: the
implicated body; and ambiguities of progression in recovery.

“A Fine Line”

Participants’ stories of the expected pathways of recovery often involved descriptions of
“walking a fine line.” Participants were provided with information about activities they should
and should not engage in during their recovery. However, their stories suggested that the
guidelines were not tailored and expected timelines were not clear. There was a sense of
uncertainty about whether information was correctly interpreted and the health implications of
error. Similar to others, there was an intimation by Wayne that he was having difficulty
translating the general guidelines into the specificity of his daily life:
They tell you you’re not supposed to pick up more than five pounds, so you get to this point where you’re afraid to pick anything up because you think something is going to rip apart … it’s a point of figuring out how much I can do. It’s a fine line. You’re trying to walk that fine line. Ultimately I feel I have to be back to where I was, where I can lift a bag of salt and put in the water softener, but the question is, “how do I get there?” … No one is standing there saying, “now you can lift.” I sort of assumed that if I can drive, then I’ve reached the point where I’m not likely to split open, therefore, I can start to lift a bit and do more normal things …. If there was some schedule that looked after you when you got out, you’d have a better idea of when you could go back to work, and when you could start to lift the garbage can, get back to normal. You’re kind of left with these things, don’t lift anything heavy, for how long?

Ashur explained that he backtracked his progress by engaging in sex too early. There was a disruption in his masculine identity of sexuality as he described having extreme pains afterwards. As a result, he was unable to complete his breathing exercises. Bodily responses reinforced the idea that there was an “exact” way to implement the pathways of recovery: “What I’m thinking about now is to try to follow exact procedures because I did two mistakes.” His body acted as a source of knowledge about whether he was following the pathway appropriately. As authorial voice shifted to participants, there was a wavering to fully incorporate it. Participants relied on the guidance offered through the technological and were uncertain about their own competence.

Dianne described uncertainty about the details of her pathway of recovery:

It [discharge booklet] covers a lot of stuff; it’s very good. It mentions about your breathing ten times every hour, well, I know I didn’t do that and I wasn’t sure how long I was to keep doing that … I wasn’t sure how often and how long I was to do that. Am I to do that when I walk? … I don’t know whether I’m supposed to be doing a fast walk or slow walk or does it matter, as long as I walk?

For many participants, the body became a determinant on how to manage the ambiguities concerning the pathways of recovery. For example, Kristi described overdoing things and indicated the importance of gauging her activities. It appeared in her story that the expected pathways of recovery she was given on discharge were not personalized and so she had to figure out the various activities by relying on her body:

I don’t think I’m fully recovered. When I went to the hospital two weeks ago, I thought I was doing good, until they put me through the test, when I got off the treadmill, I couldn’t breathe and she said, “well that’s what you’d feel like if you put in an 8-hour
shift.” I said, “oh my god. My heart feels like it’s just going to” [voice trails off]. So I
gauge myself, making a bed or vacuuming or dusting or anything like this is out of the
question ’cause you’re reaching and he [the doctor] says, “I want this to heal.” So I do
light duties. I’ll make dinner. I’ll take the dogs out. I’ll go for a walk.

*Abiding by the Pathways*

Participants’ accounts involved descriptions of closely abiding by pathways of recovery
despite the ambiguities discussed above. This suggested the emergence of a technological
consciousness that structured everyday activities, which was one way that authorial voice was
not completely internal to participants. Participants often described the medications they were
instructed to take. Ashur stated: “they gave me a list of the medication I should take and I
followed the medication that they gave me … If you have to have this surgery, just have faith
and follow the instructions of the medical staff, exactly, to the dotted line.” Elements of the
technological as an authorial voice were still partially reflected as participants described
following prescribed pathways and not questioning them. Linda noted that attitude was an
influence on recovery, but she also assigned importance to guidelines provided to her by health
care professionals:

I’m concerned about all the medication I’m taking, which I guess is necessary, primarily I
don’t take any medication, but this is actually what they say I have to have, so you follow
orders …. [the hospital] is suggesting I go and take some physical classes, but the
cardiologist wants to check me over to see if I’m strong enough to take these tests.
You’ve got to do things in right order.

However, elements of Linda’s story included ways that she personally incorporated these logics
into her daily activities. She described an incident where her friends asked her to bring
something over:

They said, “We’d like some of these things if you could bring them out but, see if there’s
anything too heavy for you to lift.” So this is what I mean, I think I should be careful that
way for a little while until I have this next echo with the cardiologist to see how strong I
am. I think if the doctors have laid out something for you, then it’s only fair to do as they
tell you to do and I think that’s what I’ve always done.
For Greta, expected pathways of recovery were interpreted as a resource, giving her encouragement. These pathways shaped a technological consciousness:

I didn’t feel like doing anything when I was home. You don’t even feel like walking, you don’t feel like doing anything …. Like Dr. J said, “everything takes time. You have to get energy back and then it should get better.” But, you have to force yourself to walk.

What emerged in Ishani’s story were ways that identity was reconstituted. To some extent, her identity was technologically shaped in that she had to restrict her activities. This contradicted her understanding of self as an active person:

I did what they say. I walk up and down in the house and did my exercises, to take some deep breathing, I had to do that. Did everything. I think my recovery is good. [Interviewer’s question: How has life changed for you?] So far, a lot. I do everything, I’m a very active person. I don’t like to sit down, so this is a bit boring, sit and watch TV. I haven’t gone back to work yet. I’m not going back for a couple of months. I usually don’t relax much, but it’s good in a way that I’m relaxing, I just sit and watch TV. In another way I miss not working, not being active and that kind of thing.

Margaret described rearranging her kitchen in order to conform to the pathways. She re-established agency by adapting the information to her own situation and daily activities:

I know I’m not supposed to lift anything too heavy, but it’s reaching to get things out of the cupboards …. you’ll notice our dining room table is full of pots and pans, well they were always on the bottom shelf and Sam can’t bend over easily to get those kinds of things, so we just moved it all on the dining room table.

Support of Others

Participants’ descriptions of following the expected pathways of recovery at home involved the support of others. Although both women and men indicated that their partners helped them, there were slight gender differences. The women indicated that they depended on their husbands or partners to help them. For example, Dianne indicated that her male friend was cooking her meals and she recounted that she initially had him walk with her: “I hung onto his arm. I had him walking up the hall with me at first and of course I wasn’t walking very fast. He was exhausted, he said ‘walking slow is harder than doing anything!’ So finally I got brave
enough to go on my own and that was good.” It did not appear in their stories that their partners were imbued with a set of logics as fully as the partners of the men.

Married male participants also described relying heavily on their spouses. However, it appeared that male participants characterized their partners as taking active responsibility for implementing discharge instructions in the home. Wives were described as not just helping, but coordinating and surveying theirs husbands’ activities. It was apparent that male participants’ wives had actually become imbued with a set of logics and practices that were technologically informed. Jack indicated that his wife coordinated activities related to a successful recovery:

[she was] getting my drugs and keeping track of them to making my meals and making sure, because I’m also now on a cholesterol and a diabetes diet, so she’s been taking care of that … I don’t know how many people do, but if I had to come home without that it would be pretty hard doing without somebody there to help you.

Bob also indicated the critical role his wife played. It was quite evident the ways that his wife was characterized as an influence in shaping his activities and routines:

[She] was an incredible part of this whole recovery process and she kept me to a kind of, no lifting, don’t bend down, all the literature I got from the hospital, Susan devoured it. I would say “why can’t I lift it?” “Actually, it’s ten pounds what you’re lifting.” So I said, “no, it’s only five pounds.” And so she was very careful to manage everything.

Edwin indicated that he appreciated the information that was provided at discharge and being told about the various medications that he would have to take at home. As well, he described ways that his wife kept him on track:

She went along [to a lecture] and I think they scared her. They said “you can’t lift anything more than your plate of food.” She wouldn’t let me lift anything … I used to get a bit puffed going up the stairs. We’ve got a little turn, a little landing there so my wife had another chair put on the landing so I could have a little rest.

**Attempting to Get Back to “Normal”**

Expected pathways of recovery often involved attempts to get back to “normal.” This idea of normalcy was linked with attempts to return to who they used to be, but often involved a
reconstitution of identity. Underlying Greta’s narrative were ways that her identity shifted from an active to a “helpless” person. Her bodily capacities were integral to this shift:

I can’t walk too much. I can’t do anything really. And you’re just helpless some how. As soon as you do something you realize you don’t have the energy. You have to sit down. It’s very strange for me. Because I used to do everything all the time. I’m not used to this…. not to be able to walk anywhere. I just hope I’m going to come back afterwards.

Shifts in identity and altered bodily capacities led to psychological issues for her. When asked about how this has affected her, she stated:

Most of the times it’s okay, other times you get depressed. You feel like crying …. Somehow it hits you because you can’t do anything. And I’m not used to that. I never was one who wants to be sick or just lay down. I was always on the go.

Edwin indicated various protocols that he was expected to follow and described a process of attempting to get back to normal:

I’m not supposed to lift anything or do anything strenuous. Which is a bit restrictive if you apply it to things that you normally do. You’re not supposed to lift more than I think they say, ten pounds. Another thing, normally in the summer anyway, I used to go to the gym, so I’ll have to be a bit selective on the exercise, I don’t go do any weight lifting.

Ishani described having difficulty with some of her normal activities of daily living. It appeared in her story that she wanted to identify herself as back to normal and recovered, but she measured this in terms of her capacity to resume the former round of homemaking activities. This capacity was slow in returning. Interwoven in her story are gender issues concerning her husband’s housekeeping skills:

It’s a lot better. But not fully recovered yet. If I try to do anything like mopping, a bit too strenuous, I find a lot of pain. I guess my arms are connected to wherever they cut. Yesterday I tried, because the house is a mess, and I want to clean it, but my husband is trying, he tries his best but women see different things. So I’m trying, but I find yesterday I was in a lot of pain. I just stopped. I didn’t bother to go further. But I’m getting there slowly …. Everything is back to normal now, I’m eating a lot better. Not sleeping that great, but I’ve always had a problem with sleeping. Everything is okay. Well, I can’t do too much, like lifting heavy things. I’m not back to normal that way.

It appeared in Ashur’s story that he was attempting to establish a sense of future for himself, but there was no certainty in it. It was evident that technological elements continued to claim part of
his agency. As well, there were forces outside of his control and the technological that shaped his biographical course. He explained that his fate was not determined by the technological:

Anticipation to me, I think it’s, life is going to go normal. I’m not going to change anything. If I can keep doing my job, then I’m going to keep doing it. I will be careful in performing the jobs that I’m doing. At the same time, if something is coming, I mean, you can’t deny it. I’m restricted to the life that I’m supposed to live. I’m not afraid to do whatever I want right now. I’m going to follow the instructions and guidelines of the therapist. I know that Doctor Z told me, “in six months you can climb Mount Everest if you want.” In six months time. I’ll die from something else probably. That happens.”

Attempts to get back to normal, often involved a resistance to the pathways of recovery. For Linda, there appeared to be a resistance to having to consider herself as a child or a person who was at the will of another. In this case, she would not allow the expected pathways of recovery to fully restrict her from the normalcy of sleeping in her own bed:

The people in the hospital they were very good about helping me with what I could and couldn’t do. She said, “Now you have to go up your stairs one at a time, like a child would go up one step, one step” and well, that didn’t last long because I thought, I’m used to these stairs. So I got up the third floor to sleep in my bedroom that night.

As Joseph described attempting to return to his normal activities, there were elements about how he resisted identifying with the dependency involved in being cared for by others. Underpinning this resistance were identity and gender issues as he attempted to become self-sufficient and re-establish his independence:

They give me the pills and told me the dosage of it and they gave me some instruction. Whom I to see, when I’m to see. They said I should not force myself, warning the health will come with time, “be careful,” which I wasn’t. As much as I tried, the person, I just, look, I’ve always been active, and, well, they said, “don’t too often climb the stairs.” I’m going up the stairs and there’s my wife or there’s my son or my sister, whoever was behind me, being scared that I’m going to faint and fall down. I said, “I’m okay. Would you go and do what you have to do.” But no, they’re right behind me. And they said “every step to stop and take a breath, a deep breath and inhale and exhale.” Why should I? I feel good. So I take three steps. That’s why I say, I wasn’t being careful.

He continued to describe a resistance against the expected pathway:

[I felt] recovered. I mean, I’m completed. Doctor L says “by Easter you should be okay.” I got news for you doctor, I’m okay now. But one thing, doctors or nurses know better, maybe one thing I’m concerned if maybe I do something inside, because there’s an operation there, maybe it needs time to be healed, so I have to be careful of that. To be
honest with you, I caught myself after I do something stupid. They say “don’t lift” and I go and lift something. After I think I should not have done that. I shouldn’t have done it because they told me not to do it. Physically, I feel I can. But they say “don’t rush it” but I’m rushing it. I can do it. They say one step or two steps, I just keep on walking.

It appeared that returning to normal involved the embodied capacity to pursue or achieve activities that they could do prior to surgery. Often these narratives were underpinned by various ways that identity was reconstituted. Raz indicated that he had not returned to normal, stating: “I can’t drive. So I’m a bit bunged down right, so, anything you want, you have to get somebody to do it for you, ‘take me here and take me there.’” In the excerpt below, he explained that he is physically unable to do all the activities he thinks are characteristic of him. There was the identification of self as “handy.” The embodied capacity to pursue valued activities and be self-sufficient had threatened his continuity of identity:

I can’t do anything. I’m always handy around the house doing a little bit of this and that. I laid this floor down myself. Now the closet door just broke. I got to do it, but I can’t do it. I got to get someone come do it. These are the things that change. I’m not going to rush into anything. I’m not going to say “yes, I can do that” and then get in more trouble. I know, I’m not what I used to be, so, that’s the way it has to be …. the doctor is saying, that in six months time “you’ll be jumping around, you’ll be moving around, you get another 15 years added to your life,” which is pretty good. It’s good hearing these things.

Abbey used a metaphor in her story that links with identity. She described herself as “a fighter” and “never want[s] to be down.” Engaged in her normal activities was how she constituted this identity. She indicated that the elevator was broken and that she was doing the stairs “practically right away … I take my laundry down and do it and come back up the stairs. One day I was up and down five times, so it was like ten times thirty-two stairs.” Although she explained that she has slowed down, she was quite adamant about getting back “to normal”:

I’ve always got right back to normal when I got back home, because I think as soon as you get to normal, the better it is for you … [She explained that normal meant:] To go back to doing the things you did before you had your operation and I think it keeps your muscles in tone. You’ve got to expect some pain now and again, so it’s going to take a little while, and bending over. You get away from bending over too much. You can to a certain extent, but not a lot … I imagine it will take about four or five months before you get normal. And I still ride my bike. I can go a mile in two and a half minutes …. It’s
getting better every day, it’s getting stronger, but it’s like any operation, you’ve got to get used to things the way they are now, not how they were.

Progression in Recovery: The Implicated Body

A part of returning to normal involved the conscious awareness of the various phases of progression in recovery. Linked into participants’ stories were descriptions of how the body and its capabilities were setting the pace for a recovery plot line. Bob described a return “to normalcy, or whatever passes as normalcy in my life.” Underpinning his narrative was a claim that the course of recovery was not just technologically driven, but that the human body was implicated as a determining factor of his progression. His identity was reconstituted in terms of gender discourses of masculinity and strength and prevailing ideas of self-sufficiency:

I’m still restricted, I get a constant reminder if I overdo things, you have to say, “you had surgery.” It’s a gradual, incremental return, but I have been assured by those who have had surgery and by doctors that four or five months time, you will feel the advantage .... you may feel strong that you can go back to normal, in fact you can’t. The human body doesn’t repair itself so quickly or it wants to slow you down or it’s doing it at its own speed and that will force you to go along with that speed .... I was the cook in the house before so I gradually got back to helping out in the kitchen, doing minor stuff around the house, but the day that I went out, I pushed myself way too much, stayed out too long and then swept out the garage. I was wiped, absolutely wiped. I eventually reconciled myself to the fact. I thought Superman here was going to beat all the records, I came out of hospital in record time and I would be back after a month, doing half marathons.

Progressions of recovery were constantly being compared with expected trajectories. Kristi indicated that she had “traveled” quite far since surgery. Her bodily symptoms acted as a source of disappointment, whereas her bodily capacities acted as a source of success:

I really thought that for the first three weeks when I came from the hospital I would be bedridden, and then I knew, when at the hospital that that was not going to be the case because I was already walking around the hospital, so to lay around and not do anything was not something I wanted to do. I brought myself up to 30 minutes a day in walking .... When I went to see the heart specialist he said it was okay to work my way up ’cause you start at 5 minutes for I think it was 7 times a day and on very low speed and then you do less time but more of it at that time so you’re doing 10 minutes but 4 times a day .... I think there was only a couple of days that I kind of felt sorry for myself and I’m going “I can’t breathe and I can’t do this” and then I went, “yeah, but I can do all this.”
Although participants could not return to all of their activities, often being able to complete one specific activity that was identified as meaningful appeared to encourage them. Graham indicated that he had to restrict what he did when he got home, but recounted an anecdote of one particular activity that he returned to the morning following discharge:

I’m up at quarter after six. I took the dog for a walk, that’s the time I get up most mornings, take the dog for a walk and then I get my shower so that everybody else can fill in afterwards. I was really happy to be at home, be able to get back to doing things that I was doing at least, obviously cut down on a whole lot of that because physical, couldn’t do everything, but being able to take the dog for a walk was great.

Although healthy bodies can be silent and often non-players in stories, his bodily responses became a measure of his recovery progression:

I was better next week than I was last week and then once you get past looking week-to-week, you’re looking from day-to-day. I feel so much better today than I did yesterday, so I can see that every day I’m getting better. I feel I’m getting better within me, the way in which my body’s responding.

Incorporating pathways of recovery into their lives involved recognition that these changes were not necessarily a complete return to normal. Often, participants noted that these were new changes that were life-long. Dianne indicated that she had progressed to walking thirty minutes a day in the hallways of her apartment. She signified: “Now I’m going to have to walk the halls every day, for the rest of my life.”

Ambiguities of Progression in Recovery

There was often ambiguity about the status and progression of recovery. Again, the body was implicated as a determining factor of this ambiguity, as well as engaging in activities that participants did prior to surgery. For example, Jack indicated that he was progressing, but described a sense of uncertainty about his recovery:

I’m feeling good, hopefully in the new year I’ll be able to get out and do what I normally do, maybe not 100% but I figure I’ll be like 80% better, because this chest thing takes a long time. I think my heart has to shrink, will take some time before I have full capacity, but I have so much more than I had before going in there. I was literally short of breath every waking moment. I couldn’t lie on my back …. I’m kind of static right now because I felt really great when I got out of hospital. I don’t feel much different now.
Often, the stagnant moments of recovery challenged participants. Margaret also questioned whether she was progressing:

I was getting frustrated because nothing seemed to be progressing, it was as if “is this ever going to get better? How long is it going to take?” Everybody that talks to you expects you to say, “I’m coming along just fine” At that point I didn’t feel like I was.

She intimated being aware of the expected trajectory. By comparing herself to a friend who had heart surgery, she described being unsure if she was measuring up and how to translate the pathways of recovery into her daily life:

Within a week, he was out doing all kinds of things. I’ve felt that I’ve been compared to him. And it hasn’t been that way for me … The part that I found frustrating was because I was upstairs and I was told I should only go up and down the steps twice a day. I’m thinking as slow as that takes, how do I get up to the bathroom in time if I’m down here? So I was upstairs for close to two weeks, it was just a matter of walking into a bedroom as far as I could go, turning around and coming back, walking in the hall and they’re all short steps so it was almost as if I was going in circles. But I’ve survived. And I go up and down these steps anyhow. I go up and down them all the time now without even thinking about it particularly unless I’ve done a lot stuff down here and I’m getting tired.

She claimed that information was not provided about varied progression rates: “Nobody, nobody has mentioned that and I don’t recall seeing it in the [discharge booklet], and apparently they say four to six weeks. Well here it is eight weeks so why am I different?” For some, the ambiguities of recovery were linked with their biographical course and considering their future. Kristi indicated that there were elements of her biographical course that were completely out of her control. One month following discharge, Kristi wrote in her journal: “I sometimes feel like how long do I have with this valve … the study that has been done does not go beyond 15 yrs. … no one has instructed me as for on what my future holds.”

“Wired Together ... Forever”

Participants’ stories reflected that the technological discourse receded, but there was an enduring presence. This presence involved the emergence of a technological embodiment. Discussed below is the idea of being “wired together … forever” which represented the
indefinite presence of technologized bodies, technological body parts, and the idea of marked bodies. Underpinning participants’ stories of a technological embodiment was a reconstitution of identity. Linked into this was how authorial voice shifted to participants, but was still technologically influenced.

Participants often talked about the permanent technologizing of their bodies. For example, Linda stated: “The fact that you can have your bones inside wired together and that those wires will stay in there and they will eventually, well they will be there forever.” For some, the new valve was something that was separate from their body. It was described in ways that the valve was agential in the sense that participants did not feel they were in control of their heart beat. Graham described hearing his valve only when he leaned on his side and stated that it made him feel good that it was still beating. However, he continued to identify that it was also “scary” because he was not fully in control of his heart:

It’s scary because you know that it’s not you, that’s actually creating that and making it go, but I look at that and say, it’s like a valve job on the car, and how good that is for the car. This is good for me too and so, let it bounce a bit. Makes me feel good that it’s doing its job …. When I go through an airport is it going to beep? The titanium won’t beep but the wire might. Hope they used good galvanized. Stainless steel at least [Laughs] …. This one [new valve] is made out of supposedly, metal. You can call me the tin man.

Identity was reconstituted in ways that bodies became technologized. Participants began to think of themselves as technologized with different qualities. During Margaret’s first interview, she described hearing the click of her new mechanical valve. It brought forth a sense of insecurity because she knew it was eternal. She characterized the valve as animate:

I hear the click of this thing, which was one thing that the booklet told you that you would hear. I don’t particularly like it. I can turn my head a certain way and I don’t hear it quite as loud, otherwise it’s just like a thump, thump, thump, thump, [laughter] and that, I can’t change now.

Temporality was an important part regarding how the technological embodiment shifted. With time, participants became more familiar with the new bodily sensations. Margaret continued to indicate during her second interview that she was now resolved to the fact of hearing the valve:
“I hear it mostly at night when I’m laying down, and when I have to take a deep breath I can sense it. So if that’s with me the rest of my life, big deal.” The enduring ways that a technological embodiment emerged were particular to how the body was physically changed. Bob described a permanent technologizing of his body in that it had literally been invaded and altered. This act not only made him think of mortality, but how his body would respond in certain situations because it was now technologized:

There’s nothing like a serious surgery to remind you of mortality. As you become older, that becomes a constant. Of all the organs, when the heart stops, that’s it. You can go on with half a lung or kidney, but if the heart quits, you’re quit … Your body is invaded, somebody opens you up, does some work around your heart, then staples you together and knits you up. Forever, until the day I die, every time I go through an airport I might go beep, beep, beep, beep, because they’ll say, “what the hell’s wrong with you” and I’ll say “I’m stapled, I’m stapled from here to here.” [points from top to bottom of sternum].

Stories of technologized bodies were sometimes specific to those participants who received a valve replacement. It appeared that identity was reconstituted as the body became technologized. The body was often conceptualized as a cyborg in which it became part machine influencing how participants defined themselves. Kristi wrote in her journal “I received a letter from the hospital for the two parts that I have received for my heart with an identification tag. Body parts, numbered, it kind of makes me feel like a bionic woman.” When talking about his new valve, Ashur indicated concern about having a permanent piece of technology in him. There was the sense that certain things associated with the technological dimensions of surgery could not be really understood. Personalized dimensions of authorial voice appeared as he resolved to have faith in the divine and not dwell on these things that were incomprehensible:

I have a card with a number, a serial number. What do I do with it? There’s something implanted in my heart with a warranty? I try not to think about it, especially what went in my heart. Because, I know nothing about medical situations. This is a big field and there are a lot of questions … I don’t want to go deep into the existence of God. He’s there and I know he’s there. And I believe in him. But how and where, I don’t want to even think about that because it’s very hard stuff to think about.
For Jack, the technological embodiment was quite dramatic. He questioned smelling different because of the porcine valve, but convinced himself that it was not possible:

The first time I woke up, I thought I smelled pig in my nose all the time. I spent some time to convince myself that that was impossible, but I kept thinking that I smelled pig in me. For some stupid reason, after a while it went away. Obviously there was some animal pieces going in, so. It was probably something else, there was probably really a smell there but I just decided what it was. It wasn’t really disturbing, it was just weird.

The indefinite presence often involved descriptions about how participants’ bodies were physically marked. For example, Ashur claimed that the permanent marking of his heart was directly observable by health care professionals:

There was a young man who did that test for me [echocardiogram]. And he looked and he said, “Oh! This is S’s work. I said, “Excuse me? Did he leave his signature there?” He said, “Yes. As a matter of fact, yes. He left his signature there. The job was well done.” “Excellent.” He really gave me the impression that everything was, not to worry about the operation. And if you have complications that something can be taken care of, but the main thing it was done well. I was happy to hear that from him!

Margaret described figuring out some things that happened to her body while examining herself at home, as well as receiving a notice in the mail:

I wasn’t told that I had a transfusion, that I had blood, but I got the notice from the hospital that I had, and the doctor now has a photocopy of that in my file [pause]. Apparently I had two up here somewhere [points to neck where her central intravenous was], I’ve never been able to find out where they were because I can’t find any marks. I know there were two things in there [points to chest] where they had, was that the monitor that they have on you after surgery? They were attached to the monitor but inside. The one thing I’ve got left from that, is the fact where these wires went in there’s a nice little hollow there. The one thing I do know, I think that’s maybe why my voice starts to go when I’m chatting for a while, is because that tube has been down there.

Graham indicated that bodily remnants acted as reminders: “They put something in my neck here. Well something was either going in or coming out at that point, I would imagine. I can still feel the scar.” Upon indicating concern about his marked body, elements of masculinity appeared in his story: “Seen zippers before. It was there. Worry about now what am I going to do when I go swimming. Oh well. That’s the way it goes.” As well, similar elements of gender appeared in Bob’s story as he described seeing his incisions and the effects of his imagination.
It was a reminder that you’ve had surgery. I thought previously, this is going through, my nice chest was going to be ruined. Sheer stupidity. Vanity of vanities. I thought who the hell is going to see it anyway, probably your wife, so forget it … Your mind plays tricks on you. You find in there [his journal] there’s a quotation from I think it’s Shakespeare, “the mind is in its own place and now that it’s out it can make a hell of heaven and a heaven of hell.” Sometimes it did that to me. It tricks you.

Edwin described his body as marked, but indicated that his incision looks like what he expected:

It’s a bit like how I expected. There was no surprise there. [But] there were a lot of holes, there must have been seven … I’ve got four or five little red marks which I think were for the drainage or I didn’t know what they were for, what are they for actually?

Abbey downplayed her scar: “what’s a scar compared to your life, you know?”

To summarize the third and final section of this chapter, the technological was emplotted as indefinitely present in participants’ stories. The presence was narrated as an emerging technological consciousness and embodiment. Interwoven into the stories were layers of how participants reconstituted identity, specifically how they conceptualized their own logics, practices and bodies as technological. Although discursive elements of the technological still shaped pathways of recovery, authorial voice had more so shifted to the participant. This was reflected in ways that participants shaped their own course and interpreted and adjusted the technological pathways based on their own contexts. Linked in with the shifting of authorial voice were participants’ descriptions of self sufficiency and re-establishment of agency.

Summary

In this chapter, I presented an examination of the ways that the technological was emplotted in participants’ stories as the surgery receded. Stories were told about a process of being unplugged in which the technological paradoxically became absent, but also indefinitely present. This paradox appeared in ways that the technological was emplotted as becoming backgrounded in the plot line like a character in a play would move back stage. However, it appeared that the technological was drawn back to centre stage at certain moments during participants’ stories.
Discursive elements of the technological continued to shape the progression of recovery and the biographical course of participants, but it became less powerful and prescriptive. Participants re-established agency by positioning themselves at centre stage and characterizing themselves as more active in constructing the plot and the course of their recovery. They were provided with instructions upon discharge about pathways of recovery, but their stories reflected ways that they retained discretion over how they interpreted and incorporated these pathways into their lives at home. This discretion appeared as a notable shift of authorial voice from the technological to the participant. Although the technological was still one of the polyphony of voices, a discourse of self sufficiency also influenced authorial voice in participants’ narratives. Identity was reconstituted as participants began to determine and fulfill their own needs in the recovery process. Although, it also appeared that identity was in a liminal state in that they described themselves as vulnerable to physical harm and lack of knowledge, but retained the belief that they were healing and progressing in their recovery. The ways that participants interpreted bodily sensations became a prominent component in setting the pace for the recovery plot line, as well as drawing the technological back to centre stage. Often, it would shift back on stage when participants engaged the technological (e.g., self-surveillance) to mediate the uncertainty associated with new and unfamiliar bodily sensations. Participants’ exposure in the hospital led to them developing a subjectivity and embodiment that was co-constituted by their experiences with the technological. Ultimately, the ebb and flow of the technological in their stories of recovery were contingent on context and personal interpretation.
CHAPTER VIII

DISCUSSION AND CONCLUSIONS

The heart.
That thing that beats beneath my skin.
    I am well aware of it.
    Life rotates around it.
    In more ways than one.
This dissertation began with unsettling professional and personal stories that revealed why I was drawn and driven to study this phenomenon. Working in the cardiovascular intensive care unit, as well as other ICUs, I recognized the critical importance of the technological in saving peoples’ lives. Still, I was bothered by being part of the technological because I did not know how it became interwoven into patients’ lives. By considering how the technological was emplotted in participants’ narratives, I was able to explore the ways that identity was reconstituted and examine the moral aspects of storytelling. As I came to understand, the technological acted a pervasive and sweeping discourse that was swiftly incorporated into stories. It became both a safety net and a burden and as quickly as it appeared, it left patients hanging. The discursive power of the technological is examined in this interpretive discussion through a literary lens of considering the metaphorical death and resurrection of the patient as author. Subsequent to this sub-section is an exploration of the characterization of nurses, followed by the suppression and performance of gender in participants’ narratives. The interpretive discussion is followed by addressing the three research questions that guided this study. The final three sections include a discussion of the study strengths and limitations, the implications of the study specific to research, policy, practice and education, and a conclusion. I bring this dissertation to a close with an epilogue that links back to the prologue of Chapter One.

Section I: Interpretive Discussion

Although I have provided a descriptive and analytic exploration of the study results, in this section I discuss how novel elements of this research prompt a different way of thinking with stories and about patients’ experiences of the technological in heart surgery. The interpretive discussion is divided into three sections: (1) death and resurrection of the patient as author; (2) characterization of nurses; and (3) subtleties of gender: suppressed and performed.
Shifting of Authorial Voice: Death and Resurrection of the Patient as Author

Authorial voice appeared as particularly relevant in this study because of two significant temporal shifts. To elaborate on the temporal shifting of authorial voice from the technological to the participant, I divide this discussion into two sub-sections informed by Irwin’s (2002b) book The Death and Resurrection of the Author? A collection of literary criticism and philosophical essays in this book debates two divergent viewpoints about the death of the author and the resurrection of the author. I first extend this debate in a less polarized fashion to consider the shifting of authorial voice to the technological as a temporary and figurative “death” of the patient as author. Secondly, I discuss the resurrection of the patient as author as the technological was backgrounded and authorial voice shifted back to participants. By considering authorial voice in this manner, I shed light on the forces that influenced how stories unfolded. Focusing on authorial voice surfaced issues of identity and the moral acts of storytelling.

Death of the Patient As Author

In the first temporal space, participants’ stories of heart surgery reflected a figurative “death” of the patient as author. This idea is based on Barthes’ 1968 satirical claim about The Death of the Author (Irwin, 2002a). Barthes (2002) argues that the author as an individual person has slipped away and authorial voice has become a discursive construction informed by language and culture. As Foucault (2002) suggests, the author (and the emergent voice) is characteristic of certain circulating discourses. I work from Barthes’ argument to discuss how the technological discourse appeared in participants’ stories as a temporary death of the patient as author. Linked into this was how authorial voice became located in and contingent on the technological discourse. As a result, patients’ full authorship was eclipsed by the prominence of a technological discourse.

Death of the patient as author was reflected in ways that storytelling became a co-constituted act. This speaks to the ontological foundation of narratives in which stories are
constituted temporally and contextually. In this study, participants were not the sole authors. Rather, narratives reflected a shift of authorial voice to the technological. Although participants were the narrators or tellers of their own stories, there was a polyphony of voices that acted as influences. Particularly notable was how the technological discourse acted as a powerful force shaping and structuring participants’ stories. Practitioners and the associated technological events and situations that were involved in preparing and recovering participants from surgery became the raw materials of stories. This was particularly notable in participants’ stories of the preoperative and early postoperative period, which unfolded in markedly similar ways.

The technological discourse constituted a universal sequence of events that were laid out prior to patient hospitalization. Discourse was prescriptive in that it defined what was possible and what was not (Winance, 2007). This is not to say that strict templates existed, but that narrative emplotment was socially orchestrated (Mattingly, 2007). Frank (2006) suggests that people often have a sense of the stories that they will tell because of the narrative scripts that are available to them. Typical scripts of heart surgery were discursively informed by the technological. The script appeared as an expected trajectory of recovery in which the culmination was a technological “fix.” Participants’ narratives reflected ways that practitioners were characterized as activating and maintaining this script/linear plot line, informed by their logics and practices of care.

The death of the patient as author was a discursive act in which the technological quickly appeared at centre stage. Shifting of authorial voice to the technological was prompted by the logics and risk calculations offered by practitioners, initiating an optimistic and hopeful plot line. As the time of surgery drew closer, it appeared that the shifting of authorial voice to the technological also involved an externalization of agency. It is suggested that when first diagnosed with a disease, a person’s sense of agency is suppressed and moved outside of them (Kierans & Maynooth, 2001). Participants entered into an unfamiliar domain where they had no
other choice but to relinquish agency. Both agency and the body were relinquished to the technological because it was these dimensions that could offer a cure and avert death.

The shifting of authorial voice to the technological continued as participants recounted the preparations for surgery and the ultimate act of losing consciousness. These stories strongly reflected the death of the patient as author within the context of a prominent appearance of technological routines and processes that structured narratives. Although the patient as author occasionally emerged through personal and emotional tellings, the technological discourse dominated the narrative structure. As participants oscillated between first and third person storytelling, they created a narrator that van Peer (1986) would describe as diffuse. Initially, there was no strong presence of the participant as author. The beginning influences of the technological discourse prompted this oscillation. Participants’ narrations became more impersonal, progressively shifting to an abundant use of third person and a diminishing of first person pronouns. The abundant use of third person pronouns was reflective of this shift of authorial voice to the technological. The use of third person pronouns creates an absence of the narrator in the discursive situation (van Peer, 1986). In this case, narratives reflecting a shifting of identity to a passive, background character. Participants characterized practitioners as playing active roles, describing the various things that “they,” “he,” “she,” or “the nurse” did to them.

Part of the authorial voice appeared in ways that the technological became an increasingly dominant player through the processes and routines of care enacted by the practitioners. Participants characterized themselves as becoming passive and non-agential. They clearly recognized that they had no control over the surgical outcome. This resulted in the simultaneous presence of fear because they had no control and were uncertain of the outcome, but also comfort because control over the surgical outcome was now in the hands of a team of practitioners. There was a surrendering to the technological as they described having confidence
in the doctors and nurses and hoped for the expected culmination of the heart surgery script (e.g., cure).

The death of the patient as author was reflected in the reconstitution of identity as the universal patient. Authorial voice was influenced by a universal process wherein a sameness reigned in the preoperative preparation procedures and the postoperative care. Participants’ own subjective voices moved back stage and the practitioners and technological events became the active players in the stories. One element of the preoperative routines involved the physical removal of the objects that partially defined and differentiated patients from each other. The most common objects that participants described removing were their clothes, followed by donning the patient gown. It has been theorized that clothes represent a self-inscription that contributes to the articulation of who one is (Young, 1997). Furthermore, it has been observed that even practitioners contribute to the shifting of patients’ identity by progressively moving them from subject to object by the non-differentiating ways that they are addressed (Young, 1997). This shift resulted in patients’ own moral concerns about becoming a non-differentiated object on the operating room table. The concerns circulated around a lack of personal control and the potential that practitioners would miss particular idiosyncrasies of the patient body.

The shifting of authorial voice to the technological simultaneously acted as a resource and limitation. Although there was a death of the patient as author, practitioners provided participants with a clearly laid out pathway that contributed to the belief that they would be carried through the operation and recovery. This aspect of a pre-scripted story provided access to an emplotment pattern of being saved. Furthermore, it appeared that expected and hopeful trajectories of recovery helped move participants beyond periods of distress and/or physical discomfort. Heart surgery and recovery encompassed unfamiliar environments and events and the discursive elements of the technological provided participants with structures to depend on.
In this study, as in other research (e.g., Micik & Borbasi, 2002), stories reflected how pathways were used to identify whether recovery was following what was considered a normal trajectory. On the other hand, the technological discourse as authorial voice also acted as a limitation. The emplotment of narratives framed by a story ending with cure was problematic (Kierans, 2005), particularly when a linear trajectory of recovery did not occur. This was particularly relevant since this study, among others, have reported that recovery from heart surgery is non-linear, longer, and more complex than patients expect (Dunckley et al., 2007; Gardner et al., 2005; Micik & Borbasi, 2002; Tolmie et al., 2006). Since narratives became scripted, to veer off this linear emplotment pattern was unfamiliar and participants did not necessarily have other plots to draw from. As a result, discourse can empower and support or it can imprison and restrict (Winance, 2007). Since practitioners were characterized as significant players in the technological discourse, their actions and behaviors impacted how participants incorporated the discursive elements into their stories (and resurrected the patient as author).

Resurrection of the Patient as Author: “Sing[ing] Ourselves In”

In this second sub-section, I build on Irwin’s (2002b) ideas about the resurrection of the author in the context of authorial voice shifting back to participants. As the operative procedure receded and participants progressed in the course of recovery, it appeared that there was a “resurrection” of the patient as author. Because final interviews were 4-6 weeks following discharge, this figurative resurrection is probably something that will continue as these individuals progress further in the course of recovery.

To further understand this shift in the authorial voice, I refer to an intriguing metaphor that pertains to voice in writing as both personal and social (Elbow, 2007). I draw on the meaning of this metaphor to shed light on how authorial voice shifted back to participants. Not only did the technological become more of a background character and move off stage, but the shifting of authorial voice to participants reflected a less scripted narrative. Participants began to
“sing” themselves into recovery and their own particularities became an influential force of how stories unfolded. Stories included more personal and unique elements that were rooted in the particularities of participants. The social elements of voice (in this case the dominant discourse of the technological) still influenced participants’ stories, but the personal voice began to flower:

We all have a chest cavity unique in size and shape so that each of us naturally resonates to one pitch alone … In this metaphorical world, then, even if we figure out the system, we are stuck. If we want to be heard we are limited to our single note. It we want to sing other notes, we will not be heard. And yet, if we are brave and persistent enough to sing our note at length—to develop our capacity for resonance—gradually we will be able to “sing ourselves in”: to get resonance first into one or two more frequencies and then more. Finally, we will be able to sing whatever note we want to sing … to make every note resound with rich power. But we only manage this flowering if we are willing to start off singing our own single tiresome pitch for a long time and in that way gradually teach the stiff cells of our bodies to vibrate and be flexible (Elbow, 1998, p. 281-282).

Singing oneself in and regaining authorial voice was a progressive process for participants. It was an act that reflected the resurrection of patients as authors. Initially, stories of the postoperative and recovery period reflected a liminal ebbing and flowing of authorial voice between the technological and the participant. Participants’ accounts involved descriptions of nurses prompting them to follow the mapped out pathways. Through these prompted actions, participants began to engage in the recovery and characterize themselves as becoming more active players. They began to characterize practitioners as shifting to supporting roles. This is a critical moral transition that needs to be initiated during the hospital period. Because the dominant discourse of the technological resulted in influential structures that shifted identity to a sense of passivity and an externalization of agency, patients need to be supported in regaining some level of self-sufficiency before they are discharged. This support provided opportunities and successes for participants to begin singing themselves in and resurrecting patient as author before they were discharged from the structured environments and safety of the hospital.

As participants described personally interpreting and incorporating pathways of recovery into their daily lives, they progressively became resurrected as author. Although they were still
influenced by discourses of the technological and self-sufficiency, stories became more contingent on participants’ own particularities. This manifest in the various daily routines and activities they engaged in, the personal adjustments they made in order to follow the pathways of recovery, the people involved in helping them, and the varied progression rates. The technological acted as a resource providing participants with knowledge on the expected pathways of recovery. However, at times the technological acted as a limitation because participants described ambiguity about how to personalize pathways of recovery into the home life. Some described feeling stranded and unsure, while others were quicker to “sing themselves” in and let the technological remain backstage.

The shifting of authorial voice was an innovative way to understand patients’ accounts of the technological in heart surgery and recovery. Considering the shifting of authorial voice in participants’ narratives revealed the various structures that these storytellers drew upon. It is critical that practitioners consider how the technological discourse (which they are a part of) became part of the authorial voice of participants’ stories. Of greater significance is how practitioners can act as supporting characters in helping with the transitions of authorial voice from the technological back to the participant. Drawing from literary criticism and philosophy sheds light on the ways that the shifting of authorial voice reflected both a figurative “death” and “resurrection” of the patient as author. Considering the shifting of authorial voice in this way may help guide practitioners and their practices to ensure patients always sing themselves back into the courses of recovery and their stories.

Characterizations of Nurses in Patients’ Stories

In this second sub-section, I discuss how nurses became prominent characters in participants’ stories. Although other practitioners were players in participants’ stories, nurses were most prominent possibly because of their constant presence during the postoperative period. I first set the scene by briefly describing how nurses are characterized in fictional and
non-fictional stories. Secondly, the importance of this discussion points to the ways that nurses were characterized as critical to the type of plot that emerged in participants’ stories. Finally, I discuss the possibility that nurses can shift this discursive characterization, to create more supportive patterns of care.

Nurses are often characters in illness stories. There have been historical shifts in the characterization of nurses in fictional and non-fictional stories. Sometimes they are at centre stage in plotlines, but frequently they play more supportive roles and background characters. This is consistent with the persistent trend of characterizing nurses in caring and supportive roles that are secondary to physicians (Gordon & Nelson, 2006). This type of characterization is a result of the historical origins of nursing and biomedical influences (Berghs, Dierckx de Casterle, & Gastmans, 2006; Gordon & Nelson, 2006; Kaufman, 2002). The historical shifts have been partially progressive in terms of characterizing nurses from servants to more educated, skilled and professional roles.

In fictional stories like Romeo and Juliet (Shakespeare, 1967), nurses were portrayed as servants and companions, which was reflective of the very early origins of nursing. Moving forward in time, the nurse in The English Patient (Ondaatje, 1992) was positioned as a protagonist who cared for a burned man during World War Two. Reflective of mid-twentieth century nursing, she was characterized as skilled and completely devoted to her patient, as well as struggling with becoming emotionally attached. As the caring role began to become challenged, the extreme character of nurse Ratched in the film adaptation One Flew Over the Cuckoo’s Nest (Forman, 1975) emerged. She was characterized as patronizing and detached. Retrogressing to the powerful influences of early nursing, the current show Grey’s Anatomy portrays nurses as background characters secondary to omniscient physicians.

In addition, there are non-fictional stories including the 19th century poet Walt Whitman. He was described as one of the most famous, male nurses and humanitarians during the Civil
War (Roberts, 2005). In actuality, he had no formal training as a nurse (Callow, 1992). He was described as practising holistic nursing caring in which the physical and psychosocial dimensions of soldiers were important to him (Callow, 1992). Also, one of the most well known nurses was Florence Nightingale. In her seminal book Notes on Nursing (Nightingale, 1860), she legitimized the importance of nursing and focused attention on the environmental conditions of patients. She was characterized as an angel of mercy who helped thousands of socially disadvantaged patients in the 19th century (Lundy, 2005). She along with others are responsible for advancing the training and education of nurses (Lundy, 2005). From the same time period was Mary Seacole, a skilled and caring Jamaican nurse who cared for soldiers in the Crimean war despite racial discrimination (Smith, 1984). More recently, Nelia Laroza and Tecla Lin, two Canadian nurses who died of SARS in 2003, were described as heroes (Storch, 2005). These various ways that nurses are positioned and characterized is not an unfamiliar custom. However, it is important to extend this discussion and consider the ways that nurses are characterized in technologically-grounded environments of health care, such as heart surgery.

In this study, nurses were positioned as contributing to the type of plot that emerged in participants’ stories of the hospital period. Because nurses were a part of the complex interrelationship of the technological, their actions and interactions with patients and object technology tended to set the scene. More optimistic plot lines emerged when nurses were characterized as supportive and caring as manifest through personalized and humanized practices. These practices involved actively engaging participants in interpersonal communication and avoiding tendencies to treat patients as passive objects of care. Often, nurses were characterized in positive ways when they were attuned to the affective and psychological wellbeing of participants. During procedure-oriented practices, nurses were characterized as caring when they talked to participants and explained what they were doing and why. On the other hand, pessimistic plot lines were more prominent when nurses were characterized as
uncaring and engaging in patient care patterns that tended to be dehumanizing and
depersonalizing. These type of care patterns were described as procedure focused to the
detriment of neglecting interpersonal communication and attention to affective and psychological
recovery of participants.

As described by participants in this study, and reflective of the literature, nurses’ practice
is technologically focused and highly routinized (Philpin, 2007; Sandelowski, 2000a; Scott,
Estabrooks, Allen, & Pollock, 2008). Participants identified that being surrounded by object
technology, nurses and their routines of care made them feel safe. Reliance on practitioners
provides patients with the security that they will be carried through heart surgery (Karlsson et al.,
2005). However, this environment also made participants feel uncomfortable because it was
unfamiliar and they did not know what many of the procedures were for and what the results
might reveal. It has been found that despite the constant monitoring of nurses in an ICU, patients
described feeling invisible (Almerud et al., 2007). Nursing practices that focused on the
technological to the detriment of patient engagement and psychosocial dimensions of care led to
participants feeling like objects and a sense of dehumanization. Consequently, nurses’ actions
and interactions with participants acted as mediators of the way that the technological was
emplotted.

Not only were nurses characterized as prominent players in participants’ stories, they
were part of the technological discourse. Nurses enacted the dominant discourse through their
activities, which influenced how participants internalized meanings of the technological.
Participants experienced a sudden awareness of their new position in the social world relative to
technology. They described being at the centre of activity, but technology (including the
emanating logics and practices) was the priority of attention in the hospital setting. Because
nurses’ practice was discursively driven and technologically focused, participants also began to
incorporate these values and behaviours into their own consciousness. Identity became
reconstituted through this profound exposure to the technological in the hospital. For example, participants described the importance of following certain pathways of recovery and implementing bodily self-surveillance practices. Although participants often indicated progressing in their recovery, they described a sense of vulnerability and a need to continually monitor bodily responses.

Nurses were constantly characterized in participants’ narrative accounts, that is, their personal attributes were remarked, explored and evaluated. If practitioners clearly understand the characters they play in participants’ stories (Frank, 2007a), then they can actively contribute in positive ways. Mattingly (1994) previously demonstrated how practitioners can contribute to the therapeutic emplotment of patients’ narratives and direct certain stories to emerge. Although it is suggested that patients need to tell the story that is called for at the time (Frank, 1998), nurses can rework the characters they play by being attuned to the developing narrative. This would involve providing opportunities for and encouraging patients to tell stories during the hospital experience.

In order for nurses’ practice to lead to more optimistic plot lines, it is important to enhance the balance between technologically- and humanistically-focused practices. It is no longer a question of whether technology is good or bad. In technologically-intense health care environments, “the flaw is not turning to the device per se; it is the turning away from the person” (Almerud, Alapack, Fridlund, & Ekebergh, 2008, p. 60). Consequently, nurses and other practitioners need to avoid focusing on the technological dimensions of practice to the exclusion of listening and responding to patients in authentic and personalized ways.

*Subtleties of Gender: Suppressed and Performed*

In this section, I consider the subtleties of gender in participants’ stories of the technological in heart surgery. I first preface this discussion by identifying the importance of gender-sensitive knowledge. The discussion on the subtleties of gender is then divided into two
sections. First, I examine the ways that authorial voice of the technological suppressed opportunities for gender to be performed. Secondly, I discuss how the particularities of gender were re-established in narrative accounts as the technological shifted from centre to off stage.

*Gender-Sensitive Knowledge*

Although gender-sensitive knowledge has been identified as an important consideration in research (Canadian Institutes of Health Research, 2007), it has not been considered in patients’ narratives of the *technological* in open-heart surgery. This is particularly salient in the cardiovascular field in which research and treatment practices have been traditionally male dominated (Beckie, 2006; Lapum, 2005; McCormick & Bunting, 2002; O'Donnell, Condell, & Begley, 2004). Despite the increase of research exploring women’s experiences of cardiac surgery and recovery since the early 1990s (e.g., Allen & Wellard, 2001; Angus, 2001; Dingley, Bush, & Roux, 2001; Emslie, 2005; Hawthorne, 1993; King & Jensen, 1994; Plach & Stevens, 2001), there continues to be a void of comparative *gender* analyses.

Because of the varying understandings, it is important to be explicit in the conceptualization of gender. Health Canada (2000) refers to the socially- and culturally-constructed dimensions of gender associated with identity, roles and relationships. Social theorists have extended this conceptualization of gender to reflect a multi-level system of social practices (Kimmel, 2008; Smith, 2005; Wharton, 2005). These authors indicate that gender operates at not only the individual, but also the interactional and institutional level. Wharton (2005) outlines complexities of gender that reflect emergence, reproduction and enactment through social interactions; and social institutions that organize and regulate social life with a set of codes. These two dimensions emerged as particularly relevant in this study as it became evident that the subtleties of gender were first suppressed and then performed.

*Gender Suppressed*
To a large extent, gender was notably absent in participants’ stories of the hospital period. Underlying participants’ narratives was a representation of the social institution of heart surgery as genderless. The “degendering” influence appeared to be that gender was not the principle organizer of behaviours, interactions and identities (Wharton, 2005). The degendered accounts are of particular interest since gender has been previously noted as a pervasive force in social practices (Wharton, 2005). However, in these narratives of heart surgery, the dominant discourse was rooted in the technological. The technological became the authorial voice shaping and structuring participants’ stories and consequently, suppressing opportunities for gender to be performed.

Social institutions of heart surgery are organized around a universal patient that is not gendered. The suppression of gender was particularly apparent when participants were recounting the preoperative period leading up to surgery and the early postoperative period. It is suggested that authorial voice is located in larger social scripts, which people live out (Duffy, 2007). In this study, the script was located in a technological discourse where standardized processes created situations where participants were re-positioned as “patients” (a universal, passive and undifferentiated identity).

The technological discourse provided the raw materials of participants’ stories and predisposed to a scripted narrative. Narratives of being claimed by the technological emerged, which involved being “hooked up” and relinquishing agency. Participants not only became a universal patient, but their accounts of shifting identity involved simultaneous degendering. This is not to say that bodies became desexed. Male and female sex was still physically present and significant in terms of the size of bodies and lumens of coronary arteries. Rather, agency was relinquished to the technological and consequently participants were temporarily unable to perform elements of gender identity. Furthermore, they were temporarily suspended from the activities of everyday life wherein gender is typically performed.
It appeared that the discursive dimensions of the technological influenced not only the content of stories, but the also the format. Analytic attention to the format of stories revealed that the boundaries of gender are more transgressed and complex than existing theories suggest. It has been previously suggested that masculinity is associated with linear storytelling and feminine ways of storytelling tend to be organized around a central theme and are not always linear (Holloway & Freshwater, 2007; Overcash, 2004). However, data that emerged in this study contests this theorization. An alternative interpretation is that certain topics (such as narratives of heart surgery) invite a linear telling in which temporally ordered stories emerge. Further to this is that authorial voice of the technological may have influenced a temporal ordering based on the events and situations that participants experienced in the hospital. Linear storytelling may also be linked with the idea postulated in gender and feminist theories, which suggests an association between technology and masculinity (Hodgkinson, 2000; Sandelowski, 2000a). Consequently, this association may have further exerted an influence on patients’ stories of heart surgery to be constituted linearly.

*Gender Performed*

As the event of surgery receded and discursive elements of the technological became less dominant, authorial voice began to shift to participants. More personalized tellings emerged that reflected various ways that gender was performed. The technological was still a prevalent voice manifesting in mapped out and expected trajectories of recovery of what patients were and were not supposed to do. But, the social institutions of the technological became less structured. Particularities unique to participants began to enter into narrative accounts. These particularities involved the re-establishment of the subtleties of gender. Interwoven into participants’ stories was the performance of gender becoming less suppressed and subtly noticeable. Unlike some of the cardiovascular literature that highlights differences between men and women, these narratives were more similar than different. Kimmel (2008) suggests a convergence in terms of
the gender gap growing smaller in social life, which was also evident in these stories of heart surgery. The subtleties of gender performance are explored here in terms of agency, the body, activities, and pathways of recovery.

When considering gender, shifting of agency to the technological was particularly relevant because of issues of (in)dependence that had been reported in the cardiac surgery and recovery literature (e.g., King & Jensen, 1994; Lukkarinen, 1999; Moore, 1994; Robinson, 2002; Theobald & McMurray, 2004; Trumbull, 1993). In this study, participants described being relieved to relinquish agency to the technological because of the unfamiliarity in this situation. Linked with agency was not just shifting control to practitioners, but becoming dependent on them. Shifting of agency appeared in both men’s and women’s accounts as characterizing self as passive and practitioners as being active players. The ways that subtleties were performed in these accounts contested the traditions of gender dualism. Accounts did not clearly reflect a binary classification system of gender. Gender was performed more along the lines of what Kimmel (2008) refers to as a continuum. There were stories of men characterizing themselves along a continuum from strong and not needing to be babied, to weak and useless and portraying the experience as a significant and frightening event, but also routine and nothing to fear. Similarly, women also characterized themselves as strong and having to do get up and do things for themselves, but also as scared and overwhelmed. These identity statements of re-establishing agency and performing gender also included biographical associations. Participants often characterized themselves in terms of how they used to be and reconstituted identity with this in mind.

Subtleties of gender appeared in narrative accounts of the body. Previous literature suggested that following heart surgery women felt scared and mutilated (Allen & Wellard, 2001; Hawthorne, 1993; King & Jensen, 1994) while men felt manly and empowered (Hawthorne, 1990). The technological marking of bodies did not appear as an explicit gender dualism in this
study and actually contradicted the previous literature. Both men and women made similar comments about the technological remnants that scarred the body, but indicated that the positive results of being “fixed” were more important. Male participants actually made comments that suggested concerns about the scarring on the chest, while some women downplayed the impact. The impact of the resultant scars was absent in other discussions. Furthermore, a technological embodiment emerged in narrative accounts where bodily sensations became simultaneously a source of concern and a source of knowledge. The body became implicated in the self-surveillance practices of both men and women.

It appeared that gender differences were markedly noticeable in participants’ descriptions of the ways that partners or family members were involved in supporting them to follow expected pathways of recovery at home. Spouses and/or other family members have been previously identified as an important source of support (King, 2000; Rantanen, Kaunonen, Astedt-Kurki, & Tarkka, 2004; Theobald & McMurray, 2004). However, these studies have not necessarily considered the ways that support is different for women and men. In this study, both women and men indicated that partners helped them, but there were slight gender differences. Women indicated that they depended on their husbands or partners to help them with specific activities. However, it did not appear that their partners were as focused on caregiving as the partners of the men. Male participants described relying heavily on their spouses. Unlike female participants, it appeared that male participants characterized their partners as taking active responsibility for implementing discharge instructions in the home. Wives were described as not just helping, but coordinating and surveying their husbands’ activities. It was apparent that male participants’ wives had absorbed or incorporated technological understandings and practices. This is particularly relevant when considering the ways that practitioners dispense discharge information and how gender enters into these technological practices of care in the home.
The technological elements of recovery were not structured according to the traditional, normative gender roles and identities that have been prevalent in the literature. This study extends previous research that reported how women’s course of recovery was complicated by an other-orientation and homemaker role (Angus, 2001; Hawthorne, 1990, 1993; King & Jensen, 1994), while men were able to focus on self and recovery. These roles were present for some, but the performance of gender was more complex and linked into interactional elements.

Subtleties of gender were narratively performed according to individual dispositions, through interactions and social life in the home, but these were not necessarily congruent with the binaries implied with heteronormativity. For example, some male participants talked about returning to work or hobbies and chores around the house that are traditionally-male dominated. However, these male participants also related anecdotes of returning to previous roles such as cooking and vacuuming (which has been traditionally associated with women). Similarly, female participants talked about traditional roles oriented to homemaking, but also returning to work (outside the home). Consequently, these narratives reflected that binaries associated with heteronormativity no longer have clear cut boundaries. Furthermore, there may be generational linkages involved in the increase blurring of boundaries. There was a suggestion that older generations tended to relate accounts that were more consistent with heteronormative roles and identities. Since this study revealed ways that gender was subtlety performed in the biographical course and recovery periods at home, conceptions beyond heteronormativity may help surface these complexities. Considering gender fluidity (Halberstam, 2002; Monro, 2007; Moynihan, 1998) in which male and female identities exist along a continuum as opposed to a binary pattern may enhance understandings of the daily lives of people recovering from heart surgery and how they engage in self-care patterns.

Subtleties of gender were suppressed and performed in participants’ narrative accounts. An erasure of gender in participants’ narrative accounts was linked with the technological
discourse of heart surgery. The shifting of authorial voice to the technological suppressed opportunities for gender to be performed. As the technological moved back stage, particularities of identity (including gender) were once again performed in participants’ everyday activities and lives. However, gender was not necessarily performed according to traditional binaries associated with heteronormativity. Gender is still important to consider in patients’ course of recovery, but it may be more analytically productive and beneficial in practice to consider it “as a floating signifier” that is complex and fluid (Moynihan, 1998, p. 1074).

Section II: Research Questions

I follow the interpretive discussion by specifically addressing the three research questions that guided this study: (1) how do patients narrate the technological in stories of heart surgery? (2) how do patients frame self-identity within these accounts? (3) how are the moral concerns narrated in these stories?

Research Question One:

How Do Patients Narrate the Technological In Stories of Heart Surgery?

The technological was narrated in temporal order based on two patterns of emplotment. The first pattern of emplotment was specific to participants’ stories of the preoperative and early postoperative period. The second pattern of emplotment was specific to participants’ stories of the later part of the postoperative period in the hospital and recovery in the home.

In the first pattern of emplotment, the technological appeared as the dominant discourse in heart surgery and became the authorial voice in participants’ narratives. This shifting of authorial voice resulted in plots lines that were discursively informed by the technological and structured how stories unfolded. The technological discourse appeared as a moving force in participants’ stories, ultimately serving to script narratives. Consequently, participants’ stories unfolded in notably similar ways. The technological appeared as a complex interrelationship of practitioners, object technology and environments, the logics and processes of care, and the
expected trajectories and pathways of recovery. These various elements constituted the raw materials of participants’ stories. Because the technological was a dominant discourse during this period, the resultant scripted nature did not leave much space for personal and unique elements to be included in participants’ stories.

During the period of hospitalization, the complexities of this interrelationship appeared as a dualistic narration of the technological as both positive and negative. It was depicted as something positive because it provided the possibility of continued life. It appeared that participants’ faith in the technological (including practitioners and their logics and risk calculations) allowed them to feel confident in the procedure and relinquish agency during an unfamiliar and fearful journey. Participants narrated the technological as an environment filled with machines, competent practitioners and constant monitoring that made them feel comfortable and safe. The technological became a way of ensuring that the body was healing as it was supposed to and of being able to quickly detect and correct problems.

In tension with these properties, the technological was also narrated as contributing to potentially negative, subjective emotional states. These included an overall fear associated with unfamiliar environments, machines and processes of care; relinquishing agency; and sensations of pain and thoughts of mortality. Participants reported that negative elements associated with the technological were its contribution to procedure-oriented and fragmented patterns of care. However, all participants qualified that the positive elements that the technological offered surpassed the negative.

The second pattern of emplotment was associated with the later part of the postoperative period in the hospital and recovery at home. It was a temporal space when the participants retreated further from the operative event and the technological discourse became backgrounded in the course of recovery. The technological appeared in narratives as an expected trajectory and pathways outlining milestones of recovery and patterns of self care. As participants progressed in
recovery, they positioned themselves as active protagonists. Consequently, plot lines revolved less around technologically-driven processes and were more reflective of participants’ personal characteristics. The technological was still present, but more reminiscent of a backstage character who could move onto centre stage depending on the unfolding chain of events. The technological became an undertone that was threaded throughout participants’ consciousness and activities. However, authorial voice had shifted to participants as they were responsible for determining how to interpret and incorporate the technological into their daily lives.

During this period, the technological was again narrated as simultaneously positive and negative. Expected trajectories of recovery acted as a resource to carry participants through traumatic, static or painful moments. However, if the course of recovery did not follow the expected progression, there was no such comfort available. Participants were not well prepared to recognize what constituted normal bodily sensations as they healed from surgery. They indicated that practitioners provided them with oral and written guidelines during discharge. These guidelines on pathways of recovery outlined what they were and were not supposed to do during the recovery at home. However, many times participants found that these guidelines needed to be less standardized, more oriented to the home context and clearly organized around time increments. With regards to time increments, participants indicated requiring more information about specific time periods required to reach particular markers. As well, others indicated being uncertain about the duration of pathways of recovery. For example some described not knowing how long they were restricted from lifting reduced loads and whether they needed to carry on with the breathing exercises. Finally, the technological appeared in participants’ narratives as self-surveillance practices of the body (e.g., taking their pulse, monitoring the physical healing of incisions). These practices provided them with ways to address the unfamiliarity of certain bodily sensations. But, sometimes these practices did not
provide sufficient knowledge of the course of recovery and whether the concealed interiors of bodies were healing.

**Research Question Two:**

*How Do Patients Frame Self-Identity Within These Accounts?*

Self-identity was framed in narrative accounts of the preoperative and postoperative hospital period in terms of what it meant to be the universal *patient*. To some extent, the universality of the patient role was scripted or created through standardized preoperative routines. Consequently, participants characterized themselves as transitioning to a passive mode and being claimed by the technological. They not only described a sense of becoming technologized as they were “plugged in,” but they relinquished agency and their bodies in hopes of being fixed. This characterization continued in participants’ descriptions of waking up from surgery. They still defined themselves as technologized in terms of being attached to machines and having tubes and wires inside of them. They characterized themselves as dependent on the technological (specific to object technology and practitioners) to keep them alive, to monitor and push them along in the course of recovery, and to provide them with daily functioning needs.

As the operative procedure receded, participants began reconstituting identity. This reconstitution was linked with participants’ embodied capacities and practices. As object technology was progressively removed, they began to engage in activities of daily living and positioned themselves as active players in the course of recovery. Participants began to characterize themselves as recovering and “fixed” and described diminishing dependence on the technological. Participants’ subjectivity re-appeared as descriptions of unique particularities and contexts became part of the narrative of recovery. Furthermore, discourses of self-sufficiency and gender influenced the reconstitution of identity. It appeared that participants began determining and fulfilling their own needs in the recovery process. Part of this was based on how they previously defined who they were and was contingent on gender identity.
The framing of identity in participants’ stories of recovery at home continued to be discursively informed by the technological. Although participants indicated progressing in the course of recovery, they still defined themselves as having to be attentive to bodily sensations and follow pathways of recovery. To some extent, identity was in a liminal state. Participants retained the belief that they were healing or even recovered, but described themselves as still vulnerable to physical harm and lack of knowledge. Participants developed a subjectivity and embodiment co-constituted by experiences with the technological. Not only did they define themselves as permanently and physically transformed by technology, but they incorporated the technological into their consciousness and daily practices in the home. There was an indication in participants’ stories that essentially their character had not changed, but identities were reconstituted in ways that included anticipated biographical changes.

*Research Question Three:*

*How Are Moral Concerns Narrated In These Stories?*

In order to answer this question, I anchor my discussion in Frank’s (2004; 1995) work concerning risks of demoralization in patient care and opportunities for remoralization. Frank (2004) describes moral as the “interpersonal, locally contextualized, moment-to-moment actions” (p. 19). These moral moments are critical because identities are shaped when patients are recognized or unfortunately not recognized or misrecognized (Frank, 2004; Taylor, 1994). Recognition involves dialogically engaging, listening and responding to patients authentically, which can lend itself to remoralization (Frank, 1995, 2004).

In this study, narratives of the technological in heart surgery raised a number of moral concerns. Participants did not explicitly use terminology of morality, but referred to various exemplary health care practices and those that ought to be changed. These demoralizing practices were often related to participants’ temporary loss of subjectivity and opportunities for personal ways of telling their stories. The story became a discursively-driven narrative. Various
technological events and practitioners inadvertently became the raw materials of participants’
stories. To some extent, participants became an object amongst the technological routines of
heart surgery and recovery. They may have been at the centre of activity, but they characterized
themselves as passive. The crux of this moral issue is the remarkable tension that occurred
between being the focus of practitioners’ efforts and attention, but also being a passive object.
The potential and sometimes actualized risks associated with passivity involved feelings of
depersonalization and dehumanization.

Narratives of the postoperative hospital period surfaced risks of fragmented care and lack
of personalized attention. On the one hand, practitioners were characterized as procedure
oriented in which personal attention to patients was neglected. On the other hand, attention to
procedural detail inspired a sense of safety and trust in competent care. Some participants
reported that emotional and psychological needs were neglected. With the caveat that approaches
to patient care varied, some participants explained that certain members of the health care team
did not seem to care. Some further softened these criticisms by noting that nurses specifically
were overworked and too busy.

It was commonly reported that discharge materials and verbal teaching were standardized
and often provided in superficial ways. Participants did not have time to reflect on and discuss
with practitioners how they could personalize this information into their lives at home. There
was often a disregard for participants’ biographical context in the home including gender issues.
A few participants indicated that practitioners dispensed discharge information when the primary
caregiver (usually the spouse) was not present. These participants indicated that this was not
appropriate because they described being mentally unable to understand and absorb this
information when they were still recovering. Consequently, they were not adequately prepared to
implement pathways of recovery in the home. This was a particularly critical moral issue
because participants were exposed to potential complications in the course of recovery due to
lack of information. Furthermore, participants indicated that pathways were provided in formats that did not account for a non-linear progression of recovery. An extension of this was that the do’s and don’ts included in these pathways were described as not clearly time-structured. Consequently, participants knew what they ought to do to recover, but did not necessarily know how and for how long.

The dualisms of dependence that were generated in the hospital continued into the home leading to a number of problems. The security associated with technological elements of care in the hospital generated a major sense of dependency. Participants’ stories reflected that they were released from restrictions associated with the hospital, but also suddenly forced to function independently without the safety net of the constant monitoring of practitioners. Because discharge information was not personalized and reinforced over time, participants were somewhat abandoned to figure things out for themselves. Consequently, pathways of recovery were not always correctly interpreted.

Section III: Study Strengths and Limitations

In this study, I employed rigorous methods germane to qualitative research, as well as specific to narrative inquiry. Limitations of this study were primarily a result of feasibility and ethical conduct.

Critical to a narrative study was the importance of making the research process transparent (Polkinghorne, 1988). Part of this involved an audit trail in which methodological congruency and analytic decisions were apparent to readers. As well, this involved ensuring that analytic decisions and interpretive analyses were clearly linked and grounded in the data. The iterative process between the various phases of research in this study ensured methodological congruency and constant re-focusing based on what was emerging in the unfolding analysis (Morse et al., 2002). This was particularly important because the first interview in the hospital
was followed by a second interview in participants’ homes. Second interviews became more focused and informed by the preliminary analysis.

In narrative research, the primacy of temporality and context is emphasized (Conle, 1999; Czarniawska, 2002; Emden, 1998; Ricoeur, 1984). These elements were accessed and engaged with the use of repeated interviews, first in the hospital and then in home context, as well as the use of participant journals between these time periods. The first interviews were very important because they were close to the surgical event and physically situated in the technological context within the hospital. Hence, the first interviews were also intentionally kept short. Interviews had to be curtailed on a few occasions because participants had to go for tests or they were not feeling well. As well, for feasibility of this doctoral research, the study interval was restricted to a six to eight week time period post discharge from the hospital. A longer term study may have revealed a progressive fading of the technological in participants’ stories and possibly temporal changes in narrative emplotment patterns.

Participants were recruited from a single hospital, which provided a homogeneous sample in terms of the technological environments and processes of care. As a result, the situated contexts of participants’ stories were similar and narratives could be examined in depth and compared regarding how stories unfolded. However, participants’ stories may be reflective of this particular setting/hospital. For this reason, detailed descriptions of the physical and social context and the biographical components of participants were provided in order for the audience/reader to determine transferability to other settings. In addition, only participants’ narratives of the technological were examined in this study. By exploring other manifestations of the technological in more detail, it would help to understand the various forces that influence how patients’ stories unfold. For example, document analysis of the various protocols and pathways, as well as observations to learn how health care professionals implement these and
interact with patients would help to understand the context or backdrop of these narratives more fully.

The crux of narrative research is being epistemologically mindful (Louden & Wallace, 2001). This involves respecting issues of representation and legitimation (e.g., constantly questioning and analyzing how researchers represent participants and attend to issues of authenticity) (Louden & Wallace, 2001). I made the commitment to enter into dialogical relationships with participants as a method to attend to authenticity (Bochner, 2001; Frank, 2002, 2005). Furthermore, this allowed for an endpoint of understanding to be possible, which is consistent with narrative approaches (Conle, 2001). Linked into this was the importance of reflexivity because epistemic activity in narrative inquiry involved the close encounter of the researcher, and interpretation in the stages of conceptualization, data collection, analysis and the writing process. I constantly acknowledged and actively engaged my subjectivity throughout the stages, but it also progressed to a constant examination of self, other, data, analysis and interpretations.

In the written text of this dissertation, each individual’s story was not preserved intact. I did however attempt to keep the experiential whole intact (Clandinin & Connelly, 1994) during analysis by creating individual visual story maps. My purpose was not to merely retell stories, but to explore how the technological of heart surgery was narrated. Although participants’ stories were contingent on their own situatedness and the way they interpreted the technological, a focus on narrative emplotment allowed an analysis that moved beyond mere content. I considered both content and format in the analytic process (Lieblich et al., 1998). As a result, the knowledge can be used to help nurses and other health care professionals understand the structures that participants drew upon to tell stories of heart surgery.

A salient strength of this narrative inquiry was aesthetic merit (Richardson, 2000). I attempted to grip the audience and draw the reader in (Bullough & Pinnegar, 2001; Clandinin &
Connelly, 1991). This involved attention to expressions of reality (Richardson, 2000), but also thinking and writing creatively with stories and poetry.

Section IV: Study Implications

Though patients’ experiences are individual, it was evident in this study that many similarities existed. The findings of this study are not necessarily transferable to all patients, but are a way to begin thinking with patients’ stories of the technological and how nurses and other practitioners figure prominently as characters in the emerging plots. To preface the study implications, I refer to the problem that tends to set the scene in this study. According to many participants in this study and other literature (Happ & Kagan, 2001; Hays, All, Mannahan, Cuaderes, & Wallace, 2006), critical care and cardiac environments are fast paced and health care professionals carry heavy and important workloads. In addition, the technological discourse organizes logics and practices of care around physical recovery and patient safety in these environments. However, this structure promotes a procedure-oriented mode of practice that can override the humanistic side of patient care (Estabrooks, 2001). With these potential risks in mind, in this section I discuss the research, policy, practice, and educational implications of this study.

Research Implications

An initial step is the replication of this study in other hospitals to explore the ways that specific environments or cardiac teams may or may not influence the findings. For feasibility of this research, only participants that lived within 100 kilometres of the hospital were included. The hospital was also located in a large urban area. Methodological implications involve considering other samples of individuals such as those that live further away from the hospital, in more isolated or rural areas and/or do not have access to a family physician. The findings of this study suggest that these factors may influence the incorporation of the technological, in terms of surveillance practices and access to information, into individuals’ daily lives.
Because the technological is embedded in many settings to varying degrees, it would be worthwhile to consider this work in the broader context of health care. Cardiovascular and critical care environments are known to be technologically-driven. As this study revealed the technological was the dominant discourse in heart surgery and structured patients’ narratives. Does this phenomenon play out in other health care fields? How does the technological enter into or shape patients’ narratives in areas of practice that differ such as home care and palliative care or in chronic care situations?

An extension of this research would be to examine other layers and perspectives concerning narratives of the technological. It would be beneficial to begin exploring nurses’ experiences of the technological in the practices of cardiac surgery and recovery. Do nurses feel their logics and practices are discursively-driven? Does the technological discourse in heart surgery impede nurses from engaging comprehensively with patients and caring for the emotional and psychological dimensions? Participants in this study described particular nurses who were technologically competent, but also attended to the patient as a person including the affective dimensions. Thus, how are certain nurses able to balance technological ways of knowing and practice with care that is more humanistically-oriented towards the affective and social dimensions of patients? Do nurses focus on procedure-oriented tasks to avoid the potential horrors of connecting with patients who do not progress well or die?

Other methodological issues involve extending the study length. Conducting a longer term study that explores narratives of the technological during the extended course of recovery would be beneficial. This will help extend the knowledge concerning both the biographical changes over a longer period of time and to further understand what dimensions of the technological are further backgrounded in individuals’ lives and what ones become enduring. For example, at one year following heart surgery, do individuals still incorporate the technological into their everyday lives?
One pressing problem for further study is the process of patient discharge and its links with technological discourse. Participants in this study described a degree of uncertainty about pathways of recovery at home. The uncertainties revolved around how to particularize these activities, as well as for how long to continue doing them. Further exploration is required about home based, time-structured and individually tailored health education. It would be important to consider how patients are actually prepared to go home including the process and content of discharge teaching. An extension of this would be to explore how patients figured out how to incorporate this health-related knowledge into their lives at home. A narrative research study that incorporates observation would potentially help to examine the whole story when it comes to patient preparation and education for recovery at home. This may include interviews in the home, as well as observations of the preoperative clinic visit and patients’ morning of discharge, as well as document analysis of the information that individuals are provided. In addition, interviews with specific members of the health care team (that are identified by participants as being active in the discharge process) would provide a further layer to the dimensions of the technological discourse.

An extension of this doctoral research involves a poetic and photographic inquiry into patients’ experiences of the technological in heart surgery. Since specific images emerged as salient dimensions of participants’ stories and how they constructed meaning in the act of storytelling, it could be enlightening to focus analytically on these. For example, a series of images included: seeing a row of other patients lying on stretchers being prepared for surgery; being pushed into the operating room and seeing the large surgical lights above; and hazy visions of people standing around participants in the operating room and in the intensive care unit. These images were incorporated into stories and reflected the shifting of identity to a passive characterization of self and relinquishment of agency. This future study could involve returning to the data with particular attention to the images that participants identified. There would be an
iterative engagement with these images in that I would begin writing poetry that stemmed from these images and the data. The poetry would be constituted of participants’ words, as well as my own analytic interpretations as the researcher. As well, I would return either to the same hospital or a different setting to begin taking photographs of these images. Part of this inquiry would result in an arts-informed knowledge translation strategy about patients’ experiences of the technological in heart surgery. In addition, this could be followed up by an intervention study examining two methods of knowledge translation, one that would be a traditional PowerPoint presentation or journal article and the second that would be an arts-informed exhibit using poetry and photographic still images.

Finally, employing qualitative methodologies such as narrative in cardiovascular and health care research have shown to be beneficial. Although sample sizes may be smaller, this heightens the power of these methodologies at accessing depth and the many layers of experiential accounts. Participants in narrative inquiries are encouraged to tell stories from their perspectives and given leeway to direct the flow of interviews. Accessing depth and allowing participants to tell stories from their perspectives can result in both descriptive and explanatory understandings. As well, narrative inquiry sheds light on the structures that may inadvertently shape stories.

Policy

In order to address the educational and practice implications of this study, I first need to begin by addressing important policy issues. These policy implications are critical in order to set the scene for changes in practice and education.

As a first step, it is important to review policies at unit levels to consider how the patient is positioned in these. These may include flow sheets, clinical pathways, algorithms and discharge policies. Also, there are tacit policies that may be technologically driven. For example, educational in-services tend to be focused on new equipment or procedures. These policies are
crucial to consider because some participants described feeling like on object interwoven into the daily technological routines and practices of practitioners (including nurses). However, some participants indicated that nurses were very technologically competent and also described feeling very cared for by them. Before making any practice and educational changes, it is first important to ensure that policies are not solely focused on technological tasks (e.g., delivery of medication, taking blood pressure). Policies need to be patient centered and include elements of how to integrate practices directed at personal and social dimensions. These elements may include interpersonal communication, talking with the patient when completing a technologically-oriented nursing task, telling them what the nurse is doing, encouraging them to ask questions, and caring for them on an emotional level.

Extending this discussion of the importance of engaging personal and social dimensions into technologically-driven practices involves creating an environment that allows this to be possible. One political issue to examine is the technological dominance in nursing practice and health care. A beginning step would be for professional organizations such as RNAO to form a panel to develop clinical guidelines related to technological practices of care in nursing. This would be an initial step to critically supporting technological advancement in health care and considering how nurses can incorporate and interface with it. Furthermore, the Canadian Council of Cardiovascular Nurses could commit resources (educational and financial) to this same cause specific to treatment and recovery practices in heart surgery. Policy issues need to be considered related to nurses’ workload and the need to apportion time to engage with patients on personal and emotional levels (which participants consistently referred to in this study). Implications may involve addressing the nursing shortage and re-considering the nurse-patient ratio. Linked into this are the possibilities associated with the use of other health care professionals (e.g., personal support workers, registered practical nurses) as a complementary method of care, so that nurses can focus on providing more comprehensive care. It may be
important to further extend the use of peer support as ways to engage patients on personal levels from people who have previously undergone heart surgery.

Other policy issues include a re-examination of the discharge process. Underlying narratives was that discharge was perceived as a standardized process that was often superficial and provided in a hurried manner. Discharge procedures need to be tailored to the person’s course of recovery and personalized, which involves attention to patient context (e.g., who does the patient live with? how is the home environment organized?). One critical element is for policies to emphasize the importance of having the patient’s primary caregiver (at home) present during these hospital discussions. Patients need to be encouraged to discuss how specifically they plan to incorporate pathways of recovery into their lives. Over the years discharge procedures have become focused on educational elements including prescriptions and follow-up appointments. It has been made apparent in this study that elements of counseling need to be incorporated.

Final policy issues include developing follow-up programs that continue into the home. This could involve a number of components depending on patients’ needs and geographical context. Some participants described that family physicians were not sufficiently prepared to monitor and educate them on pathways of recovery. Clearly, some form of network needs to be established between family physicians and hospital cardiac services/surgeons in order to enhance follow-up care and ensure a certain level of competence. In addition, policy issues around a re-consideration of time-structured education that continues into the home period is required. Many programs already exist in which automated telephone calls are used to monitor existing problems with patients. However, these calls are one-way systems and automated to a particular time. Participants described wanting to access a practitioner at the time a specific problem arose (e.g., when they felt uncertain or had unanswered questions or bodily sensations that they were unsure of). Establishing phone networks specific to follow-up may alleviate this problem. Another
innovative strategy in which research is currently being conducted is the use of peer support phone calls to patients from other individuals who have had surgery. Often, participants’ concerns stemmed from uncertainty about what to expect and how to complete certain activities. Participants did not necessarily require access to practitioners, but they expressed just needing to talk to someone about what was normal. Formal peer support networks may be one option to address this problem.

Practice

Patients’ unfamiliarity with the technological dimensions of heart surgery and recovery requires that nurses practice more holistically. It was recognized that nurses’ practice was technologically driven and participants indicated that sometimes they just wanted someone to stop and talk to them. The call for personal attentiveness to the patient in technologized environments of care is not new in nursing practice (Hofhuis et al., 2008). However, as environments of care continue to become increasingly technologized, it is even more important to address this dimension of practice. Holistic practices of cardiovascular care involve attending to the physiological state of patients, but also the affective and psychological dimensions. The importance of this attentiveness reinforces the unique place of the nurse-patient relationship and engaging in interpersonal communication. Because nurses feature prominently in patients’ stories, they can consciously position themselves in positive and caring ways.

Because of the unique and complex courses of recovery, nurses and other practitioners can be particularly helpful by communicating with patients about standard pathways, but also how they can vary. Part of the communication efforts of nurses should be structured at continually preparing and educating patients in the hospital about recovery in the home. Also, it is important for practitioners to make the effort to include family members or friends in these discussions. The instructions regarding pathways of recovery need to be initiated at an
appropriate stage, but also reiterated over a period of time while in the hospital. Furthermore, practitioners should provide time and encourage patients to ask questions.

Hospital environments and practices are technologically organized (Wikstrom, Cederborg, & Johanson, 2007). Great strides have been made because of the technological advancements. However, practices of care that become strongly organized by and focused upon the technological have the tendency to erode personal contact. Focusing on the technological elements of care can avert practitioners’ attention to the psychosocial elements of patient care. As Frank (1998) suggests, engaging patients’ stories (in health care environments such as heart surgery) can assist practitioners to access and acknowledge what patients are going through. Drawing out stories can be a form of communication and counseling and a way to remoralize technologically-driven environments of care.

Education

Often, advanced education specific to cardiac and intensive care including certificate programs and orientations to these units are focused on technologically-based nursing tasks (e.g., interpreting cardiac rhythm strips, monitoring chest tubes, removing an endotracheal tube, how to take blood from an arterial catheter). This education involves indoctrinating nurses into the technological ways of knowing and practices that are salient in the cardiac surgical population. However, the sole focus on this type of education negates the importance of integrating humanistic practices that encompass the affective and social dimensions of the patient. Education that incorporates a humanistic lens may also include how to personalize technologically-driven practices. It is critical to prepare nurses with the skills to balance technological and humanistic ways of knowing into the practices of care. Because nurses are consistently the most physically present with patients, they are well positioned to develop caring and trusting relationships and be able to engage patients in talking about the emotional and psychological impact of surgery. Actually revisiting this dimension of practice in advanced education courses and orientations
would be particularly helpful. Furthermore, preparing nurses with these skills will provide the possibilities for mentoring other practitioners in these environments.

Innovative teaching methods that engage both the art and science in health care may assist with enhancing knowledge and practice (Bradshaw & Lowenstein, 2006; Mitchell & Hall, 2007). Innovative methods that engage the arts may prompt connection between intellect and emotion. Such methods may include narrative-based education, poetry, drama and performances, as well as the involvement of persons that have actually undergone heart surgery. Engaging the arts and creativity in teaching involves a dialogical approach. Students, audiences, readers or listeners are provoked emotionally and intellectually. Examples of this include Standing Ovation: Performing Social Science Research About Cancer (Gray, 2002) and Clinical Encounters: The Politics of My Leaky Body (Devaney, 2006). These types of methods may help students and nurses feel and see the impact of ways of practice that are merely technological and/or more balanced with humanistic ways of care.

Section V: Conclusions

In this study, patients’ experiences’ of the technological in open-heart surgery were explored through stories. The findings of this study suggested that participants entered into a complex interrelationship of the technological. This interrelationship included technological objects, practitioners, routines of care and pathways of recovery. What was significantly noticeable and intriguing was that the technological became a discursive force.

The dominant discourse of the technological became the authorial voice of participants’ narratives, shaping and structuring their stories. This was particularly notable as facets of scripted narratives emerged associated with participants’ stories of the preoperative and early postoperative period. Linked into this were discursively-driven linear narratives that followed a particular pathway, acting simultaneously as a resource and a limitation. The shifting of authorial voice to the technological involved a relinquishment of agency. Practitioners were portrayed as
the active characters and participants reconstituted identity as a passive characterization based on the universal patient. Through the standardization processes of the technological, participants’ subjectivities including gender identity became suppressed.

Participants’ stories highlighted moral dimensions associated with the technological. Stories revealed how nurses’ logics and practices were discursively driven by the technological. As a result, participants sometimes described nurses’ work as procedure oriented in which personalized aspects of patient care were neglected. Because of the persistent closeness of nurses in the postoperative care, they were characterized as the most prominent characters in participants’ stories. Furthermore, nurses’ technological practices of care influenced whether optimistic or pessimistic patterns of emplotment emerged in participants’ stories. Based on the findings of this study, nurses as characters in participants’ stories are rudiment to enhancing moral approaches of care that balance technological- and humanistic-oriented practices.

As the operative procedure receded and the technological discourse was backgrounded, authorial voice shifted back to participants. The technological remained present, but moved off stage like a character in a play would retreat to the wings. Participants re-established agency and stories began to reflect more personalized elements contingent on their own particularities. Narrative accounts revealed that identity was reconstituted reflecting a technological subjectivity and embodiment. Nevertheless, participants characterized themselves as the protagonist retaining how they interpreted and incorporated the technological into their lives. There was a liminal shifting of identity in that they described themselves as recovering, but at risk of potential harm. Furthermore, narrative accounts reflected uncertainty about how to personalize the technological into the course of recovery at home and a lack of time-structured pathways.

Section VI: Epilogue

This dissertation began with an articulation of the stories that set the personal context of a professional nursing study. Reflecting back on the stories in Chapter One, moral tensions
concerning my technological ways of knowing and practice were apparent. Initially, I was driven
to shed light on the impact of my behavior as a nurse on the patient. This study progressed to
examining patients’ narratives of the technological in order to understand the structures they
draw upon to tell their stories, how self-identity was framed in these accounts and how moral
problems were narrated.

Although I have discussed some implications of this study, it is important to note that
these participants’ stories are incomplete. Their experiences and biographical courses continue.
Many have experienced a traumatic confrontation of mortality in which the technological has
both saved and disrupted them. Most likely their narrative accounts will be revisited and
reconstructed along with their shifting identities as they move through life and recede further
from the surgical event. These individuals continued to wonder about unanswered questions,
uncertain futures, and unfamiliar sensations:

What’s my warranty?
am I still raw
—
inside
am I still healing?

when I almost forget—
my body reminds me

how did they get inside?
pry it open?
will I ever come back?
to what I was before

I’m a caged lion without the cage

walking the halls everyday
for the rest of my life
listening
feeling
sensing

Could my chest still rip open?

Clicking
Always aware of that thing beneath my skin, the heart. These are the stories of the open-heart. The professional blends into the personal as I recall the story I told in Chapter One of the individual I knew personally that had heart surgery. Recently, he casually said to me: “it’s been seven years since my heart surgery. They gave me ten. I guess my warranty will soon be up.”

Warranty was also a concern of the participants in this study. Ironically, the technological fix has a warranty. Lastly, I delve back into the stories that have the tendency to be too close to home to recount: My mom is still as strong as ever, on the outside. She commits herself to enjoying every aspect of life to the fullest, this I admire about her. She still smokes, not that I expected her to quit, and she still puts mounds of butter on everything, this I try to ignore. She walks slow and stops often. I do not ask why, because I already know, this I try not to dwell on. My dad continues to walk and ride his bike everywhere, maybe a bit slower than before. I try to emulate him. He purchased an automatic blood pressure cuff as a means of self surveillance. I monitor his blood pressure too. Despite any professional knowledge, he tells me the correct way to do it and how to position the arm. And before I take it, he always closes his eyes and breathes deeply, hoping he will lower his reading. Their pills are still lined up. I still check them, every time I go home to visit. My heart still skips a beat when I see their number on my call display.

The heart.
That thing that beats beneath my skin.
I am well aware of it.
Life rotates around it.
In more ways than one.
References


Sandelowski, M., & Barroso, J. (2003). Writing the proposal for a qualitative research methodology project. *Qualitative Health Research, 13*(6), 781-820.


Storch, J. (2005). Canadian health care system. In M. McIntyre, E. Thomlinson & C. McDonald (Eds.), *Realities of Canadian nursing: Professional, practice, and power issues* (pp. 29-53): Lippincott Williams & Wilkins (2nd ed.).


Appendix A: Information Pamphlet for Nurses

Patients’ Narratives of the Technological: The Heart Surgery Experience

Questions or Concerns
If you have questions or concerns regarding this research or about a patient’s participation in this study, please contact:

Jennifer Lapum, RN, MN, PhD(c)
Phone: 416-978-1578
Email: j.lapum@utoronto.ca

Confidential Nature of Research

Please note that patients’ participation in this study is confidential. Any information they share with the PI will be kept strictly confidential and should not be shared with any third parties (including their practitioners).
Background

The technological environments of heart surgery are persistent and dynamic.

Our work as nurses involves not only caring for patients, but incorporating technology into our practices.

Unlike nurses, patients tend to be unaccustomed to the technological environments and processes of heart surgery. This can be an unnerving experience for patients.

Research

The purpose of this nursing research study is to explore patients' experiences of the technological in heart surgery.

This study is not evaluating the services provided at Trillium Health Centre.

- Participants will be recruited from the preoperative heart surgery clinic
- An interview will be conducted with consenting patients 48-96 hours post transfer from the CVICU (on the cardiac floor)
- As a nurse on the cardiac floor, the investigator will negotiate with you and the patient the best time for an interview with the patient, and a location that is private

The Investigator

Jennifer Lapum is a doctoral candidate at the Faculty of Nursing, University of Toronto.

Her clinical experience as an intensive care nurse has prompted this research.

Her most recent clinical employment includes nursing in a cardiovascular intensive care unit and a regional intensive care unit.
How can you join the study?

To learn more about this research study, please call the research office at 416-978-1578.

We will answer any questions you have before you decide if you want to take part in the study.

Stories of Heart Surgery & Technology Research Study

We would like to hear about your experience of heart surgery and your experience of recovery.

Would you like to join a research study?

Please call the research office at 416-978-1578

Jennifer Lapum, RN, MN, PhD(c)
Faculty of Nursing,
University of Toronto
Phone: 416-978-1578
Email: j.lapum@utoronto.ca
The Research

You are scheduled for heart surgery at Trillium Health Centre.

We would like to hear about your experiences of heart surgery, your experiences of the technology associated with heart surgery, and your experience of recovery.

What will be asked of you?

You will be asked to take part in two interviews and keep a journal.

- The 1st interview will occur in the hospital following your heart surgery at a time when you feel well enough to participate
- The 2nd interview will occur in your home (4-6 weeks following discharge from the hospital)

During the interviews, you will be asked to share your experiences of heart surgery, the technology, and your recovery. Also, at the 2nd interview we will discuss your journal.

Our goals

- The information you share with us will help us learn more about patients’ experiences of technology during heart surgery and recovery
- This information will help us improve the processes and environments associated with heart surgery
- This information will improve patients’ experiences in the future
Appendix C: Demographics

Sex: 8 males and 8 females

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<td>&lt;72 hours</td>
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Appendix D: Sequence of Data Collection

Surgery

Interview One
Location: Hospital
Time: 48-96 hours post transfer from CVICU

Journal:
Following interview, journal given to participants to document experiences for three weeks

Hospital Discharge

Interview Two
Location: Participants’ home
Time: 4-6 weeks post discharge from hospital
Appendix E: Checklist

Participant pseudonym: _______________________

Date of consent: ________________________ / ________________________ / ________________________
Year month day

Duplicate copy given to participant
Yes ☐ No ☐

Date of 1st interview: ________________________ / ________________________ / ________________________
Year month day

Journal discussed and given to participant: Yes ☐ No ☐

Date of telephone contact in participants’ 1st week of discharge:
______________________ / ________________________ / ________________________
Year month day

Date of telephone contact in participant’s 3rd week of discharge:
______________________ / ________________________ / ________________________
Year month day

Date of 2nd interview:
______________________ / ________________________ / ________________________
Year month day

Date of Follow-up Telephone Call: (optional)
______________________ / ________________________ / ________________________
Year month day

Any remaining issues? yes ☐ no ☐
If yes, explain:

Date thank-you postcard sent:
______________________ / ________________________ / ________________________
Year month day
Appendix F: Demographic Form

Patient Pseudonym: ______________

Date: [ ] [ ] [ ] / [ ] [ ] [ ]

Date of Birth: [ ] [ ] [ ] / [ ] [ ] [ ]

Sex: [ ] Female  [ ] Male

Employment Status: [ ] Retired  [ ] Disability  [ ] Homemaker
[ ] Full-time  [ ] Part-time  [ ] Casual
[ ] Other  specify ________________________________

Occupation: ________________________________________________________________

Education Level: ____________________________________________________________

Marital Status: [ ] Single  [ ] Married  [ ] Widowed  [ ] Common law

Do you live alone? [ ] Yes  [ ] No

If no, who do you live with? ________________________________________________

Scheduled type of heart surgery: ______________________________________________

Scheduled date of procedure: [ ] [ ] [ ] / [ ] [ ] [ ]

year  month  day
Type of heart surgery done: ________________________________________________

Off-pump □   On-pump □   Full sternotomy □

Date procedure performed: ☐ ☐ ☐/☐ ☐/☐
year    month    day

Date/time admitted to the CVICU: ☐ ☐ ☐/☐ ☐/☐
year    month    day

Time    ☐ ☐ ☐

Date/time admitted to the floor: ☐ ☐ ☐/☐ ☐/☐
year    month    day

Time    ☐ ☐ ☐

Did patient stay in the CVICU longer than 36hrs?  no □    yes □

If yes, why?  ______________________________________________________

Were any technological interventions or monitoring devices used during the patients’ stay (other than the standard)?

yes □    no □

If yes, please explain:

Patient Pseudonym: _______________
Appendix G: Written Instructions for Keeping a Journal

What to write about?

- Write about your experiences
- Write about your feelings (physical or emotional)
- Reflect back on your surgery and your time in the hospital
- Think about how things have changed for you since your surgery
- Write about your daily life and how things are for you each day
- Share your difficulties and your hope

How to Write?

- Write as neatly as you can
- Try to use your journal twice a week, but use it as often as you like
- Write freely
  - point form (one word is fine)
  - sentences
  - stories
  - art work (drawing)
  - poetry
Appendix H: Journal Questions

- Tell me about your heart surgery?
- Tell me about the technology?
  - How did it make you feel?
  - Can you describe the experience of having any of the technology being removed?
- Tell me about a day in the hospital that you remember following your surgery?
  - What did you do? What were you thinking?
  - What were the health care professionals doing?
- Did anything occur in the hospital that you didn’t expect?

Now that you are at home…

- How are you feeling today?
- How are things different for you today compared to before your surgery?
- Tell me about a day in your life
  - What do you do each day?
  - When I ask you to reflect on your heart surgery, what do you think about?
Appendix I: 1st Interview Guide

Introduction

Do you have any questions before we begin?

Today I am interested in hearing about your experience with heart surgery and your postoperative experience. A part of the interview is about how you have experienced the technology and what it means to you.

Lead questions:

In thinking about your heart surgery experience, is there anything that is important to you that you would like to tell me about first or is there any place that you would like to begin?

When I ask you to reflect on your heart surgery, what do you think about?

Preoperative time

Describe your hospital time prior to surgery?
  • Tell me what you saw? Whom did you see? What did they talk to you about?
  • What were you feeling prior to surgery?
  • What was the last thing you remember prior to your surgery? What were you thinking about?

Postoperative time

What is the first thing you remember when you woke up from your heart surgery?
  • Whom did you see? What things did you see around you? What equipment did you see? What activity did you notice around you? What were the health care providers doing?
  • Tell me about how you were feeling? Thinking?

When I ask you to think about technology, what sorts of things do you think about?

Tell me about the technology
  • Describe the technology
  • What did you see around you?
  • Can you compare it to anything?
  • How did the technology make you feel? (e.g. ventilator, chest tubes etc…whatever they refer to in their previous answers)

Describe your experience in the intensive care unit following surgery
  • Can you tell me about your experience in the hospital following surgery?
Tell me about your experience of having some of the tubes, the wires and the machines removed or disconnected? (e.g. endotracheal tube, chest tubes, pacer wires, foley catheter, heart monitor)
  • How was it explained?
  • How was it done?
  • Who did it?

Tell me about a day on the cardiovascular floor
  • What did you do? How did you feel?
  • Who did you see? What were the nurses doing?
  • Tell me about the unit?
  • What did they expect of you each day?

Tell me about how you feel now?

Tell me about your recovery?

If you knew someone who would be undergoing heart surgery, what would you tell them?

What would you tell a health care professional/nurse to help them better care for you in the technological culture of heart surgery?

Before we close, is there anything else about your heart surgery or recovery that you would like to tell me about?

Do you have any questions before we finish?

Thank-you for your participation
Appendix J: 2nd Interview Guide

Introduction

Do you have any questions before we begin?

There are two parts to today’s interview. First I am interested in discussing your journal with you. Second I am interested in your heart surgery experience and your recovery from heart surgery. A part of the interviews is about how you have experienced the technology and what it means to you.

1st Phase
Can you tell me about your experience of keeping a journal following heart surgery?
- Is there anything that you wrote about that stood out in your journal keeping?
- What prompted you to write? (draw, craft, compose etc…)
- Did you find that you wrote at a particular time of day?
- Did you discuss your journal with anyone?
- How did you feel writing in your journal?
- Did writing in your journal change things for you in anyway? Or make you think differently?
- Is there something that you could not or did not write in your journal that you would like to talk about?
- What was it like going through your journal with me today?

Many questions at this time will be elicited based on the contents of the journal. The researcher will explore points of the journal that need further exploration (e.g. I noticed in your journal… can you tell me more about that? Let’s talk about this aspect of your journal. Why was this important for you to write? What prompted you to write this?). The participant will be given time to elaborate on areas of the journal that are significant for them.

2nd Phase
*some of these questions may be addressed during the 1st phase of the interview depending on the process of the interview.

Opening Questions
- In thinking about your heart surgery experience, is there anything that is important to you that you would like to tell me about first or is there any place that you would like to begin?
- Tell me about your heart surgery experience?
- When I ask you to reflect on your heart surgery, what do you think about?
- When I ask you to think about the technologies associated with your heart surgery, what do you think about?

Hospital experience
- Can you tell me about your experience in the hospital when you had your heart surgery?
- Can you tell me about what you remember when you woke up from the heart surgery?
Who was there? What did you see? What were people doing? What were you doing? What were you thinking?

- Can you tell me about the technology you saw?
  How did it make you feel?
- How were you feeling at the time of discharge?
  Can you describe what happened at your time of discharge?

Leaving the hospital (arriving home)

- Tell me about leaving the hospital?
  How did you feel? Who were you with? Could you describe how prepared you felt to go home? Did you have any concerns? Fears?
- Tell me about your arrival home?
  How did you feel? What did you do? Who was involved in your care? Tell me about your incisions? When did you first see them? What were you thinking?
- Tell me about your recovery from heart surgery?
  Tell me about the last month? What was it like for you? How has life changed for you? Tell me about how you have changed since your surgery? How do you feel now? When did you know you were recovered? What are the significant aspects of your recovery?
- Do you think about your heart surgery? When you think about your heart surgery, what do you think about? What prompts you to think about your heart surgery?

Closing Questions
If you knew someone who would be undergoing heart surgery, what would you tell them?

What would you tell a health care professional/nurse to help them better care for you in the technological culture of heart surgery?

Before we finish the interview, is there anything else that you feel is important about your heart surgery experience and recovery from heart surgery that would like to tell me about?

Do you have any questions?

Thank-you for your participation.
Appendix K: Transcription Guidelines

- Add page numbers
- The letter “I” will denote the interviewer and the letter “P” will denote the participant
- Transcribe each word
- Transcribe other utterances in parentheses (e.g. coughing, sighing, laughing)
- Bold words/sentences that are verbalized loudly
- Pauses should be demarcated by three dots (e.g. when I woke up from surgery…I was scared)
  - To identify the length of the pause, place a number in parentheses after the three dots, for example for an 8 second pause, “I woke up from heart surgery…(8) I was scared”
- For words or parts of sentences that are inaudible, put in parentheses (unclear)
- For anything that needs to be clarified in the transcriptionist’s own words, put in [square parentheses]
Appendix L: Visual Maps

Joseph: 1st interview (Valve surgery. Age ~ early 70s)

Preoperative period was emplotted as a scripted narrative mediated by the technological. He recalled ‘getting a pill under the tongue, becoming relaxed, and being wheeled into the OR with lots of lights. He described feeling like a star on the OR table’ and stated “I left it to the guy that had the knife…I’m in your hands.” There was an incremental relinquishment of agency in which the technological took over, as the pill relaxed him, and went into the OR. He literally and figuratively placed himself in the hands of the surgeon. There was the sense that he was absent, but present. His subjectivity was temporarily pushed aside and there was a disruption in his embodiment.

Story was nested in a discourse of dissonance in which there was a simultaneous and vacillating expression that surgery was a nominal event, but also rendered as quite substantial. ‘He indicated that it was a big risk and attached a special significance to the heart, but suggested it was not much to be concerned about. He talked about the concern for a stroke, but repeated that there was not much to be concerned about explaining that the hospital is well known for cardiac surgery with good doctors. He gave credence to his family’s natural concerns, but balanced this with the idea that everything worked out for the best and the service and staff were excellent & worked hard.’

Return of awareness postoperatively was nondescript. He described feeling ‘doped up. His description of the ICU was oriented towards the practitioners & the excellent service. He stated that they really looked after him, giving him lots of personal attention. In describing the things around him, he referred to the machines and tubes. He indicated they made him feel good, because he knew they were there for him and he made note of the repetitive number of tests the machines would have undergone in order to be used in this environment.’ The technological imparted a sense of comfort in that the practitioners & objects & emanating logics & processes of care were dependable & yet, the humanities of care were not neglected. Also, he indicated that the technological provided the possibility of longer life.

There was this incremental return of self, which was organized by the technological. ‘He remembered having the tubes removed and explained that it didn’t hurt & that the anticipation of the procedures was far worst. He indicated that he was still drugged and drowsy & experiencing split second hallucinations of faces. His day was framed by meals, walking and breathing, which was described as work. He described feeling insecure & hesitant when walking in the sense that he was on stand-by.’ An altered sense of self remained.

Related technology to ‘knowledge associated with procedures & instruments & the science that goes into the development of technology.’ He constructed the technological to impart an importance to the non-technical dimensions.

‘Although he recognized he was sick, he explained that he was anxious to go home, suggesting that “home is home…hospitals are for sick people.”’ There was the sense that although his core sense of self was the same, he has changed, indicating that he ‘used to be all business and his kids grew up without him, now he wanted to get well and take his family on a trip.’
Appendix L: Visual Maps

**Abbey: 1st interview (Bypass surgery. Age ~ late 70s).**

‘She had been through many life experiences & brushes with death, heart surgery was just one more thing to get her to 100 yrs. old. Began story with talk about anxiety of just wanting to get it done & over with. People kept questioning her on whether she was scared, but she made known her philosophy: “if it’s meant to be, it’s meant to be” giving control to the “guy upstairs” & believing her life is mapped out & everything happens for a purpose. She indicated there was no sense in worrying about dying (even though she was aware of the risk for death) because it is not in your control.’ Although she narrated a story of spirituality and an external locus of control, she was quite emotional and experienced a sense of relief that it was not her time to die.

**Scripted narration of surgery and temporary biographical suppression that tends to be mediated by the technological.** She said she was ‘given a pill that made her dozy and she didn’t remember too much. She described it as just going to sleep and it “blocks” everything out. She described trying to figure out what they did to prepare her, but can’t really recall other than being cleansed with iodine.’

**Waking from surgery was directed to her bodily sensations.** She described her first memory as ‘feeling pains like “somebody had cut my chest & put something so heavy there I can’t move.” She indicated she went to move & thought something was wrong because it was so heavy. She knew she would be “cut” but the incisions on her body were not what she expected (or what her family expected). She explained she didn’t care because “I’m alive” & it was not her time to die.’

**She emplotted the technological in ways that it played a part in averting her death.** She described that ‘the nurses and doctors couldn’t be better. She explained that you just have to “go with the flow” and follow the processes of care that are involved. She indicated that they have everything “down pat” in that there are particular duties they have to do and you never have to wait for anything.’ Although there were routines of care that were implemented (e.g. checking your bandages), there was a sense of humanistic caring in which she described that ‘the nurses were always asking if everything was okay and that all her needs were being met.’ In addition, there was resistance to the technological as she ‘questioned & refused some of the medications.’

Perseverance of core self that made her who she was, but altered biography (evident in what she could do and how she looked). She described ‘that the doctor & her daughter both commented that she didn’t look any different postop. She explained that no one believes she is sick b/c she always looks good & suggested she just doesn’t let it affect her that way.’ There was a struggle as she attempted to return to her healthy self as she represented herself as a healthy and strong woman (how she was before) and a sick and slower person (how she didn’t want to portray herself or be). ‘She indicated that she felt different with regards to not being able to jump up and do what she wants. It was hard for her to slow down because she moved fast all her life. Biggest change was how she gets out of bed and she described the technique she used (in which she depended on the nurses and the pillow to hold everything in place). She explained an abnormality to it all as being in the hospital made her feel upside down & that the day she started walking she knew she’d be okay because it was just like before’ (a return of normality)

Description of technology included objects, but also science, knowledge and techniques involved. There was a sense of amazement in ‘the things they can do with technology and the thinking that goes into making it possible.’ She indicated ‘that everything will soon be bionic and related it to her knee replacement, which was like getting your car fixed.’ Although there was a sense of feeling fortunate to having the technology around, there was the sense of abnormality to it all. She described ‘feeling restricted because she couldn’t move around freely d/t all the machines’ and going home seemed to be the next step to getting back to her normal self.
Appendix M: Consent Form

Nurse Researcher: Jennifer Lapum, RN, PhD(c), Faculty of Nursing, University of Toronto, j.lapum@utoronto.ca, 416-978-1578

Faculty Supervisor/co-researchers: Dr. Jan Angus, RN, PhD, Assistant Professor, Faculty of Nursing, University of Toronto, jan.angus@utoronto.ca, 416-978-0695
Co-researchers: Dr. Elizabeth Peter, RN, PhD, Associate Professor, 416-946-3437 and Dr. Judy Watt-Watson, RN, PhD, Professor, 416-978-2850

Study Title: Patients’ Narratives of the Technological: The Heart Surgery Experience

Introduction:
Before participating in this study, it is important that you read and understand this research consent form. This form provides you with information you will need to know in order to decide whether you wish to participate. If you have any questions after reading this form, ask your questions to the principal investigator. Please feel free to discuss your participation in this study with a family member, a friend or your health care provider.

Purpose of Research:
The purpose of this research is to explore peoples’ experiences of heart surgery with particular interest concerning technology. This study is part of the Principal Investigator’s doctoral research and will involve 10-16 people who are undergoing heart surgery.

Your participation:
You have been asked to take part in this study because you are undergoing heart surgery at [redacted]. If you agree to participate, you will participate in 2 interviews, keeping a journal and 2-3 short phone calls when you have been discharged home.

The 1st interview will occur in the hospital following your heart surgery at a time when you feel well enough to participate. It will occur in a private room and will range from 30-90 minutes to complete. The 2nd interview will occur in your home or another location of your choosing (e.g. library), 4-6 weeks following your discharge from the hospital. The location and time of the interview will be negotiated with you and at a place and time that is most convenient and comfortable for you. It will last 60-120 minutes.

The lengths of both interviews will be negotiated based on how you are feeling at the time. The principal investigator will facilitate the interview. A tape recorder will be used to record the interview so that none of the information you give will be forgotten. In the interview, you may be asked about your heart surgery, your experiences with the technology, and your recovery. Some of the questions will emerge based on what you say.

Participant Initials ____________

Faculty of Nursing, University of Toronto, 155 College Street, Toronto, Ontario, M5T 1P8
A second part of your participation in this study is to keep a journal. A journal will be given to you following your 1st interview. You will be able to use the journal for the first 3 weeks at home. You will be asked to write at least twice a week, but you can write as often as you like. You can write freely, including point form, sentences, stories, poetry and/or artwork. It is your journal to document how you are feeling and document your experiences. You can use it as much or as little as you want.

Potential Harms & Benefits: You will not directly benefit from participation in this study, other than you may enjoy sharing and talking about your experience with the investigator. Your contributions will provide greater understanding for health care workers caring for persons undergoing heart surgery. Sharing your experience will contribute to health care workers being able to care for patients in ways that better take into consideration patients’ experiences. Although there are no obvious harms associated with taking part in this study, participating will involve some of your time and discussing personal issues associated with your heart surgery, which you may find upsetting. If you experience any emotional and psychological issues that require consultation, the investigator will discuss with you potential avenues to address your concerns.

Confidentiality and Privacy: To ensure your privacy, the 1st interview will be conducted in a private room at the hospital. The 2nd interview will be conducted in your home. To ensure confidentiality, you will be given the option to choose a pseudo name that will be used for all documents including audio files, transcripts, computer files, journal documents, publications or presentations. All data, including tapes, transcripts, journals, and computer disks will be kept in a locked filing cabinet in a locked location, and all computer files will be pass word protected, which can only be accessed by the research team. You will be given the option to maintain the hard copy of your journal. In this case, the researcher will ask permission to make a photocopy of your journal. We will not share the information you give us with any of your doctors or others involved in your care. No information that could reveal your identity will be given to anyone else, unless the investigator is required to do so by law. Results of this study may be published and presented. Aspects of your story may be retold and/or particular quotes or items from your journal or interview may be used, but at no point will your name be used or any identifying information.

Participation and Withdrawal: Participation in this study is voluntary. Decisions concerning participation or non-participation are confidential. You may withdraw from the study at any time and do not need to give any reason or explanation for doing so.

Further Questions:
If you have questions about taking part in this study or questions following participation in the study, you can contact the nurse researcher Jennifer Lapum at 416-978-1578 or j.lapum@utoronto.ca, or her faculty supervisor Dr. Jan Angus at 416-978-0695.

If you have questions about your rights as a research participant, please contact Jill Parsons, Health Sciences Ethics Review Officer, Ethics Review Office, University of Toronto, at telephone 416-946-5806 or by email: jc.parsons@utoronto.ca.

Participant Initials  ______  
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I acknowledge that this study has been explained to me and that any questions I have asked have been answered to my satisfaction. I have been informed of my right not to participate and my right to withdraw at any time. I have been informed that I can decline any question during the interviews. The potential harms and benefits have been explained to me and I understand these. I have been assured that my personal identity will be kept private and confidential. I acknowledge that the interviews will be audio-recorded. I have been provided with a copy of this consent form.

Having read, understood and had a full explanation of this consent form, I voluntarily consent to participate in this study.

Name of Participant       Signature of Participant       Date

Name of Principal Investigator       Signature of Principal Investigator       Date

Please check here if you would like a copy of the final report

Version Date: June 1, 2006

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