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Is Catherine Crazy? The Role of Schizophrenia and the Character Catherine in David Auburn's Play Proof: Exploring the Script from Research to Performance

Karin M. Lorenz

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Is Catherine Crazy?

The role of Schizophrenia and the character Catherine

in David Auburn's play *Proof*:

Exploring the script from research to performance.

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Masters of Fine Arts in Acting Thesis

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Prospectus

When the time came to choose a script for my thesis performance, I was not exactly sure where to begin. I had never really had the chance to play someone my age, from my time period. Most of the plays I had seen or read were written anywhere from Ancient Greece to the 1960s. Having received a B.A. in English with a concentration in world literature, I have explored many types of drama, but I found I have little experience with American plays and playwrights. So I decided I wanted to play a contemporary American in her mid-twenties.

The next step was to find a play that fit my criteria. I began my search at the public library and on the internet. I picked up anthologies containing the top plays of the year, looking through the past decade; I searched the internet for nominated and award-winning plays and playwrights, for such awards as the Tony Awards and the Pulitzer Prize, and I began to read.

Many of the plays I read, even the award-winning ones, were not quite what I expected; they seemed to lack substance or depth. I was starting to become discouraged when I came across a play I heard friends mention and heard had been recently adapted into a movie. I am often skeptical of plays that become movies; I find they often become overdone and carry a certain stigma and sense of expectation. However, having not seen the movie and knowing nothing of the story, I figured why not give it a try and read it.

What I found was a play with both a fascinating story, compelling characters, dialogue that felt natural not forced, and normal everyday interactions telling a unique story, with a pairing of art and science. This play – *Proof* by David Auburn – appealed to me on so many levels. It combined the artistic with mathematics and science. It explored the psychological on both the emotional and chemical levels. The story revealed the beautiful, often ignored or

overlooked connections between art and science, passion and logic. The main character, Catherine, encompassed all of these ideas while also appealing to me on a more personal level.

Catherine is at a turning point in her life. The pattern of her everyday life which she has followed for so long has come to an end. For the first time in her life she faces the unknown. She no longer has anyone whose needs she feels obligated to put above her own and has no expected predetermined path to follow. What she decided to do with her life must come from what she wants and who she wants to be. She must choose a new beginning. Like Catherine, I face a new chapter in my life, a new beginning. After spending the last eight or so years in university studies, and thirteen years before that in kindergarten through high school, I have reached the end of my formal education. I feel at a loss. I have been in school since I was five years old and now, twenty-one years later, it is time to move forward.

It seems I had found the play and role for my thesis performance – Catherine in *Proof* by David Auburn.

After the decision was made and details were finalized, it became time to explore the written portion of my thesis process. I began with research, first with background and general information on David Auburn and the production of the play *Proof*. My research continued with a study of schizophrenia and its presence in the play.

One of the driving forces of the play and its main character is Catherine's fear of developing the illness that robbed her father of his career and life. Catherine has just seen her father loose a battle she has watched him fight her entire life. Having inherited Robert's mathematical talent, Catherine believes she may inherit his illness as well. Although the play never names his illness, the symptoms found in the dialogue suggest Robert suffered from

schizophrenia. While the play does not resolve the question of whether or not Catherine's future will be a parallel of her father's life, it presents evidence for both outcomes.

The next step in the process involved an analysis of the script. I studied the text and subtext, from stage direction and dialogue, making notes and recording questions (shown in the script notes appendix). I created a basic character analysis of all four of the play's characters – Robert, Catherine, Claire, Hal – on the basis of Francis Hodge's method of examining their desire, will, moral stance, and decorum. Following my initial analysis, I took a deeper look into the character I would portray – Catherine. I raised and answered questions to develop my understanding of the character, combining ideas from the text with my own interpretations. I also examined the characters, based on their need to prove ideas through argument, fact, and evidence, and the most prominent example of this need, determining the author of the newly discovered proof.

I next focused on the ideas of the play, examining the meaning of the title and philosophical statements found in the dialogue. The title encompasses as many aspects as there are definitions for the word "proof." The two prominent ideas center on the mathematical proofs and the characters' attempts to prove ideas, both concrete and variable. The philosophies of the play reflect its mathematician characters, revolving around logical, analytical thinking and the balance between math and life. While understanding math vs. life or logic vs. faith requires a separate set of skills, the two seemingly opposing ideas occasionally overlap.

The process section of the paper contains a rehearsal journal, detailing my rehearsal and performance experience. In the journal, I recorded specifics of the rehearsal and performance

days along with my own personal acting process and thoughts throughout. The written component of my thesis project concludes with a peer evaluation of my rehearsal process contributed by the play's director, assistant director, stage manager, and my fellow actors.

A series of appendices form the remainder of the paper, presenting a collection of materials from process to performance.

Chapter One: Research

Proof, a two-act drama written by David Auburn, originally opened at the Manhattan Theatre Club on May 2, 2000. The play ran through July 20, 2000 with 80 performances and 24 previews. The original production was directed by Daniel Sullivan, starring Larry Bryggman as Robert, Mary-Louise Parker as Catherine, Ben Shenkman as Hal, and Johanna Day as Claire, with set design by John Lee Beatty, costume design by Jess Goldstein, lighting design by Pat Collins, sound design by John Gromadal, and James Harker as stage manager (Willis 14). The play later moved to Broadway's Walter Kerr Theatre, produced by Manhattan Theatre Club (Lynn Meadow, Artistic Director; Barry Grove, Executive Producer), Roger Berlind, Carole Shorenstein Hays, OSTAR Enterprises, Daryl Roth, and Stuart Thompson. The Broadway production of *Proof* ran from October 24, 2000 to January 5, 2003 with 917 performances and 16 previews, "making it the longest-running Broadway play in two decades" (Pincus-Roth).

David Auburn was born in Chicago in 1969, and spent his childhood in Ohio and Arkansas ("Proof." *Oxford Companion*). Auburn began writing with a student comedy troupe while in college. The troupe performed comedic sketches, and after writing some of those sketches, Auburn discovered he enjoyed writing. Over time, the sketches increased in length, and before long he had written a play. He later moved to New York where he continued to write and worked to have his plays performed at small theatres. He was then accepted into the play-writing program at Julliard where he was able to have his plays read by talented actors. Eventually, he had met enough people and compiled enough material that when he completed a full-length play he was able to find people to help him produce it (Auburn, "Pulitzer").

Proof was the second full-length play written by Auburn. According to Auburn, *Proof* is: the story of a young woman, Catherine, who has spent years caring for her father who is a brilliant mathematician, and her father began having various kinds of mental illness problems. She gave up her life to care for him. When the play begins the father died. She is sitting alone on the 25th birthday and wondering is this going to happen to me. How much of my father's mental illness have I inherited and have I inherited any of his talent as well? So the play is about a weekend in her life where she is trying to sort that out and she is trying to deal with her sister, who's flown in from New York and she has some plans for Catherine's life. There is also a character who is a grad student who is a protégé of the father's who is upstairs in the house looking through the dad's papers hoping to find something he left behind. He also kind of has designs on Catherine.

(Auburn, "Pulitzer").

In an interview aired on PBS with Terence Smith and David Auburn, Smith asks Auburn why he chose to write a play about mathematics. Auburn explained that it began as an idea to have two sisters argue over something found following the death of their father, along with the idea of a child inheriting her parent's mental illness. When deciding what would be found by the sisters, Auburn thought a scientific or mathematical document would be fascinating. He felt there would be a number of interesting possibilities and directions for such a story, as the authorship of the document is questioned. Auburn decided having a character question their mental state would parallel nicely with the fact that a number of mathematicians who have made significant and well-known contributions to the field of mathematics have suffered from mental illnesses. Once he formed an idea for the play, Auburn said the next step was deciding

how to incorporate the math. To do this he found help by “reading popular books and spending time with mathematicians” (Auburn, “Pulitzer”).

When asked about the worry Catherine feels about having inherited her father’s illness along with his talent, Auburn commented on how the play deals with heightened emotions that are often associated with feelings toward one’s family (Auburn, “Pulitzer”). He feels *Proof* presents an exaggeration of the idea that, to some extent, everyone both hopes and worries they will inherit familial traits. There is the hope of acquiring the more favorable and admirable traits, paired with the fear of being trapped in difficult or unfavorable patterns. Catherine hopes she possesses her father’s talent, but fears she also has his illness.

Auburn, an alumnus of the University of Chicago, says he decided to set the play in Chicago because he felt the story needed to be told in the “melancholy atmosphere that [he] often felt in Hyde Park” (Auburn, “A Conversation”). Like Robert in the play, Auburn often witnessed a specific type of person found frequenting the bookstores and coffee shops in the area. He described them in an interview saying they were

usually men, middle aged, clearly not students, not faculty either; it was hard to tell what they were—they were these sort of perennial campus ghosts haunting the place. You got the sense that they’d slipped off the tracks somehow. Sometimes there would be little legends attached to them—you’d hear that this guy or that one was a brilliant prodigy who cracked up spectacularly.” (Auburn, “A Conversation”)

He felt these men were specific to Chicago, and since Robert himself was one of them, the play needed to be set in Chicago. Aside from Chicago, the play is more specifically set entirely on the back porch of a house. Auburn says that initially the porch was where he saw the story

unfolding. He later decided to confine the action to this location as an exercise to challenge himself to craft a play within the constraints set by the ideas of the traditional or well-made play (Auburn, "A Conversation").

Both the Off Broadway and Broadway productions of *Proof* were well received by the critics. *Theatre World 2000-2001 Season*, gives a summary of reviews:

Variety tallied 9 favorable, and 2 mixed reviews. *Times* (Weber): "...exhilarating and assured...as accessible and compelling as a detective story." *News* (O'Toole): "It proves that it's still possible for an intelligent new play by a young American dramatist to make it onto Broadway...Parker...an electrifying performance..." *Post* (Barnes): "All four actors are pitch-perfect, but the one you'll remember is Parker." *Variety* (Hofler): "...managed to improve upon this remarkable play in its transfer to Broadway from the Manhattan Theatre club...Together Bryggman and Parker hit enough emotional highs to sustain a dozen lesser plays." (Willis 14)

David Auburn, *Proof*, and those associated with the initial production of the play received numerous awards including the Pulitzer Prize for Drama in 2001, New York Drama Critics Circle Award for Best Play, and Tony Awards for Best Play given to David Auburn and the play's multiple producers, for Best Performance by a Leading Actress to Mary-Louise Parker, Best Direction of a Play to David Sullivan, along with nominations for the Best Performance by a Featured Actor/Actress in a Play given to Larry Bryggman, Ben Shenkman, and Johanna Day.

The play opens during the early morning hours of Catherine's twenty-fifth birthday and the day of her father, Robert's funeral. Catherine has spent the last five years caring for her

father – a brilliant and famous mathematician who has spent most of his life struggling with mental illness.

Hal, a former student of Robert's, has spent the past few days reading through the one-hundred and three notebooks in Robert's study. Despite Catherine's insistence that the notebooks contain nothing more than the nonsensical ramblings of an insane man, Hal is determined to discover evidence that his mentor's brilliant mind produced more than the ground-breaking proof written in Robert's early twenties.

When Claire, Catherine's older sister flies in from New York for the funeral, the sisters' already strained relationship is pushed even further as Claire tries to do what she feels is best for her sister.

Over the course of the play Catherine struggles with a fear that along with her father's mathematical talent she has also inherited his mental illness, while beginning a romantic relationship with Hal and defending her sanity to her sister Claire. Catherine's relationship with Robert and her first meeting with Hal – showing an instant attraction between the two – are revealed through a series of flashbacks during the action of the play.

Catherine leads Hal to a previously undiscovered notebook containing a proof that, if legitimate, could change the course of the mathematical world. After revealing the notebook, Catherine, who claims to have written the proof, has her trust betrayed by both her lover and sister as Hal and Claire doubt her mathematical capabilities and sanity, believing Robert to be the author of the proof.

As the play progresses, Catherine must come to terms with her fears, decide the course her life will take, while defending her claims to the proof.

One of the driving forces of the play *Proof*, by David Auburn, and its main character, Catherine, is her fear of developing the illness that robbed her father of his career and life. Catherine has just seen her father loose a battle she has watched him fight her entire life. Having inherited his mathematical talent, Catherine believes she may inherit his illness as well. Following the death of her father, Catherine searches within herself for signs, to see if she will suffer the same fate. Although the play never names his illness, the symptoms found in the dialogue suggest Robert suffered from Schizophrenia.

Schizophrenia is a psychiatric term for a mental disorder identifiable by a common set of characteristic symptoms. The term *schizophrenia*, first used in the early twentieth century by the psychiatrist Eugene Bleuler (1857-1939), originated from the idea that the brain's functions are disconnected (Reveley 27). The word itself is derived from the Greek words for brain, *phrenos*, and split, *schiz*, and is used by Bleuler to "reflect his belief that the functions of the brain were no longer coordinated together" (27). The illness presented "a split (schizo) in the mind (phren) between perception and reality" (Mueser 6).

Emil Kraepelin (1855-1926) was the first to describe "the symptoms of schizophrenia as due to a single illness" (Mueser 5). Kraepelin identified common symptoms characteristic of the illness, including "hallucinations, delusions, impaired attention span, and social withdrawal" (Mueser 5). Schizophrenia refers specifically to an illness characterized by difficulties in social functioning, self-care skills, and distinguishing reality from fiction (4). The illness usually manifests in early adulthood as the brain finishes maturing and often develops as a "chronic, long-term problem, affecting all aspects of a person's life" (Reveley 1).

Schizophrenia is a psychotic disorder caused by errors created in the temporo-parietal/limbic area of the brain, which controls sensation and emotion (Reveley 2). These errors affect a person's ability to process sensory information from their environment and the ability to distinguish between internal thoughts and feelings from external experiences (3). Although schizophrenia presents a specific set of symptoms, not all schizophrenics suffer from the same combinations of symptoms. Psychiatrists place schizophrenic symptoms into five categories: "psychotic symptoms, negative symptoms, cognitive impairment, mood problems, and behavioral disturbances" (Mueser 21). People suffering from the illness will usually exhibit symptoms from each category, but never all symptoms within each (21). Every individual with schizophrenia has a unique set of symptoms.

Psychotic symptoms, also called positive symptoms, are marked by the "presence of potentially absurd or false thoughts, behaviors, or feelings" (Mueser 21). These symptoms manifest in the form of hallucinations and delusions. Hallucinations are false perceptions, sensations a person experiences that others do not (22). Hallucinations create a sensory experience – a smell, taste, sound, sight, or feeling – that does not exist in the present environment. For example, a person suffering from a psychotic hallucination may think he is hearing voices that no one else can hear. Delusions or false beliefs are beliefs "not shared by others in the person's culture or religion" (22). While these delusions are very real to the person experiencing them, to others they may seem impossible. Common examples of schizophrenic delusions may focus on ideas of "persecution, reference, control, and grandiosity" (23).

Negative symptoms of schizophrenia are "characterized by the absence of normal thoughts, behaviors, or feelings" (Mueser 24). The *blunted affect*, an example of a negative symptom, manifests in the expression of emotion (24). Also referred to as the *flat affect*, this symptom is often exhibited through "decreased facial and vocal expressiveness" (24). Even though a person may feel emotions, he is unable to show them. Other forms of expression and overall motivation may also suffer. Similar to the blunted affect, *alogia*, also referred to as poverty of speech or speech content, is a symptom where a person will say little or convey little of his thoughts (24). They may also experience *anhedonia*, or a "decreased ability to feel pleasure or enjoyment" (25).

A person suffering from schizophrenia may feel an overall sense of apathy, or lack of motivation toward personal goals or independent functions (Mueser 24). This symptom can disrupt a person's daily routines, interfering with basic hygiene and manifesting in excessive sleeping and self-isolation. For some, apathy presents itself as a sense of "discouragement and hopelessness about the future, whereas for others it is just a genuine state of not caring" (24). While negative symptoms more often tend to be stable positive symptoms may fluctuate (24). *Simple* schizophrenia, a sub-type of the illness, is a "condition where there is slow development of negative symptoms, with a progressive decline in social performance and increasing lack of initiative and motivation, but without any positive symptoms being seen" (Reveley 39).

Cognitive impairment symptoms of schizophrenia relate to information processing problems. These problems may be with attention and concentration, memory, reasoning and problem solving and other thought processes. A person's *psychomotor speed* may suffer, causing a decrease in the speed at which they "process information and respond accordingly

(Mueser 25). They may also lack in their "ability to perform complex tasks that may require abstract reasoning, planning, and problem solving," also referred to as *executive functioning* (25). These symptoms may also be evident through language difficulties. A schizophrenic person may begin to "use language in an odd way that is hard to understand" (26). Common examples of language problems may involve the use of loose associations and derailment, jumbled syntax, invention of new phrases, *neologisms* or inventing new words or new meaning to words, and thought blocking or forgetting what is planned to be said (26).

The symptoms of cognitive impairment may also manifest as poor insight. Social perceptions can be distorted, rendering a person unable to decipher social signals common to interaction with others. For example, a schizophrenic may be unable to deduce another's feelings as expressed through "facial expressions and tone of voice" (Mueser 26). These social comprehension problems can lead to a difficulty in understanding other's perspectives and "limit or eliminate the capacity for empathy" (26). A person may even be unable to perceive that he suffers from a psychiatric illness. *Anosognosia*, a neurological term often used to "describe a lack of insight into handicap displayed by many people following a brain injury, is sometimes used to describe the profound unawareness of illness and related disability in people with schizophrenia" (26).

Mood and behavioral problems are also indicators of schizophrenic illness. Mood problems, long-term or temporary, include feelings of depression and thoughts of suicide, anxiety, anger or hostility, and suspiciousness (Mueser 26). A person may experience a *labile mood*, displaying rapid mood fluctuations with no apparent cause (28). An *inappropriate or incongruous affect* may appear, showing the sufferer exhibiting incongruous emotional

responses such as "smiling or laughing when talking about a serious topic" (Mueser 28).

Behavioral problems associated with schizophrenia include catatonia, catatonic excitement, and mutism, or the refusal to speak. A person in a state of catatonia remains unmoving, maintaining the same posture for hours or days. On the other end of the spectrum is catatonic excitement or "excited, purposeless motor activity not brought about by external stimuli" (28).

Although a family history of schizophrenia raises the risk of developing the illness, many people with schizophrenia are the only one in their family with the illness (Reveley 13). A person's genetic make-up accounts for an estimated eighty percent of the cause (55). Possessing one of more *susceptibility genes* may increase an individual's risk of getting schizophrenia, "but would by no means make it certain" (42). Susceptibility genes are those commonly found in individuals with schizophrenia. These genes could, in a variety of ways, lead to the development of the illness. For example, these genes could affect the brain cells in a developing fetus making the development of psychosis more likely, could "influence the way the brain matures throughout childhood, or they could interact with a third factor, such as hallucinogenic drugs" (43). However, no specific gene has been linked to the development of schizophrenia. While certain genetic markers appear to be connected with its development, "the basis for, and precise source of, genetic association is unknown" (Harrison 3). It can neither be proved nor disproved that schizophrenia results from any one gene.

One of the driving forces of the play *Proof*, by David Auburn, and its main character, Catherine, is her fear of developing the illness that robbed her father of his career and life. Although the play never puts a name to Robert's illness, evidence throughout the play indicates schizophrenia. It is probable that Robert suffered from schizophrenia, evident by the time of

onset being in his early twenties and his progressive decline in functioning. He also exhibits common positive, negative, and cognitive symptoms of the illness.

Robert shows evidence of suffering from positive symptoms of schizophrenia, both hallucinations and delusions. When he speaks to Catherine at the beginning of the play, Robert tells her that he has been happy:

If I wanted to look for information – secrets, complex and tantalizing messages – I could find them all around me: in the air. In a pile of fallen leaves some neighbor raked together. In box scores in the paper, written in the steam coming up off a cup of coffee.

The whole world was talking to me. (Auburn, *Proof* 10)

Robert saw things where no one else would. He believed he could find information hidden in common everyday objects. He found patterns in random occurrences, order in chaos. Robert falsely perceived messages where there were none. Catherine tells Hal that her father “talked to people who weren’t there” (16), another sign that he suffered from hallucinations.

The idea that Robert found messages in the world around him could have been seen as metaphorical, if it were not paired with evidence that he was also delusional. More than once Catherine refers to a time where Robert became obsessed with checking out library books, “he believed aliens were sending him messages through the Dewey decimal numbers on the library books. He was trying to work out the code” (16). The messages contained everything from “beautiful mathematics” – “answers to everything” and “the most elegant proofs, perfect proofs, proofs like music” to “fashion tips” and “knock-knock jokes” (17).

Robert exhibits common behavior associated with negative schizophrenic symptoms. When Catherine tells Hal about her father’s illness, she tells him “[she] had to make sure he

bathed" (Auburn, *Proof* 16). Robert's behavior shows he suffers from a sense of apathy. He also shows a sense of discouragement and hopelessness about the future:

I was starting to imagine I was finished, Catherine. Really finished. Don't get me wrong, I was grateful I could go to my office, have a life, but secretly I was terrified I'd never work again. (61)

Robert seems unable to carry out other routine behaviors as well:

CATHERINE: Don't you need a coat?

ROBERT: Don't you think I can make that assessment for myself? (59)

and

CATHERINE: I've been calling. Didn't you hear the phone?

ROBERT: It's a distraction. (59).

Although he admits to being cold, he does not attempt to put on a coat. He does not even seem to be aware that he has neglected to perform this simple, normal task. Robert has also either been ignoring the telephone or has not been aware of it. Both suggest that his connection to the world around him is slipping.

Robert has difficulty processing information evident through his inability to concentrate, remember, and reason as he once could. Examples of these cognitive impairments manifest throughout the script. His inability to work in the later years of his life is mentioned frequently by multiple characters. Catherine uses the example of her father's overall decline in functioning over the years as she argues her authorship of the proof she has shown Hal: "He didn't do this, he couldn't have. He didn't do any mathematics at all for years. Even in the good year he couldn't work" (53). Robert was also shown to have problems with his memory.

In one of the flashback scenes of the play, he forgets that it is Catherine's twenty-first birthday, he apologizes saying that he "used to have a pretty good memory for numbers" (Auburn, *Proof* 49).

Robert's rapid changes in subject while he is speaking to Catherine show that he has difficulty concentrating. While telling Catherine about his great new mathematical discovery, he abruptly changes the course of the conversation more than once:

I see whole landscapes – places for the work to go, new techniques, revolutionary possibilities. I'm going to get whole branches of the profession talking to each other.

I – I'm sorry, I'm being rude, how's school? (60)

and

Work with me. If you want to, if you can work it out with your class schedule and everything else, I could help you with that, makes some calls, talk to your teachers...I'm getting ahead of myself." (62)

His information processing problems are also evident in this scene with his creation of a nonsensical proof which he believes to be a major mathematical discovery. What Robert believes to be a mathematical world-changing discovery is really a series of non-mathematical statements about the seasons where "X equal[s] the cold" (63). Robert has poor insight into his own deteriorating condition. He is unaware of his loss of touch with reality. He does not realize the ridiculousness of his proof until Catherine reads it back to him.

Catherine worries that because she inherited her father's mathematical ability, she will also inherit his illness. While the play does not resolve the question of whether or not Catherine's future will be a parallel of her father's life, it presents evidence for both outcomes.

When the play begins, Catherine is speaking with her father. At the end of their discussion, Robert reveals that he is dead. Catherine agrees telling him he "died a week ago" (Auburn, *Proof* 12). If her father is dead, Catherine cannot be having a conversation with him. The conversation between Catherine and her father has been a hallucination, one of the positive symptoms of schizophrenia. Later, when Hal talks to Catherine about her father, she interrupts him saying "I don't want him around" (17). The fact that she mentions her father being around even though he has been gone a week suggests this is not the first time Catherine has seen or spoken to her father since he died. Catherine also appears to be suffering from delusions. She accuses Hal of attempting to steal from her father. He responds telling her she is "being a little bit paranoid," another positive symptom (16).

Catherine displays common negative symptoms of schizophrenia as well. Her father hopes she is not spending her birthday alone, he asks if her friends are taking her out. Catherine says no, "because in order for your friends to take you out you generally have to have friends" (7). It seems that Catherine has withdrawn herself from social situations and cut herself off from her friends. Her apparent disinterest in social situations is paired with a general sense of apathy. She has a loss of interest in taking care of self, and has little motivation to accomplish anything productive during her days. Her father's description of her current lifestyle exemplifies her state of apathy: "You sleep till noon, you eat junk, you don't work, the dishes pile up in the sink. If you go out it's to buy magazines . . . Some days you don't get up, you don't get out of bed" (Auburn, *Proof* 8).

Claire also notices her sister's lack of interest in caring for herself. When Claire first appears in the play, her reaction to Catherine coming out on the porch with wet, freshly

washed hair provides evidence Catherine has not bathed in some time. She also notes that there is no food in the house. Her insistence that her sister eat a bagel and banana, along with mentioning her fiancée wonderful cooking, implies that Claire does not believe Catherine has been eating well or at all. Claire even tells Catherine that she does not trust that she is well, telling her: "You can't take care of yourself for five days" (Auburn, *Proof* 66).

The interactions between Catherine and Claire reveal behavior from Catherine that could be symptoms of schizophrenia. When conversing with Claire, Catherine says very little, conveying little of her thoughts. This behavior could be a sign *alogia*, a condition identified by a person's inability to communicate their thoughts and feelings. Catherine demonstrates rapid shifts in her mood that may indicate more serious mood problems. She is seen to quickly become angered and sometime hostile. Examples of her mood problems can be seen when Claire tells Catherine: "the police said you were abusive," and "they said you were either drunk or disturbed" (26). Instances such as these suggest that Catherine may not be in full control of her actions.

Other behavior problems exhibited by Catherine appear in her disconnection with the world. Several statements made by Claire suggest that Catherine experiences catatonia and mutism: "She's been sleeping since yesterday. She won't get up. She won't eat, won't talk to me" (Auburn, *Proof* 56), "You slept all week" (66), "If she's not going to speak..."(57), and "You were completely out of it, Catherine, you weren't speaking" (67).

Although parts of the play suggest that Catherine may be slipping slowly into the illness that plagued her father, evidence to the contrary appears as well. Sharing her father's mathematical ability does not guarantee that Catherine will also share his illness. He even

reminds of this fact: "There are all kinds of factors. It's not simply something you inherit. Just because I went bughouse doesn't mean you will" (Auburn, *Proof* 10). A person's genetic make-up alone does not determine whether she will acquire a mental illness. Catherine may not even share the genes that led to her father's illness. Catherine is twenty-five years old, past the age at which her father began to show symptoms. She has also past the age usually associated with the onset of the illness. Schizophrenia usually presents itself by the time a person's brain finishes maturing. At twenty-five, Catherine has past this point in her life. It is likely that if she has not shown symptoms of the illness by this point in her life, she will not develop the illness.

Catherine has a clear sense of insight into her own thoughts and behaviors.

Schizophrenics often lack this type of insight. Like Robert, people suffering from the illness may be unable to identify their differences. Just as Catherine's father tells her, "crazy people don't sit around wondering if they're nuts" (10, 11). Her ability to question herself indicates that Catherine does not have cognitive problems. Additionally, she does not exhibit any signs of possessing problems when working with mathematics. She is still able to process and remember complex mathematics. She discusses prime numbers with Hal, even shocking him with her advanced knowledge of them (31). She also writes a complex mathematical proof, which Hal refers to as "some of the most important mathematics in the world" (41). Catherine shows no signs of memory loss. She easily recalls information on Sophie Germain, including a quote from a book given to her by her father (31).

Catherine was able to care for herself, her father, and their house for the past five years without any help or support other than occasional long-distance monetary help from her sister. She did all of this despite her sister's protest and insistence that their father be

institutionalized. If Catherine were ill herself, she would not have been able to care for both herself and another low functioning adult.

Symptomatic behavior seen in Catherine that could be evidence of schizophrenia could also be signs of depression and exhaustion, both physical and emotional. Catherine lost her mother, leaving her to care for her ill father on her own. She had to leave school twice, giving up her own life so her father could maintain a normal lifestyle. Catherine discusses her depressed state while explaining when she found time to write the proof:

After I dropped out of school I had nothing to do. I was depressed, really depressed, but at a certain point I decided Fuck it, I don't need them. It's just math, I can do it on my own. So I kept working here. I worked at night, after Dad had gone to sleep. It was hard but I did it. (Auburn, *Proof* 52)

If she were staying up late working on the proof she might sleep late the next morning. While she is only sleeping a normal amount, from the outside it would appear that she stayed in bed all day.

During the course of the play Catherine is dealing with the loss of her father along with the uncertainty of what to expect in her future. For the past five years she knew what to expect from every day. She had a job, a purpose, caring for her father. Now that he is gone, she is left without anything to do. Catherine tells Claire, "I'm just not sure what I want to do...I do feel a little confused. I'm tired. It's been a pretty weird couple of years. I think I'd like to take some time to figure things out" (37). After an attempt to return to school failed, Catherine resigned herself to the idea that her life would be spent caring for her father. She made no plans for the future, not expecting her way of life would change.

Seeing her father around the house does not necessarily mean she is suffering from hallucinations. There is no other evidence that she is experiencing anything else out of the ordinary. She could easily be imagining her father's presence. After becoming accustomed to him "shuffling around like a ghost" (Auburn, *Proof* 16), imagining she sees him in the house might not feel that entirely different. Even when he was alive, he was not always completely there. Although Catherine had her father's physical presence in the house the past few years, there was little left of the man who was her father. She became accustomed to having him there, while feeling completely alone.

Catherine is also dealing with her father's death and working through her grief. She has had no one else close to her in many years. Catherine's close relationship with her father has led to Robert's *voice* becoming part of her inner monologue. It is not that she actually believes she is talking to her father, she is running through a scenario in her head. She feels lost and has no one to go to for answers, so her imagination manifests a situation where she can work through her questions. Having a conversation with her dead father is her way of seeking her father's help in a situation where that is no longer possible. It is just another way of asking *what would dad do or say*, as a way to find comfort and make sense of her life.

Catherine feels devastated, angry, and betrayed when Hal and Claire do not believe she has written the proof. She felt a connection with Hal, and put all of her trust in him. Even her sister did not take her side. Catherine staying in bed for a week is not catatonia, but a result of a combined sense of anger and depression. It is not that she cannot speak, but that she refuses to talk to Claire and chooses to ignore her. Claire has betrayed and given up on her, she no

longer cares to even acknowledge her. By staying in bed all day and refusing to speak, Catherine can avoid dealing with her anger and grief.

Although Catherine's behavior could be the result of a developing mental illness, every supposed symptom could be nothing more than a normal human reaction to emotionally overwhelming situations. Catherine has spent the past five years providing physical and emotional support for her father, with no outlet of her own. She has watched the man who raised her, whom she loved, fight a losing battle with himself. During a time in her life when she most needed the support of a parent, Catherine had no one. She took care of the person who should have taken care of her. The physical, mental, and emotional stress she kept bottled inside occasionally leaked through her defenses manifesting in seemingly abnormal behavior. Being like her father does not make Catherine her father. She has experienced difficulties in her life that have left her with mental and emotional issues to resolve, but Catherine is not doomed to spend her life suffering from mental illness.

Chapter Two: Character Analysis

Francis Hodge's method of script analysis centers on the idea that a thorough analysis of a play prior to rehearsals will increase productivity. According to Hodge's methods a play's characters should be examined on the basis of their desire – what they most want, will – the intensity of their fight for their desire, moral stance – their values and moral code, and decorum – a description of their physical appearance.

Robert

- A. Desire – Robert wishes to see his work continued, if not by him then by his daughter

Catherine.

Then I remembered something and a part of the terror went away. I remembered you.

Your creative years were just beginning. You'd get your degree, do your own work. You

were just getting started. If you hadn't gone into math that would have been all right.

Claire's done well for herself. I'm satisfied with her. I'm proud of you. I don't mean to

embarrass you. It's part of the reason we have children. We hope they'll survive us,

accomplish what we can't.

(Auburn, Proof 61, 62)

- B. Will – He will push himself to the limits in the hopes of working again; “work takes priority” over all else (60). He will encourage Catherine, remind her of her potential, but he will not try forcing her into anything.
- C. Moral Stance – He loves his daughter and will be proud of her whether or not she makes a significant contribution to the mathematical world. Robert was a good father, so much so in Catherine's eyes that she was willing to sacrifice her wants in life to take care of him. Hal reveals that he was a good teacher who cared about the success of his students. Hal feels

he owes his successful completion of his degree to Robert. Robert cared enough about Hal and his work to invite him to his home to discuss it. Robert's actions with both his daughter and Hal show him to be a kind, caring man.

- D. Decorum – He is in his 50s, with a “ruffled academic look” (5). Robert wears pieces of what would once have been a professor's wardrobe: tweed jackets over wrinkled t-shirts with a pair of reading glasses tucked into the front pocket, mismatched argyle socks inside old, worn house shoes. His hair is uncombed and a little long around the ears, suggesting he is past due for a haircut. His fingers are ink-stained, and he would benefit from a shower and a shave.
- E. Summary – Robert sees things differently than do other people, allowing him to find new ways to solve problems. He approaches things from a different perspective. Robert attacks problems in life the way he would a mathematical problem. Robert is aware of both his genius and his mental illness. His deteriorating mental state has left him unable to do mathematical work, robbing him of the qualities by which he defines himself.

Catherine

- A. Desire – Catherine wants to determine who she is now that her life will be her main focus. She hopes to be accepted as a mathematician like her father, and she wants to know if the mathematical talent she inherited from her father is paired with his mental instability.
- B. Will – She is willing to risk everything to answer her questions. She completely trusts Hal with her proof and herself, while knowing that in doing so she could discover her worst fears have come true.

Although she has a few moments where her will seems to falter, in the end, Catherine does not give in when her resolve is challenged. Twice she begins to seem weak willed. The first occurs after she feels betrayed by Claire and Hal and refused to leave her bed for a week. Her behavior eventually returns to normal and she argues she isolated herself more than anything out of anger. The second time she seems to give in is when Claire convinces her to move to New York. Even after she agrees to leave with Claire she is reluctant and ultimately does not leave. Catherine made the choice to go not from a lack of willpower, but because there was nothing left for her in Chicago. After her resolution with Hal, she decides to stay in Chicago.

- C. Moral Stance – Catherine does what she believes is the right thing to do without hesitation. She is willing to give up her own life and dreams for the people she loves. She quit school twice to take care of her father.

Although it could be argued that Catherine is immoral for sleeping with Hal when she is not married to him and has not even been dating him, she did not make this decision lightly and has not compromised her morals. The decision would be immoral mainly from a religious perspective. There is no evidence to support the idea that Catherine is religious, so her moral integrity would not be compromised with this decision. She does not sleep around. She tells her father she does not have any friends and it seems she has not spent time with anyone but Robert in years. She made her decision to sleep with Hal based on the idea that she would be entering a long term relationship with him. Although they have not spent much time together, Hal and Catherine have known each other for years and Robert trusted and cared about Hal.

- D. Decorum – She is twenty-five years old. She shows little interest in maintaining her appearance and puts little effort into her outward presentation. Her clothes reflect the styles of half a decade prior. She wears wrinkled, worn jeans and t-shirts that have the look of clothes stored in a pile rather than a dresser or closet. Her hair is finger combed, pulled back out of practicality, and appears to be a day or two overdue for a wash.
- E. Summary – Catherine is both structured and creative, methodical with an attention to details while reflective. She lashes out when threatened, hiding her insecurities with anger and sarcasm. She has faith and belief in the capabilities of others. She is compassionate, caring, and sensitive. She will give before she takes, allowing others to stand in the spotlight. She is intelligent and enjoys utilizing her practical, logical traits.

Catherine attempts to discover whether or not she shares in her father's illness. She examines her life, searching for evidence that she may be crazy. Catherine tries to find proof of either her sanity or her slipping grasp on reality. She hopes to compile a list of evidence that will lead to conclusions revealing her state of mental stability or instability. She finds the task to be more difficult than she anticipated as she begins to realize life does not follow the logic of math. She begins to realize factors such as genetics, personality, and talent are not absolutes.

Claire

- A. Desire – Claire wants to please people and to take care of her sister. She feels guilty for not being home after her mother died and is overcompensating now by making herself fully responsible for her younger sister. She helped financially before, but now believes she must take a more active role.

I have to take care of her. (Auburn, Proof 56)

- B. Will – Claire is willing to make sacrifices in her life to help her sister. She is determined to do what she feels is best for Catherine at any cost.
- C. Moral Stance – She has a strong sense of responsibility for her family and a strong desire to do the right thing.
- D. Decorum – She is twenty-nine years old, “stylish, attractive” (21). She has manicured nails, not a hair out of place, and expertly applied, barely visible makeup. Her clothes are the latest in fashion, neatly pressed appearing both elegant and casual, as only expensive, designer clothing can. She is poised, controlled, and proper. Her smile is open and friendly, giving the impression she knows no strangers.
- E. Summary – Claire is determined and persistent. She works diligently to reach goals. Once she sets her mind to something she will do whatever it takes to make it happen. Emotional and financial security, success, and order drive her. Claire has found a practical way of applying her mathematical talent to life through her job as a currency analyst. She has difficulty expressing her emotions, keeping people close but at a distance. She loves her sister but does not know how to openly express her feelings. She feels guilt for leaving her sister with their ill father and for not being present to help either one.

Claire examines Catherine in an attempt to determine her mental state. Claire feels responsible for her sister. Unless she sees proof that Catherine is well and can take care of herself, Claire will keep Catherine close where she can monitor her behavior. Claire analyzes every word Catherine says and every decision she makes. By watching her sister

closely and evaluating her actions, Claire hopes to recognize any signs Catherine is not well, in the hope of providing her with the help she needs.

Hal

- A. Desire – Hal wants to find mathematical work of Robert’s to publish. He does not want to accept that someone with Robert’s mind and mathematical insight did not leave more for the world. Hal is also determined to find a way to repay Robert for his support and advice.

I don't have time to do this but I'm going to. If you'll let me. I loved your dad. I don't believe a mind like his can just shut down . . . I was stalled on my Ph.D. I was this close to quitting. I met with your dad and he put me on the right track with my research. I owe him.

(Auburn, Proof 14, 15)

Hal also desires Catherine and a relationship with her. He shows this when he tries to do something nice for her by giving her a birthday gift. He wants to surprise her with a notebook of her father’s in which Robert has written how proud he is of Catherine. This desire is seen again during the funeral reception when Hal kisses Catherine and then tells her that he has always liked her.

Even before I knew you. I'd catch glimpses of you when you visited your dad's office at school. I wanted to talk to you but I thought, No, you do not flirt with your doctoral adviser's daughter.

(33, 34)

- B. Will – He is determined to read through all of the notebooks, no matter the obstacles. He is even “prepared to look at every page” (14). He also stands by his beliefs. He does not change his mind about the proof just to please Catherine. He will not concede his point without undeniable proof.

- C. Moral Stance – He is honest, loyal, and wants to make things right if he makes a mistake or makes someone unhappy. He is willing to set aside his pride and admit to being wrong when he discovers Catherine wrote the proof. He tries to apologize for doubting her even when she tells him she does not want the proof back and he should just claim it as his own.
- D. Decorum – He is twenty-eight years old, and has “semi-hip clothes” (Auburn, *Proof* 12). His clothes are casual and trendy, worn in an orderly and careful way, giving a laid-back appearance that, if studied closely, appears to be planned, as if he must consciously work toward looking hip. His hair is combed but a little on the shaggy side, as though he has been too busy to get a scheduled trim. He does not wear glasses, but occasionally catches himself reaching to adjust a familiar but absent pair, revealing him as a longtime wearer currently in contact lenses.
- E. Summary – Hal is both the stereotypical geek and the opposite of the stereotypical geek. He projects an outwardly hip appearance but his thoughts betray him as a math geek. He is a good natured and happy person with a sense of humor. Hal tries to do what he feels is right, but often abandons his instincts and emotions in hopes of staying logical and rational. He sees life through the eyes of a mathematician, attempting to solve issues in a logical, orderly manner.

Hal wants to find a definitive answer for the questioned authorship of the proof. He uses logic paralleling that of a mathematician attacking a conjecture. He collects evidence, approaches the problem from multiple angles, and then brings in outside assistance. He works to view the situation objectively, putting aside his feelings for Catherine. It is evident

that he has feelings for Catherine and has had for sometime, but during the scene where the proof is questioned, he cuts off his emotions, fighting to stay rational and logical.

During the rehearsal process many questions arose about the characters, regarding both who they were and what drove their actions. After these questions were raised and considered in rehearsal, I later examined the ideas more fully combining ideas from the text with my own interpretation of the characters.

Family Background:

Claire and Catherine are both French names. Robert calls Catherine, Cathy which is a nickname for the English form of the name. Claire calls her Katie, which is a nickname for the French form of her name. I always imagined that Claire was close to her mother. I think that Claire calls her sister Katie because their mother used the name. Since their mother called Catherine, Katie – a name that is more often associated with Katherine or other spellings of the name with a K – I saw her using the nickname because of a French background. Since the script does not mention anything that would distinguish the family as coming from a specific background and they live in a culturally diverse area, I felt the characters needed to have a slightly diverse background. I decided Catherine's mother was named Jacqueline and she was the daughter of a French man and an Irish woman. Robert had an English father and German mother.

The play only mentions Catherine's mother once when Catherine says "After my mother died it was just me here" (Auburn, *Proof* 16). Since the characters did not mention more about her death, I figured that she died suddenly and from something other than a tragic accident. Catherine's statement suggests that before her death, her mother took care of her father. If

she had died of a long-term illness she would not have been well enough to care for Robert, and Claire would not have moved away. I decided Catherine's mother died of an aneurysm.

Catherine's description of caring for her father after her mother's death suggests that Robert's wife was always the one to take care of him and deal with his illness. Robert's illness began to manifest in his mid-twenties and became progressively worse. This would have made it necessary for his wife to be available to help him and look after him. To do this she would need to have a job that allowed her flexible hours and the ability to work from home. Taking in to account all these factors, a Public Relations Researcher would be a fitting profession.

In the opening scene is Robert a ghost, hallucination, dream, or imagined?

Is he a ghost visiting her to impart a final bit of advice? Is Robert a hallucination and a sign that Catherine is crazy? Has she fallen asleep and is merely dreaming that she is talking to her father? Is the conversation a glimpse into a vividly imagined encounter?

I believe that she has fallen asleep and dreams that she is speaking to her father. She is in the same seat before and after the conversation. Robert appears to Catherine as a compilation of father's best qualities and best moments; he is who Catherine believes he would have been if he was well. Catherine is a creative person; her proof shows new ideas, suggesting she has a strong imagination. She feels her father is still around the house. She tells Hal he shuffled around like a ghost, he was barely there when he was alive, and this not the first time she has seen him – "I don't want him around" (Auburn, *Proof* 17). After five years of living like this, her mind fills in the missing elements and she immediately assumes he is there. Catherine

has been drinking and is exhausted both physically and emotionally. She needs to speak to her father, wanting his advice, and so her subconscious provides her with what she needs.

Why Cindy Jacobsen? What makes Cindy stand out from Catherine's other friends?

ROBERT. You have friends. What about that cute blonde, what was her name?

CATHERINE. What?

ROBERT. She lives over on Ellis Avenue – you used to spend every minute together.

CATHERINE. Cindy Jacobsen?

ROBERT. Cindy Jacobsen!

CATHERINE. That was in third grade, Dad. Her family moved to Florida in 1983.

(Auburn, Proof 7)

Cindy was the last of Catherine's friends to come over to the house. Catherine and Cindy became best friends in Kindergarten. Cindy was the only one who never whispered behind Catherine's back or said mean things about her father. She was the only person Catherine trusted to have at her home.

Catherine remembers that Cindy was the last of her friends that her father really knew. She was also the last friend Catherine felt completely comfortable with, someone with whom she could share all parts of her life. Since Catherine never really let anyone in completely because of her fears about how they would treat her if they knew her father was crazy, she never really developed any lasting relationships. She distanced herself to keep from being hurt. Her inability to trust others kept them from trusting her as well, preventing her from forming more than casual passing friendships.

Why is Catherine concerned that Hal is taking a notebook?

The notebooks are the only tangible thing she has left of her father. Although they represent some of his worst times, they were a part of who he was. She fears Hal found something her father did that she somehow missed. She may also fear he has found her work.

What does Sophie Germain represent for Catherine?

Her father gave her a book about Germain when she was young. By giving her the book, he shows he believes she is capable of great things. He gave her something to aspire toward, reinforcing the idea that women are just as capable as men intellectually. Catherine references Germain when speaking with Hal both to flirt with him and as a test of his acceptance of women in math. She wants to know if she is like her father and Gauss. Germain represents who Catherine hopes to be. Someone Catherine can relate to, who was able to become a mathematician despite the fact there were no women in the field and women would not be taken seriously as mathematicians.

Why show the proof to Hal?

Catherine wants to connect with someone. She wants to trust and show trust. She feels he is like her father and will see her as the mathematician she knows she is. She wants to share her work with someone who will feel about it the way she does. She wants a second opinion on her work. She hopes Hal can fill her need for intellectual companionship after the loss of her father. She wants to be open and honest with him, sharing every part of herself.

What does Hal's betrayal mean to Catherine?

He will not accept her as a capable mathematician, after she trusted him completely. She offered him a part of herself she had not shared with anyone else, not even her father. She feels the proof is the defining point for her life, it could prove she has everything or nothing.

What does the proof mean for Catherine?

If the proof turns out to be bad:

If she is not a mathematician, then who is she? Has she let her father down? He was proud of her interest in math, but would he be disappointed if she is not a successful mathematician? She feels it is her responsibility to carry on for him, to continue his work. Is this a sign she is crazy? Has she lost her mind like her father? What does she do with the rest of her life? Math is all she has ever wanted to do. What is her purpose if she is not taking care of her father? What does she want for her life? She does not know how to focus her energy on herself.

If the proof turns out to be good:

Will she be accepted, will she be getting what she wants? How will that change her life? What comes next; will that be it or will she be able to do more, does a person only really have that kind of inspiration once in her life? Will that mean she is sane? Is this the proof that she has not inherited her father's illness or will she still worry? Will anyone believe she wrote it?

What does the proof mean to Hal?

The discovery of the proof proves to Hal he was right in his hopes. He is able to repay Robert. He will never do the type of work Robert did. The closest he can come is to help bring

undiscovered work to light. Since he cannot contribute with his own work, he hopes to help keep Robert's work and memory alive. Hal is not ready to let Robert go, discovering something he left behind would allow Hal to hold on a little longer. Robert represents for Hal what Sophie Germain represents for Catherine.

Relationship between Catherine and her father:

ROBERT. You knew what a prime number was before you could read. (Auburn , Proof 7)

Catherine and Robert have always been close, sharing a love for mathematics. When Catherine was young her father would play math games with her. Bedtime stories were often histories of numbers and mathematicians. When Catherine was young, her father could still do some math, but it was becoming more difficult for him. As soon as she could count, Robert began to teach his daughter about numbers. Catherine has always been fascinated by the endless possibilities of numbers. Numbers also provided her with a sense of security. No matter what, the rules remain the same and with enough hard work answers can be found. Math provided a sense of order in the world of chaos that surrounded her father's illness.

Relationship between Catherine and her sister Claire:

ROBERT. What about Claire?

CATHERINE. She's not my friend, she's my sister. And she's in New York. And I don't like her. (7)

CATHERINE. The money will be fine. Claire's gonna help out.

ROBERT. When did you talk to Claire?

CATHERINE. I don't know, a couple weeks ago.

ROBERT. You talk to her before you talk to me?

CATHERINE. There were a lot of details to work out. She was great, she offered to take care of the expenses.

(Auburn, Proof 44)

Catherine and Claire were closer in the past, but since she quit school to take care of her father, she has felt abandoned by her sister. After their mother died and Catherine left school to stay at home with her father, she still had hopes that he would get well enough for her to return to school. She figured that with the death of her mother, her father's illness became a larger issue. She hoped that by being with him at home full time she could help him through her mother's death and help him return to a routine way of life.

Although Claire could not come home to help at the time, she gave Catherine her support from a distance. They talked regularly and Claire helped Catherine pay the bills at home. When Robert began to show signs of being able to care for himself and sustain a normal lifestyle, Catherine discussed the possibility of returning to school with Claire. Claire was happy to see her sister considering the possibilities of her future and hoped that Catherine's return to school was a sign that Catherine was not going to be stuck in the same life as her father.

For Claire, Catherine's desire to return to school was an opportunity to get her to see the possibilities available to her. If Catherine distanced herself a bit from her father, she might see the situation more clearly and consider Claire's point-of-view and be more open to the idea of getting their father full-time care.

Catherine's mother worried that because her daughter was so like her father in many ways, she might inherit his mental illness. If she saw any small behavioral changes in Catherine,

she worried that it might be a sign of her developing her father's illness. Claire was aware of her mother's concerns and began to be concerned about her sister's mental health as well. Claire structures her life around order, security, and practicality. She sees Catherine's insistence to keep her father at home and not in a full-time care facility as a sign that she is not thinking rationally or clearly. Catherine is also much more emotionally driven than Claire. Claire distances herself from emotions, while Catherine embraces her emotions and allows them to determine her actions. Claire sees this personality trait of Catherine's as instability.

Claire loves her sister and is willing to do anything to make her happy, but her ideas of what should and should not be done are different from Catherine's. Catherine sees caring for her father at home as the only option, because she loves him and believes he deserves to live a normal life. Claire wants to see her father under professional care. She sees this as the most logical and practical solution for everyone. She would be sure that her father received the best care available, allowing Catherine to live her own life and allowing her to keep her life as it is.

When Catherine sees her father cannot care for himself alone, she quits school, sacrificing what she wants for her father's happiness and health. Claire says she will do anything to help, but she will not sacrifice her life like Catherine has. Neither sister can understand the decisions made by the other, and their relationship – already strained by the death of their mother and their father's illness – is damaged.

CATHERINE. OKAY? I really don't need this, Claire. I'm fine, you know, I'm totally fine, and they you swoop in here with these questions, and "Are you okay?" and your soothing tone of voice and "Oh, the poor policemen" – I think the police can handle themselves! – and bagels and

bananas and jojoba and "Come to New York" and vegetarian chili, I mean it really pisses me off so just SAVE IT.

(Auburn, Proof 28)

Catherine and Claire were closer when they were younger. They had each other for support when their family life became difficult. Their shared experiences in dealing with their father's illness allow them to understand each other in a way that no one else could. They never had to explain their feelings to each other and knew they could trust one another. Although they did not share the same social groups, they always knew they could turn to each other.

Claire has always played the big sister role well, wanting to take care of her little sister and to be there for her. However, Claire can be overly protective and controlling. Claire believes that she knows what is best for her sister, that she has a clearer, objective sense of Catherine's life and what she need. She tries to instill some of her sense of order into Catherine's life, but that is not what Catherine wants or needs. Catherine is driven more by her emotions. She reacts on instincts and makes decisions based on her feelings. Catherine's tendency towards impulsivity frustrates Claire, leaving her feeling she has to come in and clean up her sister's mess of a life.

CLAIRE. Why did you sleep with her? (Beat)

HAL. I'm sorry, that's none of your business.

CLAIRE. Bullshit. I have to take care of her. It's a little bit harder with you jerking her around.

HAL. I wasn't jerking her around. It just happened.

CLARIE. Your timing was not great.

HAL. It wasn't my timing, it was both of our –

CLAIRE. Why'd you do it? You know what she's like. She's fragile and you took advantage of her. (Auburn, Proof 56, 57)

Claire has always had an easier time making and keeping friendships. While Claire had large groups of friends, Catherine always had only a few friends and often spent time alone or with her father. Claire thinks the time Catherine spent with her father growing up may have caused her to have emotional difficulties and problems relating to people. She does not think she understands how to have a normal relationship with a normal person. She has seen her sister hurt in relationships too many times and believes that she does not know how to make good decisions when it come to relationships. Claire believes Catherine does not know how to keep people from taking advantage of her.

Catherine had difficulty trusting people growing up. She worried that people would see her differently because her father was crazy. She always felt different and did not every really feel like she fit in anywhere. She was teased for being smart and being good at math. Catherine was more introverted and often preferred to spend her time reading and learning. Since she had such difficulty making friends, when she found one she worked especially hard to keep her. When Catherine discovered a friendship with someone she devoted all of her energy to that person, and put all of her trust into that friend. Unfortunately this often left her hurt and alone when the relationships ended, as was the case with her first close friend Cindy Jacobsen. Catherine spent all of her time with Cindy and when Cindy moved away, Catherine was left without any other close friends.

The same type of situation happened with Catherine and her high school boyfriend. A friend she had known since freshman year, but had not spent much one-on-one time with her until he asked her to their junior prom. That summer they started spending more and more time together. When school started in the fall they were officially dating. They did not share the same groups of friends, and as their relationship became more serious Catherine spent more time with him and his friends and less time with hers. She traded her group of friends for his friend's girlfriends, but she was never able to develop a real friendship with any of these girls.

In her senior year, after the Homecoming dance, Catherine and her boyfriend slept together, moving their relationship beyond just dating. She believed that he loved her as much as she loved him. She was worried things would change between them once they began college. He assured her that he cared too much for her to let that happen. After a week in college he called her and broke up with her, leaving her devastated. She loved him and trusted him completely, and he broke her heart. Claire interceded, picking up the pieces, cleaning up the mess of her sister he left behind. When Hal suddenly comes into Catherine's life and then betrays her trust, Claire feels she has once again been left to clean up someone else's mess. She is frustrated with Catherine for allowing herself to be hurt and is angry at Hal for hurting her.

During the course of the play, the characters work to prove ideas through argument, fact, and evidence. The most prominent example of this idea focuses on the evidence that will determine the authorship of the proof found by Hal. While Catherine claims ownership of the proof, Hal and Claire believe the work belongs to Robert. Catherine, Hal, and Claire all strive to provide evidence to support their stance.

Evidence supporting Robert as the author of the newly discovered proof comes from ideas presented by both Claire and Hal. The proof was found in one of Robert's notebooks in his study (Auburn, *Proof* 51). It was in the drawer of his desk. The notebook is "one of his notebooks. The exact same kind he used" (54). After seeing the proof, Claire says that it is written in her father's handwriting (52). Hal has been looking through Robert's work and believes the handwriting in the newly found notebook "looks an awful lot like the writing in the other books" (54).

When presented with the possibility that Catherine's handwriting may resemble her father's, both Claire and Hal believe Catherine could have physically written down the proof, but the work itself belongs to Robert. Claire's first reaction to Catherine's claim that she wrote the proof is to suggest that Catherine means that her father dictated and she recorded his work (51). Hal considers that "[Robert] might have written it and explained it to [Catherine] later" (53). If this is the case, Catherine cannot prove authorship by explaining the proof.

Hal, who teaches mathematics at the University of Chicago, recognizes the level of work within the proof. He tells Catherine "I know how hard it would be to come up with something like this. I mean it's impossible. You'd have to be . . . you'd have to be your dad, basically. Your dad at the peak of his powers" (54). Catherine never completed her college education and

attended only a few courses in mathematics at Northwestern (Auburn, *Proof* 55). Hal reminds Catherine her father was extraordinary, telling her "my generation hasn't produced anything like him. He revolutionized the field twice before he was twenty-two" (55). Mathematicians of Robert's caliber are few and far between. The odds of Catherine being one of those few is likely impossible.

The proof contains a number of newer techniques. Although the proof does not seem to be written in his normal style, Robert was a genius and could have read about the new methods. "The books he would have needed are upstairs" (68).

After announcing that she is the author of the proof, Catherine has to defend her claim. Catherine presents her case both defending her claim of authorship and refuting the possibility that Robert could have even been capable of writing such a proof. Hal tells Claire that Catherine gave him the key to the drawer that contained the notebook (51). Catherine's possession of the key suggests that the drawer does in fact contain her belongings. Robert's things are a jumbled mess; if he had locked the drawer it is unlikely Catherine would have been able to easily find the key.

Throughout the play the characters present the idea that Catherine and her father spent quite a bit of time together and that Robert helped fuel Catherine's passion for math. The close relationship between the two and the knowledge they did math together supports the idea that Catherine's handwriting looks similar to her father's (54). Hal even later admits "parents and children sometimes have similar handwriting, especially if they've spent a lot of time together" (68).

Although Hal and Claire suggest that the type of notebook that holds the proof is the same used by Robert, Catherine explains she used one of the extra, blank books. She began writing the proof after purchasing a case of notebooks for her father. Since she bought the books and there were plenty of them for her father to use she simply used one herself. There was no reason to seek out different writing tools where there were a number readily available. By keeping her notebook in a locked drawer, she insured it would not be lost in the chaos of her father's numerous notebooks.

When Claire asks if their father knew about the proof Catherine says no and "it wouldn't have mattered to him anyway, he was too sick" (Auburn, *Proof* 51). If he was not well enough to understand the significance of what his daughter was doing, then Robert would not have been capable of writing the proof. Catherine reminds Hal that he has been looking through her father's writing and that he should "know there is nothing even remotely like" the notebook in question (53). There is no other evidence to suggest Robert was capable of producing work even slightly similar to the newly discovered proof.

In addition to the lack of similar work in Robert's notebooks is the knowledge that his decline in mental functioning prevented him from being able to work through the advanced mathematics. Catherine reiterates "he didn't do any mathematics at all for years. Even in the good year he couldn't work" (53). Robert's own writing supports this theory. In the entry written on Catherine's twenty-first birthday he states "Machinery not working yet but I am patient...I am not driving yet but there's cause for optimism" (19, 20). He speaks of his mind and his ability to do math relating them to an old, worn-down engine. He admits he does not yet have a grasp on his previous mathematical abilities. He reinforces this idea saying that by

caring for him Catherine has “made it possible to imagine doing math again” (Auburn, *Proof* 20). Robert wrote this entry at the height of his lucid period, when he was able to teach; and reveals his admittance to an inability to work on proofs. Therefore he could not have written the proof found in the drawer.

It is already apparent that Catherine is gifted in math. She “knew what a prime number was before [she] could read” (7). She made a connection between the time she feels she has wasted and “the smallest number expressible as the sum of two cubes in two different ways” (9). She was accepted in to the math program at Northwestern after time away from school with both the class standing of the last time she attended college and a full scholarship (44). Robert believes his daughter has the potential to continue his work as long as she does not waste her talent or underestimate herself (49). Catherine has a strong understanding of mathematics and the passion and ability to carry it through. Her mathematical experience at this point in her life may not differ much from her father’s at the time he did his most important work. When Hal argues that Catherine does not have the education needed to write the proof she counters the argument saying “My education wasn’t at Northwestern. It was living in this house for twenty-five years” (55). The capacity to create a significant mathematical discovery is not simply something gained through math course work.

Catherine is willing to talk through the proof with Hal (52). By doing so she can demonstrate her knowledge of the proof and how it works. The offer to go through the math is in itself a suggestion that Catherine knows the proof well, indicating she is the author. When Hal later tells her the proof works, Catherine says she already knew – further evidence she is more than generally familiar with the work contained in the notebook. As Catherine finally

begins to go over the proof with Hal she immediately locates a section she feel needs work and begins to explaining her work with no problems or hesitation (Auburn, *Proof* 74).

After studying the proof with a group of mathematicians, Hal returns telling Catherine "I don't think your father wrote [the proof]" (68). He explains that the author of the proof utilized "newer mathematical techniques, things that were developed in the last decade" (68). Robert was ill the last ten years and probably could not "have been able to master those new techniques" (68). Hal also notices the notebook has no dates in it. He recalls that Robert "dated everything. Even his most incoherent entries" (68). Hal noticed this fact when going through the notebooks in Robert's study. Hal points this out to Catherine at the beginning of the play, telling her this allowed him to organize them in the order they were written.

The notebook is undisputedly from the same batch of books bought by Catherine for Robert a few years previously. Hal never came across any reference to the proof or anything to suggest Robert was working on math. Aside from the fact the proof is not dated, Hal never mentions any gaps in the dates of Robert's notebook entries that might suggest a missing book.

I believe Catherine is the author of the proof. I personally never had a doubt in my mind that she wrote it. As I initially read the script I saw Catherine as someone capable of great work, who was never given the opportunity to show it. Her priority was not herself, it was her family. She willingly sacrificed her own wants to give her father and sister a chance to live their lives. Catherine was not hiding her work; she was only waiting for the right time to share it. Her father would not have been able to understand it and it might upset him to be reminded of what he lost. The work would not have been meaningful to Claire. Hal is the first person with whom Catherine feels she can share her work.

Chapter Three: Idea – Meaning of the Title and Philosophical Statements

The title in the most literal sense, in the world of the play, refers to the mathematical proofs which Robert and Catherine have written and Hal strives to complete. Throughout the play the characters work toward proving a number of different ideas, both concrete and variable. However, “proof in the legal sense is quite different from proof in the context of mathematics or science” (*A Dictionary of Law*).

Mathematicians strive to complete proofs that lead to a mathematical theorem. These theorems lead to advancements and new understandings in the science of mathematics. Both Catherine and her father have written mathematical proofs. Robert’s work contributed to the fields of “game theory, algebraic geometry, and nonlinear operator theory” (Auburn, *Proof* 15). Catherine’s work, “a mathematical theorem about prime numbers, something mathematicians have been trying to prove since . . . since there were mathematicians,” is possibly “some of the most important mathematics in the world” (40, 41).

Like a mathematical proof, Robert, Catherine and Hal tend to view the world through “a chain of reasoning...that leads to a conclusion and which satisfies the logical rules of inference” (*Dictionary of Mathematics*). They process information from the point-of-view of mathematicians, even in situations that do not follow logical scientific rules. These three characters share in a struggle to come to terms with the idea that life does not follow lines of logic and reasoning. Life is unpredictable and people, unlike mathematics, do not conform to a set of universal truths or rules. No matter how intelligent a person may be, he cannot find the answers to life through a sequence of preordained formulas.

Mathematicians inhabit the universe of the play, causing much of the philosophy of life to revolve around a logical, analytical way of thinking. Catherine, Robert, and Hal struggle to balance math and life, never quite sure where one begins and the other ends. Are they congruent or opposing forces? Will an understanding of one help resolve questions with the other? The characters also battle with the ideas of logic and faith. Can something or someone be trusted without concrete supporting evidence? While understanding math vs. life or logic vs. faith requires a separate set of skills, the two sets of seemingly opposing ideas occasionally overlap. One cannot be ignored in place of the other, and only in understanding both concepts and how they work together can the characters find answers.

Beautiful mathematics. Answers to everything. The most elegant proofs, perfect proofs, proofs like music. (Auburn, Proof 17)

Robert sees math not as merely science but as art. He finds the hidden beauty in mathematics which only a lucky few recognize.

I see whole landscapes – places for the work to go, new techniques, revolutionary possibilities. (60)

It's not about big ideas. It's work. You've got to chip away at a problem. (32)

Discoveries arise from exploring possibilities. Searching, questioning, and risking leads to discovery. A person cannot find something if they never begin to look. Ideas spring out of work and new discoveries. Every examination of a problem presents new and endless

possibilities. Each answer opens the way for new questions, questions that lead to new paths of exploration and discovery.

Math and life are processes of trial and error. Each question brings answers closer, each decision leads to new experiences. One step leads to the next, and each step has its place. A sum comes only after addition. A book cannot be read before it is opened. There is no effect without a cause. Every discovery, every experience, every success, every failure provides another piece of the puzzle. Math and life are journeys, with each step in the process a learning experience. The importance of the journey lies not in the destination but the path traveled to reach the destination.

...it's just evidence. It doesn't prove anything.

(Auburn, Proof 69)

I'm saying there's no proof that you wrote this.

(53)

Unlike in mathematics, there are few certainties in life. Sometimes logic and scientific reasoning are not enough. No one truly knows the mind of another. Without concrete, physical proof an argument is only one person's word against another. No matter how compelling the evidence, it is still only just that – evidence.

Thoughts and emotions, ungoverned by universal truths, cannot be explained or understood through logical reasoning. Each person sees the world differently, filtered through his own unique personal experiences. No two people will ever live the same moment. Even shared moments leave varying, unique impressions. The human experience is subjective. When facts and evidence are exhausted, only trust and faith remain.

Although the philosophies of math may present themselves in common, everyday life, life expands beyond the boundaries of math. Study of the mathematical world allows for the possibility that with enough time and effort all questions can be answered. The connections exist, waiting to be found. Math represents the safety and stability of the known. Math provides consistency and predictability in a world of inconsistencies and uncertainty. Any day, in any place or time, one plus one will always equal two. By simply learning and following the rules, answers can be found. Life is ever changing; each moment the result of the decisions of many, the outcome only one of the infinite possible.

Chapter Four: Process – Rehearsal Journal

Callbacks

March 3

Went well, found good fits for parts. I felt awkward. I don't know if I would have read the same had I not known if I were going to be in the show.

It was a great feeling to already know the script pretty well before audition readings. It took away a lot of the anxiety I usually have. Once I got over the initial weirdness of being the only one reading with everyone called back, I forgot about any nervous feelings.

I wish all auditions could feel like that, that I could feel that confident and relaxed. I guess that is something I will have to try to recreate in the future.

Read Through

March 9

Went fine, need to look at one word lines ("Yes") and write what they mean. Need to make sure I am conveying the right idea. After the read through, I went through the script and made note of character related details:

Dad died week before September 4 (11)

birthday September 4, 25 years old (5)

3rd grade 1983 (7)

live near University of Chicago, walking distance of lake (43)

about half hour drive from Northwestern

house 3 bedrooms (38), older, radiators (59)

details dad sickness (16)

mom died (16) about 5 years ago

December 4 years ago father ill again (59)

Dad OK from around March to November 4 years ago

Flashback scenes 21 years old (49)

Started proof few months after quit school (51)

finished few months before father's death

took little more than 3 years

Started school at U of C (43) around 5 years ago (38)

dropped out first time after ? years (need to make decision based on text)

Dad first sick 23 or 24 years old (10)

must not have been overly severe during childhood if learned math from him

Claire living in studio in Brooklyn (38)

Claire working when mom died (38)

Claire marrying boyfriend Mitch, January 2000 (23)

After reading over the script again a few questions arose in my mind:

How/Why did mom die?

When is Claire's birthday?

What did mom do?

Update script to present day? (keep dates as written or change 1983 line)

March 10

Blocking: Scenes 1-1 first part, 1-2, 1-4 all but beginning and end, 2-4. Addressed question of what specifically is Dad's illness. I believe Robert is schizophrenic based on his behavior. I briefly discussed my research on Schizophrenia and mentioned places in the script which I feel support this idea. I need to start deciding some character details like how her mother died, family's last name, family's religion.

After rehearsal I began wondering what happened between Catherine and the police.

What happened with police? (19, 24, 26-27)

Phone call:

PHONE: Chicago Police Department

CATHERINE: Hello?

PHONE: Hello?

CATHERINE: Hello, Police? I—

PHONE: Yes, can I help you ma'am?

CATHERINE: Yes, I'd like to report a robbery in progress.

PHONE: A robbery—

CATHERINE: A ROBBERY.

PHONE: Yes, can you tell me your location?

CATHERINE: Yes, I'm at 5724 South—

PHONE: 5724 South...?

CATHERINE: South...

PHONE: Are you still there ma'am?

(HANG UP PHONE)

I looked at the details in the script recounting the police visit and created a scene between-the-scenes describing Catherine's encounter with the police.

Police at house:

CATHERINE	CLAIRE
"guys were assholes..wanted me to fill out a report"	"The police said you were abusive"
"one cop keep spitting on me when he talked" "It was disgusting"	"Did you use the word 'dickhead'?"
"Not with that phrasing"	"Did you tell one cop...to go fuck the other cop's mother?"
"I might have pushed him a little"	"Did you strike one of them?"
↳ "They were try to come in"	"said you were either drunk or disturbed"
"wanted to ...search my house"	"seemed perfectly nice"
"acting like they owned the place— pushing me around, calling me 'girly' smirking at me, laughing"	"were very polite"

Catherine talks to police:

(Sirens, Sirens stop, head to door, knock on door, police announce self, open door)

COP 1: Hello, miss, are you the one who reported a robbery in progress?

CATHERINE: No . . . I mean, yes I called but I changed my mind...

COP 1: You changed your mind?

CATHERINE: Yes, thank you, you can go *(begin to close door)*

COP 2: *(stop door)* Were you or were you not witness to a robbery?

CATHERINE: I was, but it stopped, he stopped, he left.

COP 2: Who left? The robber.

CATHERINE: No, there was a guy here, he tried to take a notebook, but he took it so he could
give it back...

COP 1: He took your notebook?

COP 2: Did he try to take you lunch money too? *(cops laugh)*

COP 1: Is he here now, this guy? *(try to enter the house)*

CATHERINE: *(block way)* NO! I told you, he left, no one is here, nothing is wrong, thank you,
good bye!

COP 2: *(put hand on CATHERINE's arm)* Not listen here...

CATHERINE: Hey! *(shove officer back)*

COP 2: Alright girly that's enough. We need to come in and check things out. So just step aside
and we'll do a quick search.

CATHERINE: I will not!

COP 1: Now, miss, listen we...

CATHERINE: No! You listen, dickhead!

COP 2: I am starting to lose my patience. You need to file a report.

CATHERINE: How 'bout instead you *(point to COP 1)* go fill out the report and you *(point to COP
2)* go fuck his mother. *(slam door shut and lock it)*

Reconstructing the scene helped me understand Catherine's state of mind, both after
her conversation with her father and while speaking with Claire the next morning. It also gave
me insight into Claire's perspective and why she would assume Catherine may not be well.

March 16

Rehearsal canceled

I went over the script and began to look for character specific statements in relation to their desire, will, and moral stance. I took notes of the places in my script and recorded a few supporting quotes.

Desire – What does he want most?

Will – What is he willing to do to get what he wants?

Moral Stance – What are his values, moral code?

HAL:

“I don’t have time to do this but I’m going to. If you’ll let me (*Beat*) I loved your dad. I don’t believe a mind like his can just shut down.” (14) [devoted]

“I’m prepared to look at every page.” (14) [dedicated]

“I was stalled on my Ph.D. I was this close to quitting. I met with your dad and he put me on the right track with my research. I owe him.” (15) [loyal]

“CATHERINE: You’re hoping to find something upstairs that you can publish.” (15)

“It’s – No, it’s my responsibility – as a professional. I can’t turn my back on the necessity of the – “(58)

“I’m trying to correct things.” (69) [responsible]

“It was my fault.” (32) [honest]

CLAIRE:

wants to fill big sister role, wants to please people, wants to help – Catherine, her father, her family

"I was working fourteen-hour days. I paid every bill here. I paid off the mortgage on this three-bedroom house while I was living in a studio in Brooklyn." (38)

"I would have done anything" (38)

"Claire's gonna help out." (44)

"She was great, she offered to take care of all the expenses." (44)

"I have to take care of her." (56)

"I had to cancel my flight. I missed a week of work – I was this close to taking you to the hospital." (66)

"Do you need anything?" (22)

"CATHERINE: Well people are nicer to you." (27)

March 17

Blocked Hal scenes, good work done. Felt we were able to act not just block. I noticed I have been doing this so long that I automatically pick up on other actor's physical cues. There was a moment where I saw Michael/Robert was going to turn away from me after an argument and I matched his turn in the opposite direction. Becca noticed it and pointed out what we did.

March 22

Previous rehearsal canceled. Worked all but Robert scenes. I need to look at the first scene, for some reason it feels awkward to me. I am never quite sure how I want to say the lines. I know my lines better than I thought but I don't know anyone else's yet, so I never know when they are done and I need to speak again. I usually know everyone else's lines before my

own, so this is a change. I am starting to panic a little about lines. I have a hard time memorizing when I am not walking through my blocking. Hopefully by the end of the week we will have gone over everything enough that I will start to remember more. Going through scenes at callbacks helped some with repetition, but it all feels different with blocking. I think I will be much more comfortable when I am not worried about acting around my script.

March 25

For some reason the first scene of Act 2 gives us a bit of trouble. We have a lot of short lines back and forth. The argumentative nature of the scene leads to repeated ideas as the characters try to understand one another and to make themselves understood. While Catherine defends herself, she is frequently asked to repeat herself – leading to similar lines that can easily be interchanged. Emily, James, and I should find a time to run over the scene a few times in a row to help solidify the lines in our memories.

A few things to think about, brought up during rehearsal:

What was mom like? – Did Catherine have a good or bad relationship with her mother?

What was Claire's relationship with her mother like?

Why Cindy Jacobson? – What makes her stand out from all other friends Catherine has had over the years?

Had boyfriends in the past? – Is the interaction between Catherine and Hal a completely new experience or has Catherine dated/slept with guys in the past.

March 26

Today was our first day off book. There were a few points where we struggled, but overall it went fairly well. I only ran into a few points where I got a little mixed up in my lines. It was nice to have script free hands. It is hard to deal with your hands while holding a script, and one thing I find I really notice while watching a play are the actors' bodies.

In my undergraduate acting classes we spent a lot of time discussing our physicality – what personal habits we had, what tendencies we had while acting, and how to keep our body fully engaged while on stage, even in stillness. So, I am always aware of my whole body, especially my hands because they can quickly become awkward. There seems to be a tendency for hands to either be too busy or dead.

April 5

Worked through the show. From this point on we will be working through the show as a whole, polishing and refining. Things to change/work on:

At the beginning of the show, when with Dad, stand directly behind table, not alongside it.

Remember to keep volume high – project, and be aware of where the audience is seated.

Cheat out more on porch, avoid turning back completely on either side.

Say the line “you stole this” while going to pick up the notebook, instead of saying it after picking it up, cut the awkward pause and keep the scene moving.

April 6

Worked through the show. Things to change/work on:

During the 911 scene, throw the words said in the phone at Hal.

Turn away and look out front on the line "don't lecture me".

Find places in the scene with Claire to mock her, and to laugh at the absurdity of what she is saying.

The energy in the scene with Dad and the proof was better. It is important to build up the excitement and hope, allowing the contrast of the let down at the end, intensifying the shock and sadness at the loss of Robert's grasp on reality. This is what really sets the action of the play into motion. This moment is when Catherine realizes her father will never be well enough to be on his own again, and that she must sacrifice her own dreams to care for him. This incident leads to Catherine writing the proof.

April 7

Worked through the show. Things to change/work on:

Take a drink after the line "She's my sister. And I don't like her", thinking of Claire makes you want to drink.

Section with Dad on bench, emphasis the you on "You are crazy", the argument is that Robert just said crazy people don't know they are crazy and that he himself is crazy. Catherine is trying to make him see the contradictions and absurdity in his argument.

After Hal enters, first "what" out front, second "what" to where Robert was sitting.

Pause on the "with no one" line as if about to reveal the conversation with Robert "with (beat) No one", also suggests to Claire that there was in fact someone else there.

April 8

Tonight was our first run without the ability to call for a line. It went fairly smoothly for me since I have not really needed to call for lines the last few rehearsals. Although I do still have a little trouble keeping a scene straight if I am given an unexpected line. My lines are ingrained in my head as automatic responses to the line before. If a section is skipped or said out of order my response is out of my mouth before I realized we have gotten ahead of ourselves. Once that starts, it is difficult to work the missed lines back into the scene. There were a few places where we were stalled as lines were forgotten and we tried to find ways to prompt each other or continue with the scene.

Things to remember:

The "with no one" line good.

During the Sophie Germain monologue find places to add levels, personalize it, this person is the reason Catherine is passionate about math and prime numbers

Add a drink after "Great Lakes vineyard"

Although I did not have to call for lines often, there are a few I skipped and a few that need to be looked over for accuracy:

- "take it I'm done" section
- "performance of imaginary number"
- "I know you mean well" monologue
- Claire, Hal, Catherine scene
- Chicago beer, no flavor – line
- "I'm a mathematician too"

- “real disaster” monologue
- not now, too cold – section
- last scene

April 9

Today was our first Rehearsal on our set. It was a bit of an adjustment to have so much room. It feels like we have doubled our playing space. We have been in such a small space for so long it seems we have forgotten how loud we need to be. Having more room changes when I need to begin and end my crosses. At times I felt like I was either stuck in one place or running around the stage like crazy. Other parts of the blocking have begun to feel more natural when done on the actual set. It helps to finally have a door to make our entrances and exits and to have levels to work with.

I have been jumping a few of Claire’s lines, cutting her off before she can finish speaking. I have never had a problem with needing to pick up my cues, my problem tends to be jumping them. I seem to want to start my lines before other actors have finished theirs.

Things to remember:

- let Claire say “Is this person”

There are still a few places where I need to solidify my lines. A couple of my monologues tend to come out with the lines out of order. I like to look over even the smallest line discrepancies to try to keep my lines accurate. I figure the playwright chose his words for a reason, the least I can do is present them the audience as they are written. I believe each word influences how I see the characters and I have built my ideas around those words. The best

way to express the characters is with those words. Leaving things out of changing them would be cheating the audience out of the poetry of the lines that support the portrayal of the characters and actions of the play.

Look over lines:

- “Thank you I know” monologue
- “Fuck it, I don’t need them” monologue
- “talk through it together” line
- “talk about what you are doing”
- lines after read Dad’s proof
- beginning scene 2-5
- “No big deal” “Thanks Claire”
- “You can do whatever you want with it. Publish”
- “You can’t, do you hear me” monologue
- being taken care of – monologue
- “some night they were really far apart” section

Dress/Tech

April 13

I am still adjusting to the Black Box. The most difficult part of moving spaces is working to make sure the audience on all three sides can see and hear us. This is my first full length show done in three-quarter round. Before now I only experienced it for a few minutes during a ten minute one act play. Seeing chairs in the house reminds me of how different the staging is

and how I will have to remember to stay aware of the audience. Playing for a proscenium audience has become so ingrained in me that I turn myself forward unconsciously.

It has been fun to have all of our props and costumes. I have quite a few quick changes, but I love the challenge. I have to say I am quite adept at lightning fast costume changes.

Dress/Tech**April 14**

I am getting more comfortable with the space. Keeping the audience in mind is coming more naturally. No matter how often we were reminded during rehearsals to remember where the audience would be, it did not really sink in until we had a physical representation of their presence.

Dress/Tech**April 15**

Tonight was our last rehearsal, tomorrow we have an audience. I think we are ready. I cannot wait to see how the audience will respond.

Performance**April 16**

Opening night! Went amazing. We were really on, which was great because the show was filmed tonight. We hit every line we have been missing lately and I do not think we skipped one line. The excitement of a first performance and the energy of an audience can throw you off, but more often I find it drives you forward. The show no longer feels like work as you enjoy it again for the first time along with the audience. You relax and feel the show instead of thinking it, allowing all of the lost lines and skipped sections to resurface.

Performance**April 17**

Another good show, not a great as last night, a few skipped lines – nothing critical – but still went well. It is always disappointing when a show does not go as well as you feel it could. But that's live theatre, every show is going to be different. We just have to remember, what feels inadequate to us on stage may not even be noticed by the audience. As a spectator the show is a completely different experience and it is easy to forget that although we have been working with the script for weeks the audience is experiencing it for the first time.

Performance**April 18**

Our last show. A good show but we still all agree Friday was our best. I feel both relief to have closure and sadness to see it end. The things I always miss the most after the end of a show is seeing everyone, everyday. It is amazing how quickly you build relationships while working on a play. I guess it comes from how open and trusting you have to allow yourself to be to explore a character, and the number of emotional moments you share with each other. I think mimicking long term relationships with the other actors also begins to leak into your real life. After all, the best on stage relationships are the result of good actor chemistry, so I guess you are predisposed to make some sort of connection.

It always amazes me how much a character can affect me. I am not sure if it is the actor in me or my strong kinesthetic side. Spending time with a role is like spending time with a friend, where you start to pick up on each other's habits. I find in my everyday life I am saying things with Catherine inflections, or making Claire expressions or gestures. While it is hard to see it all end, it feels good to have a sense of accomplishment at the completion of the process.

Chapter Five: Evaluation

Following the performance of the play my director, assistant director, stage manager, and fellow actors completed an actor evaluation form. The evaluation rated my level of participation through out the process on the basis of six categories. Six participants completed the evaluation. A copy of the actor evaluation form can be found in Appendix H.

One of my favorite parts of performing is receiving feedback from others. An actor's intentions do not always translate in performance. Although an actor may attempt to convey a specific message, their actions may not translate accordingly. It does not matter what an actor is attempting to do, only what he appears to do. An audience does not have the benefit of hearing the actor explain his choices or motivations. Actors need an outside opinion in order to understand how their actions are perceived. I have never understood anyone's reluctance to share his opinions, whether positive or negative. If I am not communicating effectively I need to know so I can adjust and correct the problem.

I found the actor evaluation to be a wonderful tool. It gives me a sense of the areas in which I need work along with the places where I am working effectively. I am grateful for the comments of my peers as well. Pointing out a problem is not helpful without acknowledging why it is a problem.

The results of the evaluation were as follows:

- The actor was prepared: almost always – 4.83/5 or 97%

Rehearsal time is limited and valuable. It is the time where everyone comes together to work. So much time is lost when someone arrives unprepared. I know that a great performance is the result of an effective rehearsal process. The efforts made in preparation outside of rehearsal greatly contribute the efficiency and success of the rehearsal. I try to come to each rehearsal prepared and ready to work, taking care to avoid wasting time and opportunity.

- The actor was on time: always – 5/5 or 100%

I have a fear of being late. I find it personally embarrassing and rude. I feel that arriving late to an appointment conveys the message that you do not respect or value the other person's time. I always plan to arrive fifteen minutes before I am scheduled to be somewhere, allowing myself time for unexpected delays and the chance to prepare to begin on time. Although most of this is a personal habit, I was also taught in undergraduate classes that a 7:00 rehearsal means work begins at exactly 7:00. If you need to warm-up or take care of any other business it should be done prior to rehearsal.

- The actor took and followed directions: almost always – 4.33/5 or 87%

One comment suggested that although I took direction I was reluctant to implement it. I was not aware I did this. I do not remember being wary of applying direction notes to my performance. If I have a different opinion I try to discuss it at an appropriate time with the director. It is possible that I either forgot to make changes or that the changes I made did not read clearly. I will work to remember and be aware of this in the future.

- The actor offered insights and input: almost always – 4.67/5 or 93%

I try to leave every rehearsal with questions to answer and ideas to consider, and to return to rehearsal with answers and new questions. Part of the rehearsal process is exploration and collaboration. Raising and answering questions helps me to better understand a play and to find the best way to clearly present its message to an audience.

- The actor made a commitment to the role: always – 5/5 or 100%

I was so excited to be playing this part and to just be acting in general. If you have the opportunity to do something you love and are passionate about, how can you be anything but completely committed? In addition to my own excitement, everyone involved in the process shared a similar excitement and enthusiasm. One of the wonderful aspects of theatre is that it requires a team effort. Your involvement in a production is a commitment not only to yourself but to everyone involved.

- The actor worked well with other actors: almost always – 4.83/5 or 97%

One of the most important things to me when working with others, is to make an effort to be positive and agreeable. I want to help things run as smoothly as possible and let everyone know that I appreciate their work. It is always easier to accomplish something you can be proud of when working in a positive environment. In addition to the general benefits of a comfortable working environment, I will admit my pleasant behavior is somewhat selfishly motivated. I was always taught that finding work in the performance and entertainment industry has as much to do with your attitude as your skills.

My acting teachers always said that your audition for a role begins the minute you walk into the building. No matter how well you read a part there will always be someone else equally talented. If you are rude and disagreeable you will tip the scales in the other actor's favor. You have such a limited amount of time to present yourself and make an impression. If you are already known for being positive and easy to work with you will dramatically increase your chances of being hired. So I concentrate all of my efforts in to working hard and staying positive, knowing that some day it could be the tie-breaker that gets me the job.

One comment suggested that I am resistant to others ideas or thoughts. I value other opinions and perspectives and try to be open to suggestions. I do, however, have a tendency to question things in order to fully understand others' views. I will bring up a conflicting perspective purely for the sake of discussion and discovery. I can understand how I would appear to be resistant to the insights of others. However, just because I pose questions and work to explain my own point-of-view does not mean I do not seriously consider others. I find the best ideas arise out of discussions from multiple perspectives.

Overall it seems that the production experience was as positive for the others involved as it was for me. There were several things addressed in the comment section of the evaluation that I am aware of myself. One in particular refers to my habit of continuing with a scene before the other actors have finished their lines. I have always had a problem with jumping other people's cues. I do not always know the other actor's lines as specifically as I know my own and when I hear silence I assume that I have missed my cue and I begin my lines. It seems

one of my fellow actors believed that I assumed they had forgotten their lines, when really it is my discomfort with silence that causes the problem. Silence on stage feels at least twice as long as it actually is. Unless I know it is a specifically scripted silence, I tend to panic and rush to fill it.

Another comment shows me to be “bull-headed and nit-picky about the technical aspects of the show, like props, costumes, etc.” I think that this is a result of my experience in all aspects of theatrical productions. I have extensive experience in both the design and production of sets, props, costumes, sound, and lighting. In the past, I was often involved in shows in more than one capacity, with name my appearing in a few different sections of the production’s program. Being passionate about theatre in all aspects of the production, I may just know too much for my own good. I have trouble separating myself into one production role. I need to remember that as an actor my responsibility is to act, and that there are other capable people covering the other areas of the production.

I was pleased to find positive reflections from my peers and glad to be made aware of area in which I need more work. If I remember to consider the suggestions presented in the evaluations and continue the practices that prove effective, I am sure I can continue to learn and become a more effective performer.

The following additional comments were made on the evaluation forms:

- “She seemed to know a lot about the show and her choices in the character.”

- "It was a great cast. Everyone got along well."
- "She was sometimes resistant to other's ideas and thoughts."
- "Everything was fine . . . But she had this annoying habit that if I paused for more than three seconds at a time she would assume I forgot my lines and continued on. I had to adjust to that."
- "I much enjoyed working with Kari. She always had something to add each day of rehearsal. She is committed, dedicated, and entertaining."
- "Kari was incredibly excited about and dedicated to this role. She worked very hard and it was obvious that she was totally invested."
- "Kari was always there before anyone else. She was definitely committed to the role and the show."
- "She carried the bulk of the line work with little to no trouble. She was relatively off book when she needed to be."
- "She always arrived before her call time ready with any questions or concerns."
- "She listened to direction most of the time but was a little reluctant to implement it during rehearsals."
- "She always was giving suggestions and insights to her character and was always read to justify her actions."
- "She definitely committed to the role and had very clear cut ideas about her character."

- “She also worked well with the other actors and created a pleasant environment for her fellow actors.”
- “She was, however, very bull-headed and nit-picky about the technical aspect of the show, like props, costumes, etc. and seemed to be unrelenting in any ideas she had.”

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Appendix A: Definition of the word "proof"

Definitions of the word "proof" found on *Oxford Reference Online*:

"proof Informally, a procedure that brings conviction. More formally, a deductively valid argument starting from true premises, that yields the conclusion. Most formally, in proof theory, a proof is a sequence of formulae of which each member is either an axiom or is derived from a set of preceding members by application of a rule of inference, and which terminates with the proposition proved. The final member of such a sequence is a theorem. In 17th- and 18th-century usage 'proof' has the same implications of a chain of intuitive ideas as demonstration." (*The Concise Oxford Dictionary of Mathematics*)

"proof A chain of reasoning, starting from axioms, usually also with assumptions on which the conclusion then depends, that leads to a conclusion and which satisfies the logical rules of inference." (*The Oxford Dictionary of Philosophy*)

"proof n. 1. In the law of evidence, the means by which the existence or nonexistence of a fact is established to the satisfaction of the court, including testimony, documentary evidence, real evidence, and judicial notice. Since most facts with which a court is concerned are not capable of being tested empirically, proof in the legal sense is quite different from proof in the context of mathematics or science. The uncorroborated evidence of one credible witness is sufficient proof for most purposes in the law." (*A Dictionary of Law*)

Appendix B: List of Awards Received by the Play *Proof*

- Best American Play – Awarded by the New York Drama Critics Circle Voting 2000-2001, Michael Sommers, of the *Star-Ledger*, Newark, president (Jenkins 326)
- Critics Choice for Best Play – Awarded by Sherry Eaker of *Back Stage*, Alvin Klein of *New York Times Suburban*, Dick Schaap of *ABC World News Tonight* (Jenkins 327)
- Tony Award for Best Play – Award presented to both the author and producer, *Proof* by Arvid Auburn, produced by Manhattan Theatre club, Roger Berlind, Carole Shorenstein Hays, Jujamcyn Theatres, Ostar Enterprises, Daryl Roth, and Stuart Thompson (Jenkins 330)
- Tony Award for the Best Performance by a Leading Actress in a Play – Mary-Louise Parker in *Proof* (Jenkins 331)
- Tony Award for the Best Direction of a Play – Daniel Sullivan for *Proof* (Jenkins 331)
- Lucille Lortel Awards of 2001 – Awarded “for outstanding Off Broadway achievement were established in 1985 by a resolution of the League of Off Broadway Theatres and Producers, which administers them and has presented them annually since 1986. Eligible for the 16th annual awards in 2001 were all Off Broadway productions that opened between April 1, 2000 and March 31, 2001. Winners were selected by a committee comprising Clive Barnes, Maria DiDia, Susan Einhorn, Beverly Emmons, Bruce Ferguson, George Forbes, David Marshall Grant, Barbara Hauptman, Gerald Rabkin, Marc Routh, Donald Saddler, David Stone, Anna Strasberg, Carol Waaser and Linda

Winer," were awarded to *Proof* by David Auburn, Mary-Louise Parker for her role in *Proof*, and Daniel Sullivan for his direction of *Proof* (Jenkins 332-3).

- 2000 ELIZABETH HULL-KATE WARRINER AWARD – Awarded “to the playwright whose work deals with social, political or religious mores of the time, selected by the Dramatists Guild Council,” was given to David Auburn for *Proof* (Jenkins 335).
- 67th ANNUAL DRAMA LEAGUE AWARDS – Awarded “for distinguished achievement in the American theatre” was given in the play category to *Proof*, and for distinguished performance to Mary-Louise Parker in *Proof* (Jenkins 336).
- 46th ANNUAL DRAMA DESK AWARDS – Awarded “for outstanding achievement in the 2000-2001 season, voted by an associations of New York drama reporters, editors and critics form nominations made by a committee,” was given for New Play to *Proof* and Actress in a Play to Mary-Louise Parker in *Proof* (Jenkins 336).
- 51st ANNUAL OUTER CRITICS CIRCLE AWARD – Awarded “for outstanding achievement in the 2000-2001 season, vote by critics on out-of-town periodicals and media,” was given for Broadway Play to *Proof*, for Actress in a Play to Mary-Louise Parker in *Proof*, and the John Gassner Playwriting Award was given to David Auburn for *Proof* (Jenkins 336).
- 46th ANNUAL VILLAGE VOICE OBIE AWARDS – Awarded “for outstanding achievement in Off and Off-Off Broadway theatre,” was given to Mary-Louise Parker for her performance in *Proof* (Jenkins 336).

- The 2001 Pulitzer Prize for Drama – Awarded “for a distinguished play by an American author, preferably original in its source and dealing with American life,” was given to David Auburn for *Proof* (pulitzer.org).

The Pulitzer Prize was “established in 1917 in honor of Joseph Pulitzer, a Hungarian-American journalist and newspaper publisher.” It is awarded “to recognize outstanding accomplishments in U.S. journalism, letters, music, and drama. Awards are given in the following categories: Public Service, Breaking News Reporting, Investigative Reporting, Explanatory Reporting, Beat Reporting, national Reporting, International Reporting, Feature Writing, Commentary, Criticism, Editorial Writing, Editorial Cartooning, Breaking News Photography, and Feature Photography. Awards are given in the following Letters, Drama, and Music categories: Fiction, Drama, History, Biography/Autobiography, Poetry, General Nonfiction, and Music. A certificate and \$10,000 cash prize are awarded in 20 categories annually; the recipient of the Public Service award receives a gold medal. (pulitzer.org)

Appendix C: Structural Analysis Notes

Evidence for linear script:

Balance – relationship with father, house/porch, Claire in New York

Inciting Incident – death of father: Hal arrives, Claire arrives, Catherine unsure of her purpose

Exposition – conversation with father, speech to Hal about life with Dad

Rising Action –

- | | |
|-----------------------|-------------------------|
| -Dad dead | -thesis |
| -accuse stealing | -birthday |
| -find stolen notebook | -discuss proof |
| -Claire comes | -Hal leaves |
| -Claire questions | -Hal comes for notebook |
| -Hal enters | -worry about Dad |
| -Party | -Dad working |
| -kiss | -Dad sick again |
| -key | -leaving house |
| -selling house | -Claire leaves |
| -find notebook | -Hal comes |
| -going to school | -acceptance |

Climax – “it’s just evidence. It doesn’t finish the job. It doesn’t prove anything.”

Resolution – Catherine accepts self, begins to move forward with her life

Evidence for Circular script:*Experiences/Process* – flashbacks*Subject/Theme* – proof, relationships, math vs. life*Idea more important than event* – proof*Topic Variations* –

Flashbacks:

-act 2 scene 1

-act 2 scene 4

Character Interactions:

-Catherine/Robert

-Catherine/Hal

-Catherine/Claire

-Catherine/Hal

-Catherine/Claire

-Catherine/Hal/Claire

-Catherine/Robert/Hal

-Catherine/Claire/Hal

-Claire/Hal

-Catherine/Robert

-Catherine/Claire

-Catherine/Hal

Variations Proof:

Questions to answer

– crazy?, something in notebooks?, taking notebook?, Dad crazy?

– Claire – is Catherine ok?, telling truth?

1.3 – Hal accept Catherine?

1.4 – trust?, Claire good sister?, Claire thinks Catherine crazy?

– Catherine

2.1 – Dad ok?, go back to school?

2.2 – wrote proof?

2.3 – Catherine need care? forgive Hal?

2.4 – Dad ok?, working again?

2.5 – ok?, take care of self?, crazy?,

wrote proof?

One critical aspect for analyzing a play, is understating the structure in which the play is written. After the format of the writing is discovered, the play can be more easily broken down and examined from a literary point of view. An understanding of the playwright's written process helps to reveal the literary devices he utilizes to move his story forward. Elements such as exposition, conflicts, imagery, foreshadowing, symbolism, themes, ideas, and turning points for the plot and characters are more clearly revealed. Although the play contains elements of a circularly structured script, it more closely follows the pattern of a linear structure.

In an interview David Auburn said he set the play exclusively on the back porch as a challenge for him to follow the well made play formula.

The *Cambridge Paperback Guide to Theatre* defines the well-made play:

A translation of the French *pièce bien faite*, the well made play was first codified by Eugène Scribe (1791-1861). Since he (with assorted collaborators) wrote some 400 plays, he had little time for such frivolities as theory. By mid-19th century, when the term came to common use, it was already derogatory, and yet its formulae have moulded some 150 years of Western drama.

The well made play is skillfully crafted to arouse suspense. It is an outgrowth of the comedy of intrigue: its action is propelled through a concatenation of causally related events. Beginning with a detailed faintly disguised exposition, it gathers momentum through complication and crises, with each act closing on a climatic curtain. A series of perils for the protagonist leads to the revelation of a secret in an obligatory scene – named and analyzed by the French critic Francisque Sarcey some half-century after Scribe codified the practice. The well made play closes swiftly in a plausible

resolution. Technically, it thrives on fortuitous entrances and exits, mistaken identity and quid pro quos. (Stanton 405)

Proof begins with "a detailed faintly disguised exposition" as Catherine speaks to her father and later Hal. It is revealed that Robert, a brilliant mathematician, has just died after a long struggle with mental illness; Catherine, who has given up the last five years of her life to care for her father, is concerned that she may have inherited his illness; Claire, Catherine's sister is coming in from New York tomorrow for their father's funeral; Hal, a former student of Robert, is desperately searching for undiscovered work left by Robert. The first scene introduces all four characters providing a brief history of each. The "complication and crises" occur as Catherine struggles to find herself, Claire arrives with plans for Catherine's life, Hal and Catherine spend the night together, Catherine reveals a hidden proof she claims to have secretly written, and Claire and Hal question Catherine's claim that she is the author of the proof. In the final scene, Hal returns to admit his errors and ask for forgiveness, telling Catherine he believes she is the author of the proof. The play comes to a swift conclusion as Hal helps Catherine to move past her fear of inheriting her father's illness and she accepts Hal's apology and begins to discuss her work with him, thus beginning to live her life.

Appendix D: Analysis Notes

A. Given Circumstances – Environmental Facts:

1. Geographical location, climate –

“The back porch of a house in Chicago”, Illinois, USA (Auburn, *Proof 4*)

Single-family home located in the Hyde Park neighborhood of Chicago.

2. Date, year, season, time of day –

Act 1 – late summer 1999

Scene 1 – Saturday, September 4, 1999, almost 1:00am

Scene 2 – same, morning

Scene 3 – same, night

Scene 4 – Sunday, September 5, 1999, morning

Act 2 – late summer 1995, late summer 1999, winter 1995

Scene 1 – Monday, September 4, 1995, afternoon

Scene 2 – Sunday, September 5, 1999, morning

Scene 3 – Monday, September 6, 1999, afternoon

Scene 4 – December 1995, afternoon

Scene 5 – Monday, September 13, 1999, morning

The Hyde Park neighborhood of Chicago was settled in 1850 as Chicago’s first suburb.

Located eight miles south of downtown Chicago on Lake Michigan, Hyde Park is “recognized as a national model of racial diversity and urban stability” (hydeparksecc.com). The area is also known for its cultural and art sites along with its highly intellectual residents. A large number of

the residents of the neighborhood hold bachelor's, master's, professional or doctorate degrees (hydeparksecc.com). Schools in the area include Divinity School, Catholic Theological Union, Lutheran School of Theology, McCormic Theological Seminary and the University of Chicago. The University of Chicago, a private institution of around 11,000 students, was founded in 1892 by John D. Rockefeller. The University is affiliated with sixty-nine Nobel laureates and the University of Chicago Hospital is the largest medical research institute in the state of Illinois (hydeparksecc.com).

Like the other south side neighborhoods of Chicago, Hyde Park suffered from economic decline in the 1950s ("Hyde Park"). An extensive urban renewal plan was sponsored by the University of Chicago. The highly successful endeavor led to a neighborhood that is today "considered a secure and stable neighborhood, with a rich cultural life and many benefits to offer the students, families and singles who are making it their home" ("Hyde Park"). Many University of Chicago faculty members, their families, and students live in the Hyde Park area.

Hyde Park features a large number of artistic and cultural sites such as the Court theatre, David and Alfred Smart Museum of Art, DOC Films, DuSable Museum of African American History, Hyde Park Art Center, Little Black Pearl, Munto Dance Theatre, Oriental Institute, The Renaissance Society, and Rockefeller Memorial Chapel Music Series. The area also features a walking path along Lake Michigan and a diversity of architecture ranging from "gothic edifices, modern high rises, and the largest concentration of mansions in [Chicago]" (hydeparksecc.com). The University of Chicago feature gothic structures created by such architects as Rafael Vignoly, Cesar Pelli, and Ricardo Legorreta. Howard Van Doren Shaw, Frank Lloyd Wright, George Washington Maher, and Alfred S. Alschuler's work can be seen in the

nineteenth and twentieth century mansions of Hyde Park. In addition the work of Mies van der Rohe and Frank Lloyd Wright's Robie House are located in the area.

3. Economic Environment –

According to the 2000 Census of the Hyde Park area (zip code 60637) the area was comprised mainly of middle-class residents with a median family income of \$27,096. Of the residents sixteen years and older, 54 percent were part of the labor force and 44.5 percent were employed. Occupations of those employed showed 37.2 percent in management and professional positions, 19.5 percent in service, 29.6 percent in sales and office positions, 0.1 percent in farming, fishing, and forestry, 4 percent in construction, extraction, and maintenance, and 9.7 percent in production, transportation, and material moving. 37.8 percent of the working population in the area held jobs in the education, health, and social services industry. Of the working residents, 77 percent were salary workers or received private wages, 18.8 percent were government workers, and 3.9 percent were self-employed workers.

4. Social Environment –

According to the 2000 Census of the Hyde Park area (zip code 60637) the total population of the area was 57,090. 95.2 percent of the residents were native to the United States, 94.9 percent were born in the country, 67.5 percent were born in Illinois, and 27.3 percent were born in different states. 1.7 percent of the population was naturalized citizens and 3.1 percent were not citizens of the United States. Of the 4.8 percent of the population who were foreign born, 32.6 percent were of European descent, 49.5 percent were Asian, 4.2 percent were African, 0.6 percent were Oceanic, 12.6 percent were Latin American, and 0.6 percent were Northern American. Of the population twenty-five years and older 73 percent

received a high school graduate or higher level of education, and 24.5 percent received a bachelor's degree or higher. 4.1 percent of the residents held associate's degrees, 9.2 percent held bachelor's degrees, and 15.3 percent held graduate or professional degrees. School enrollment saw 7.4 percent of the residents in preschool, 4.6 percent in kindergarten, 40.3 percent in elementary school – first through eighth grade, 18.8 percent in high school – ninth through twelfth grade, and 28.8 percent in college or graduate school.

According to the *Washington Post*, the 2000 census reported of the 29,000 residents of Hyde Park proper 43.5 percent were white, 37.7 percent were black, 11.3 percent were Asian, and 4.1 percent were Hispanic ("Community profiles: Hyde Park").

5. Political Environment –

President, Democrat, Bill Clinton and Vice President Al Gore

Congress, 106th, Republican Majority, Speaker of the House Dennis Hastert

Governor, Republican, George Ryan

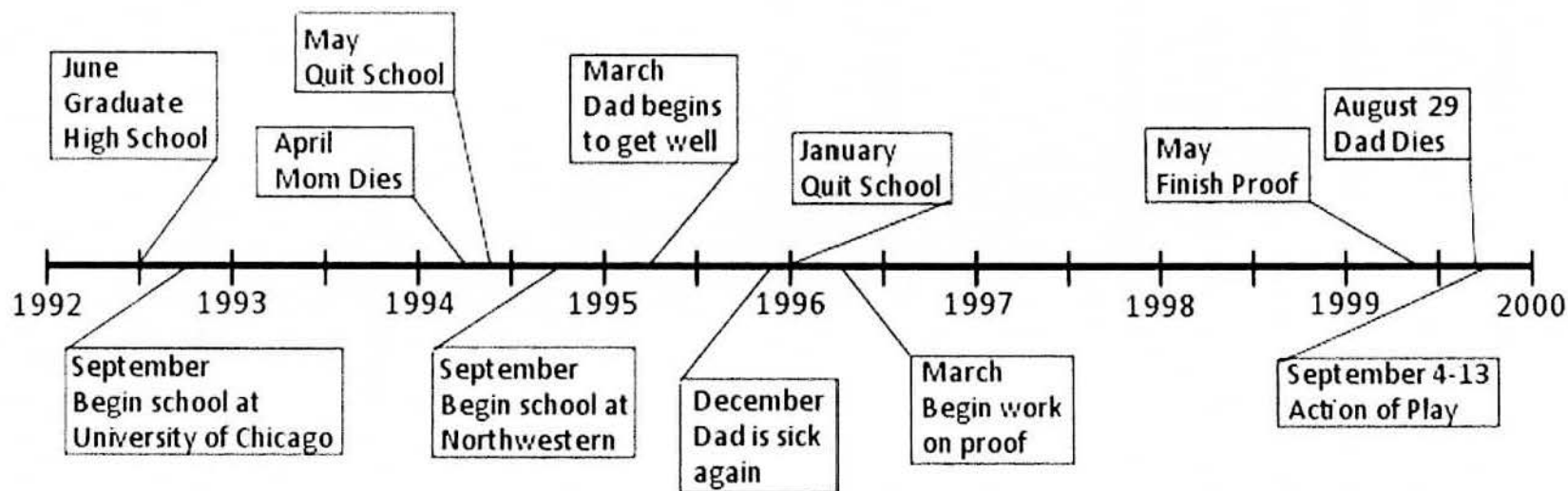
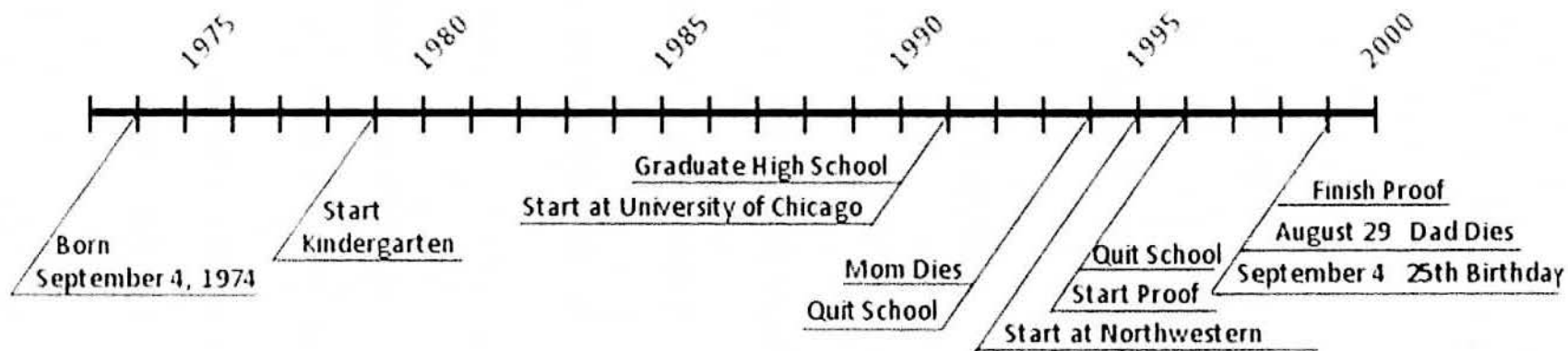
Mayor, Democrat, Richard Daley

6. Religious Environment –

The Hyde Park area presents a diverse religious community that is reflected in the number of various religious organizations found on the University of Chicago. These organizations include Asian American Students for Christ, Baha'i Association, Bethel Christian UC, Buddhist Association, Campus Crusade for Christ, Catholic Campus Ministry (Calvert House), Chabad Jewish Center, Christian Business Students Association, Christian Science Fellowship, Destino, Episcopal Campus Ministry (Brent House), Graduate Christian Fellowship, Hillel Center for Jewish Campus Life, Hindu Society (Bhav Bhakti), Interfaith Dialogue, InterVarsity Christian

Fellowship, Jewish Business Students Association Jewish Graduate Students Association, Jewish Law Students Association, Jewish Medical Students Association, Korean-American Campus Ministry, Latter-day Saints (Latter-day Saints Student Association), Lutheran Campus Ministry (Augustana Lutheran Church), Muslim Law Students Association, Muslim Students' Association, Orthodox Christian Fellowship, Pritzker Christian Fellowship, Quaker House, QueeReligious, Rockefeller Memorial Chapel, Sikh Students Association, Thomas More Society (Catholic Law Students), Unitarian Universalists, United Protestant Campus Ministry, University Church, and Vineyard Prayer Group.

Catherine: Character Timeline



Appendix F: Character Notes

Part of creating a character, is knowing the details of his life. A person's choices are the result of his individuality, based on their history and experiences. Understanding a character's past can help to explain their present. Charles S. Waxberg, author of *The Actor's Script*, explains "there are two parts to breaking down the script's information to develop and effective, communicative character" (80). Before character can be created, the first step is to create the character's biography. Biographical information of a character helps to explain who that character is.

Name: Catherine Marie Butler

Sex: Female

Age: 25

Date of Birth: September 4, 1974

Occupation: none, currently caring for ill father, formally university student

Nationality: Caucasian, American

Family History: Father English and German, Mother French and Irish

Family Members:

Robert Henry Butler – Father (b. January 17, 1944, age 55): Professor at University of Chicago, famous mathematician, lived in Chicago

Jacqueline Marie Butler – Mother (b. December 9, 1948, age 45 – at time of death): Public Relations Researcher, lived in Chicago

Claire Monique Butler – Sister (b. May 3, 1970, age 29): Currency Analysis, lives in New York

Economic Class: Middle-Class/Upper-Middle-Class

Social Status: Father famous mathematician and Professor at the University of Chicago

Religious Beliefs: Non-practicing Christian, father was raised Lutheran, mother was raised Catholic

Morality: Sense of responsibility, obligation to do what is right, abandons own life, plans to care for her father, Angry that Hal might try to pass of her father's work, or hers, as his own

Education: High School Diploma, Some College Studies at University of Chicago and Northwestern University

Intelligence/Skills: Highly intelligent, capable of high level mathematical understanding and reasoning, logical, self-aware, creative reasoning, scholarship to math program at Northwestern, Northwestern worked hard to get her in school – accepted credits, beginning as sophomore, free ride (Auburn, *Proof* 43-44)

Achievements: Wrote important proof on prime numbers that may revolutionize the mathematical field.

Hobbies/Interests: math – specifically prime numbers, reading about female mathematicians, reading magazines

Marital Status: single

Sexuality: straight

Relationships: High School Boyfriend, Boyfriend at University of Chicago, Hal

Loves: High School Boyfriend

Priorities: Caring for father, finding her purpose/place in life now that father is gone

Needs: acceptance, reassurance, understanding, love, emotional support, to reestablish a sense of self

Temperament: Sarcastic, passionate, caring, guarded, strong willed, bold, quick witted

Hopes and Dreams: make her father proud, to be like her father without suffering the same fate, be accepted in the mathematical community

Fears and Phobias: Suffering from mental illness, losing self, responsible for father's regression into illness, unable to be recognized as a significant mathematician because she is a woman in a male dominated field

Past Traumas: death of mother, quitting school, quitting school again, abandonment by sister, father's illness, death of father

Self-Image: mathematician, daughter

Projected Image: abrasive, indifferent, does not care what anyone thinks

Perceived Image: unbalanced, lazy, difficult

Appendix G: Rehearsal Schedule

Proof Rehearsal Schedule

Date	Time	Place	Rehearsal	Who
March 10	8:00	Clark St.	Block	Robert (Claire 8:30)
March 11	7:30	Clark St.	Block	Catherine, Robert
March 16	7:00	Clark St.	Block	Catherine, Robert, Hal
March 17	7:00	Clark St.	Finish Blocking	All Cast (TBA)
March 18	7:00	Clark St.	Work Act 1, Scene 1	Robert, Catherine, Hal
March 19	7:30	Clark St.	Work Robert Scenes	Catherine, Robert
March 22	7:30	Clark St.	Work Catherine	All Cast
March 23	7:30	Clark St.	Work Act 2	All Cast
March 24	7:00	Clark St.	Work Act One	All Cast
March 25	7:00	Clark St.	Work Act Two	All Cast
March 26	7:00	Clark St.	Work Show (Off Book)	All Cast
April 1	7:00	Clark St.	TBA (Off Book)	Catherine & Robert
April 2	7:00	Clark St.	TBA (Off Book)	Catherine & Claire
April 5	7:30	Clark St.	Work Show	All Cast
April 6	7:00	Clark St.	Run Through	All Cast
April 7	7:00	Clark St.	Run Through	All Cast
April 8	7:00	Clark St.	Run Through (No Line)	All Cast
April 9	7:00	Black Box	Tech/ Run Through	All Cast
April 13	6:00	Black Box	Dress/ Tech	All Cast
April 14	6:00	Black Box	Dress/ Tech	All Cast
April 15	6:00	Black Box	Dress/ Tech	All Cast
April 16-18	6:00	Black Box	Show!	All Cast

Appendix H: Evaluation Form

ACTOR EVALUATION

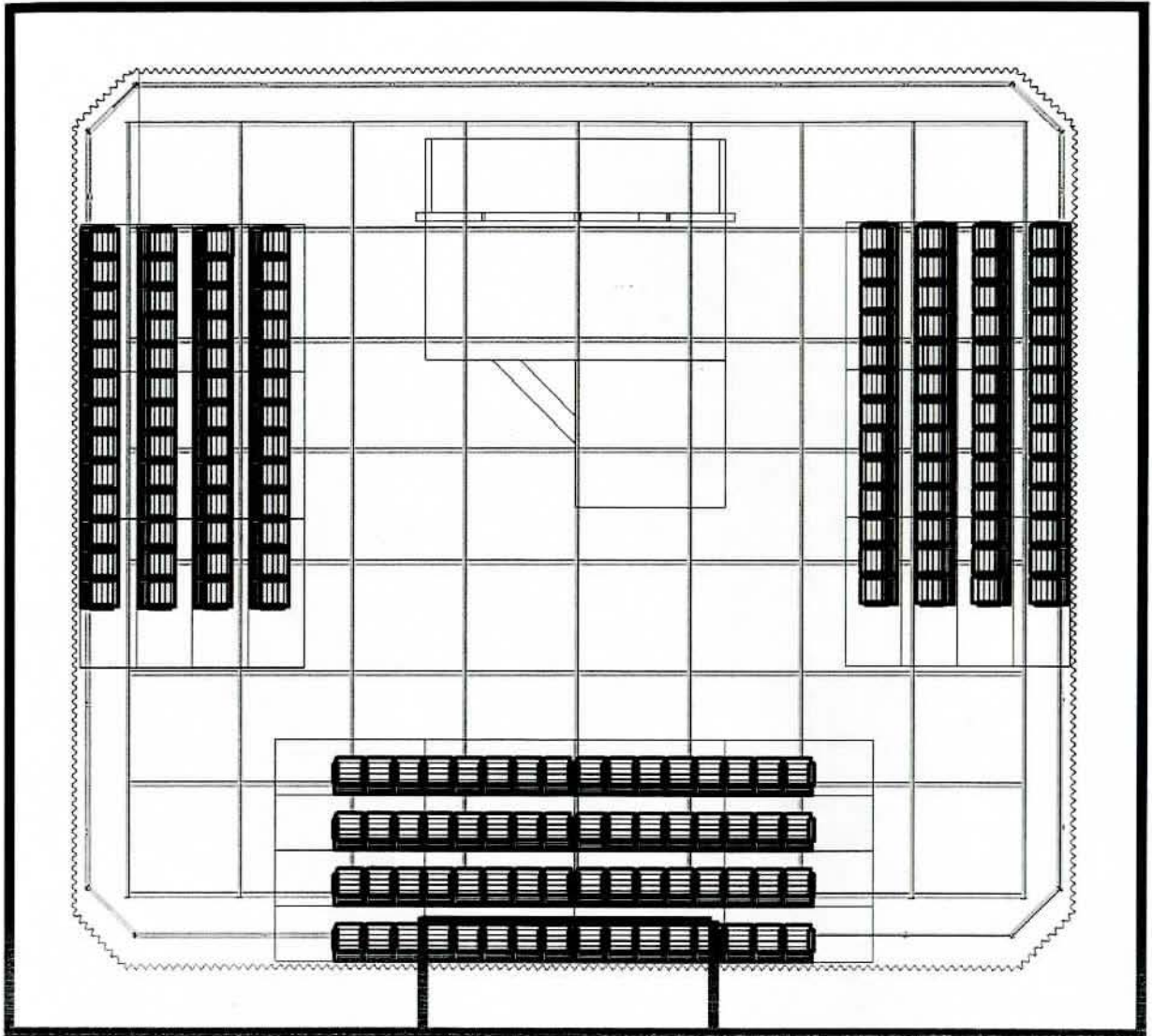
Actor's Name _____

1=NEVER 2=SELDOM 3=HALF THE TIME 4=ALMOST ALWAYS 5=ALWAYS

- | | | | | | |
|--|----------|----------|----------|----------|----------|
| 1. The actor was prepared. | 1 | 2 | 3 | 4 | 5 |
| 2. The actor was on time. | 1 | 2 | 3 | 4 | 5 |
| 3. The actor took and followed direction. | 1 | 2 | 3 | 4 | 5 |
| 4. The actor offered insights and input. | 1 | 2 | 3 | 4 | 5 |
| 5. The actor made a commitment to the role and scene. | 1 | 2 | 3 | 4 | 5 |
| 6. The actor worked well with other actors. | 1 | 2 | 3 | 4 | 5 |

Any additional comments

Appendix I: Set Floor Plan



Appendix J: Production Poster

Proof

April 16, 17, 18
7:30 pm

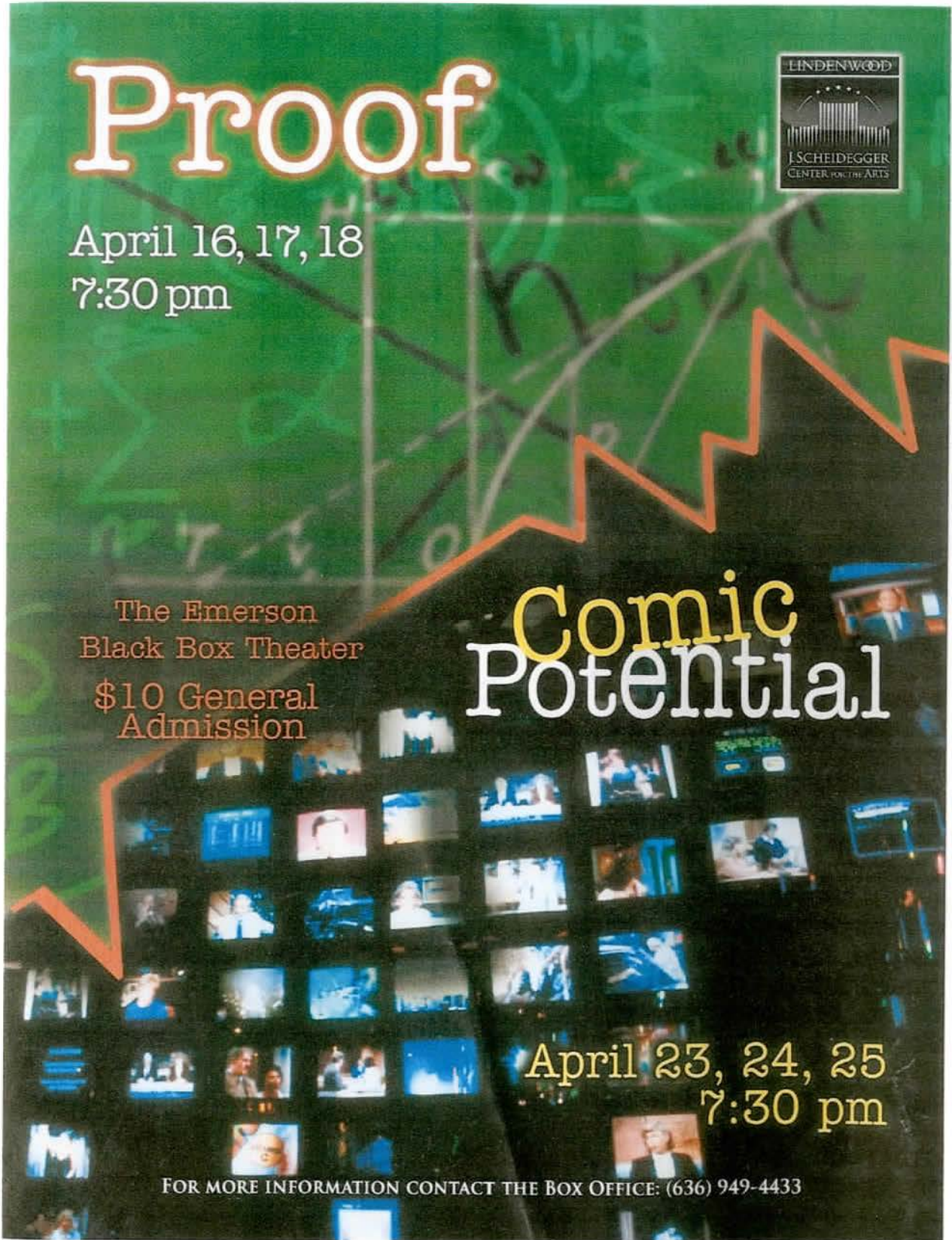


The Emerson
Black Box Theater
\$10 General
Admission

Comic Potential

April 23, 24, 25
7:30 pm

FOR MORE INFORMATION CONTACT THE BOX OFFICE: (636) 949-4433



Appendix K: Ticket



SUBJECT TO TERMS & CONDITIONS ON REVERSE SIDE.
Your direct connection to the box office

ALWCPR	LINDENWOOD'S J. SCHEIDEGGER CENTER	
041809E	THE EMERSON BLACK BOX THEATER	52248688
	2300 WEST CLAY ST, ST CHARLES, MO	
\$10.00		
VI	PROOF	
040709	7:30 PM SAT	909744796030
	APR 18, 2009	VISA \$10.00
GENADM	MALWC1007 0407 F9H	GENADM
7	LORENZ, KARIN	7

FOR TICKETS & INFORMATION
Telecharge.com or 800-233-3123

Appendix L: Program

**PROOF
CAST**

April 16, 17, 18, 2009 7:30 pm

A play by David Auburn

show contains mature language

- Catherine Kari Lorenz
- Claire Emily Heitmyer
- Robert Raphael Montero
- Hal Jamie Lewis

PRODUCTION STAFF

- Director Larry D. Quiggins
- Assistant Director Becca Helms
- Stage Manager Michael Juncal
- Light Board Operator Chris Vaught
- Sound Board Operator Kelley Keough
- Stage Crew Angela Cox
Brianna Knox
- Set Designer Donnel Walsh
- Lighting Designer Shannon Fedde
- Dresser Amanda Walker

Appendix M: Newspaper Article – St. Charles County Suburban Journal

Entertainment

D1

WEDNESDAY, APRIL 15, 2009

suburbanjournal.stltoday.com

Lindenwood shows tackle drama, satire

By Ramie Day
8509PROB@STLST.COM

The Lindenwood University Theatre Program will be performing back-to-back productions this month. The drama "Proof" opens Thursday and runs through Saturday and the satire "Comic Potential" runs the following Thursday through Saturday.

Written by David Auburn, "Proof" opened on Broadway in 2000 starring Mary-Louise Parker. It won the Pulitzer Prize for Drama and the Tony Award for Best Play. A film version was released in 2005 starring Gwyneth Paltrow and Anthony Hopkins.

The play tells the story of Catherine, a young woman whose father was a brilliant but mentally disturbed mathematician. When a former student discovers a ground-breaking paper among her father's notebooks, Catherine must confront her own issues of genius and madness.

"I love how it's written. The dialogue is very natural, very real," said Larry Quiggins, director of Lindenwood's theater program and director of "Proof."

Lindenwood's production is part of a thesis project for Karl Lorenz, who plays the role of Catherine. The cast also includes M.D. Ginsburg, Emily Heilmeyer and James Lewis.

"It's a 'slice of life' show," Quiggins said. "There are some comedic parts and some dramatic parts — like real life."

If your interests are more light-hearted, "Comic Potential" is a sci-fi romantic comedy. Written by Alan Ayckbourn, the show debuted in 1998 in England.

"It's a comedy that focuses on social satire and



Lindenwood University's Theatre Program presents "Comic Potential" April 23-25 at the J. Scheidegger Center for the Arts.

ROY STALL PHOTO

the crazy aspects of love and art and television and what it means to be human in the future," said Marsha Parker, Lindenwood's dean of fine and performing arts and the director of "Comic Potential."

"It was recommended by a colleague," she said. "I read it and liked it. It's come together really well."

The setting is a hospital soap opera, where the nephew of the producer finds himself attracted to a member of the cast. But the cast member is actually a robot, or "actoid."

"There's some mature subject matter, some slapstick as well as verbal comedy," Parker said.

The cast includes James Krawczyk, Nicole Ogden,

Jason Puff, Sarah Porter, Lindsay Bartlett, Tasha Zelmowski, Alex Cooper, Stephen J. Heffernan, Megan Jones, Brian Kappeler, Jenni Passig, Parth Patel, Khni Wilbenmeyer and Ryan Wood.

Both shows will be presented in the Emerson Black Box Theater in the university's J. Scheidegger Center for the Arts. The new center is a big hit with the theater department.

"It's a great working space — it's a joy to work there," Parker said.

"It's like night and day. It's like going from medieval times to the 21st century," Quiggins said. "It has all the bells and whistles."



James Lewis, Karl Lorenz and Emily Heilmeyer star in Lindenwood University's production of "Proof."

ROY STALL PHOTO

WANT TO GO?

WHAT: Comic Potential
WHEN: 7:30 p.m. April 23-25
WHERE: The Emerson Black Box Theater in the J. Scheidegger Center for the Arts, 2300 W. Clay St., St. Charles
COST: \$10
TICKETS: 636-949-4433
INFORMATION: www.lindenwood-center.com

WANT TO GO?

WHAT: Proof
WHEN: 7:30 p.m. April 16-18
WHERE: The Emerson Black Box Theater in the J. Scheidegger Center for the Arts, 2300 W. Clay St., St. Charles
COST: \$10
TICKETS: 636-949-4433
INFORMATION: www.lindenwood-center.com



Appendix N: Script Notes

After learning that I would be performing the role of Catherine in *Proof*, I began to reread and analyze the script and characters. The following section includes my notes from this process.

KEY to Script Notes:

-  Points of Interest
-  Beat Divisions
-  Character Insight
-  Robert's Symptoms
-  Catherine's Symptoms
-  Philosophical Statement

Statements for the argument: Who wrote the proof?

-  Evidence Catherine Wrote Proof
-  Evidence Robert Wrote Proof

SETTING
The back porch of a house in Chicago.

PROOF

BY DAVID AUBURN
ACT ONE

Scene 1

Saturday 12:?? am September 4, 1999

Night. Catherine sits in a chair. She is twenty-five, exhausted, haphazardly dressed. Eyes closed. Robert is standing behind her. He is Catherine's father. Rumpled academic look. Catherine does not know he is there. After a moment:

ROBERT. Can't sleep?

CATHERINE. Jesus, you scared me.

ROBERT. Sorry.

CATHERINE. What are you doing here?

ROBERT. I thought I'd check up on you. Why aren't you in bed?

CATHERINE. Your student is still here. He's up in your study.

ROBERT. He can let himself out.

CATHERINE. I might as well wait up till he's done.

ROBERT. He's not my student anymore. He's teaching now.

Bright kid. *(Beat.)*

CATHERINE. What time is it?

ROBERT. It's almost one.

CATHERINE. Huh.

ROBERT. After midnight ...

CATHERINE. So?

ROBERT. So: *(He indicates something on the table behind him: a bottle of champagne.)* Happy birthday.

CATHERINE. Dad.

Yes, 4 years ago

ROBERT. Do I ever forget?

CATHERINE. Thank you.

ROBERT. Twenty-five. I can't believe it.

CATHERINE. Neither can I. Should we have it now?

ROBERT. It's up to you.

CATHERINE. Yes.

ROBERT. You want me to open it?

CATHERINE. Let me. Last time you opened a bottle of champagne out here you broke a window.

ROBERT. That was a long time ago. I resent your bringing it up.

CATHERINE. You're lucky you didn't lose an eye. *(She opens the bottle.)*

ROBERT. Twenty-five!

CATHERINE. I feel old.

Feels like already failed at life

ROBERT. You're a kid.

CATHERINE. Glasses?

ROBERT. Goddamn it, I forgot the glasses. Do you want me to —

CATHERINE. Nah. *(She drinks from the bottle. A long pull. Robert watches her.)*

ROBERT. I hope you like it. I wasn't sure what to get you.

CATHERINE. This is the worst champagne I have ever tasted.

ROBERT. I am proud to say I don't know anything about wines. I hate those kind of people who are always talking about "vintages."

CATHERINE. It's not even champagne.

ROBERT. The bottle was the right shape.

CATHERINE. "Great Lakes Vineyards." I didn't know they made wine in Wisconsin.

ROBERT. A girl who's drinking from the bottle shouldn't complain. Don't guzzle it. It's an elegant beverage. Sip.

CATHERINE. *(Offering the bottle.)* Do you —

ROBERT. No, go ahead.

CATHERINE. You sure?

ROBERT. Yeah. It's your birthday.

CATHERINE. Happy birthday to me.

ROBERT. What are you going to do on your birthday?

CATHERINE. Drink this. Have some.

ROBERT. No. I hope you're not spending your birthday alone.

CATHERINE. I'm not alone.

ROBERT. I don't count.

CATHERINE. Why not?

ROBERT. I'm your old man. Go out with some friends.

CATHERINE. Right.

ROBERT. Your friends aren't taking you out?

CATHERINE. No.

ROBERT. Why not?

CATHERINE. Because in order for your friends to take you out you generally have to have friends.

ROBERT. *(Dismissive.)* Oh —

CATHERINE. It's funny how that works.

ROBERT. You have friends. What about that cute blonde, what was her name?

CATHERINE. What?

ROBERT. She lives over on Ellis Avenue — you used to spend every minute together.

CATHERINE. Cindy Jacobsen?

ROBERT. Cindy Jacobsen!

CATHERINE. That was in third grade, Dad. Her family moved to Florida in 1983.

ROBERT. What about Claire?

CATHERINE. She's not my friend, she's my sister. And she's in New York. And I don't like her.

ROBERT. I thought she was coming in.

CATHERINE. Not till tomorrow. *(Beat.)*

ROBERT. My advice, if you find yourself awake late at night, is to sit down and do some mathematics.

CATHERINE. Oh please.

ROBERT. We could do some together.

CATHERINE. No.

ROBERT. Why not?

CATHERINE. I can't think of anything worse. You sure you don't want any?

ROBERT. Yeah, thanks.

You used to love it.

CATHERINE. Not anymore.

ROBERT. You knew what a prime number was before you could read.

Social withdrawal

*Did have friends?
what happened?*

First reference to Catherine and math

Feels she lost chance to be mathematician
so why even do math anymore

CATHERINE. Well now I've forgotten.

ROBERT. *(Hard.)* Don't waste your talent, Catherine. *(Beat.)*

CATHERINE. I knew you'd say something like that.

ROBERT. I realize you've had a difficult time.

CATHERINE. Thanks.

ROBERT. That's not an excuse. Don't be lazy.

CATHERINE. I haven't been lazy, I've been taking care of you.

ROBERT. Kid, I've seen you. You sleep till noon, you eat junk, you don't work, the dishes pile up in the sink. If you go out it's to buy magazines. You come back with a stack of magazines this high — I don't know how you read that crap. And those are the good days. Some days you don't get up, you don't get out of bed.

CATHERINE. Those are the good days.

ROBERT. Bullshit. Those days are lost. You threw them away. And you'll never know what else you threw away with them — the work you lost, the ideas you didn't have, discoveries you never made because you were moping in your bed at four in the afternoon.

(Beat.) You know I'm right. *(Beat.)*

CATHERINE. I've lost a few days.

ROBERT. How many?

CATHERINE. Oh, I don't know.

ROBERT. I bet you do.

CATHERINE. What?

ROBERT. I bet you count.

CATHERINE. Knock it off.

ROBERT. Well do you know or don't you?

CATHERINE. I don't.

ROBERT. Of course you do. How many days have you lost?

CATHERINE. A month. Around a month.

ROBERT. Exactly.

CATHERINE. Goddamn it, I don't —

ROBERT. HOW MANY?

CATHERINE. Thirty-three days.

ROBERT. Exactly?

CATHERINE. I don't know.

ROBERT. Be precise, for Chrissake.

CATHERINE. I slept till noon today.

ROBERT. Call it thirty-three and a quarter days.

Depression signs or apathy

CATHERINE. Yes, all right.

ROBERT. You're kidding!

CATHERINE. No.

ROBERT. Amazing number!

CATHERINE. It's a depressing fucking number.

ROBERT. Catherine, if every day you say you've lost were a year, it would be a very interesting fucking number.

CATHERINE. Thirty-three and a quarter years is not interesting.

ROBERT. Stop it. You know exactly what I mean.

CATHERINE. *(Conceding.)* 1,729 weeks.

ROBERT. 1,729. Great number. The smallest number expressible —

CATHERINE. — expressible as the sum of two cubes in two different ways.

ROBERT. Twelve cubed plus one cubed equals 1,729.

CATHERINE. And ten cubed plus nine cubed. Yes, we've got it, thank you.

ROBERT. You see? Even your depression is mathematical. Stop moping and get to work. The kind of potential you have —

CATHERINE. I haven't done anything good.

ROBERT. You're young. You've got time.

CATHERINE. I do?

ROBERT. Yes.

CATHERINE. By the time you were my age you were famous.

ROBERT. By the time I was your age I'd already done my best work. *(Beat.)*

CATHERINE. What about after?

ROBERT. After what?

CATHERINE. After you got sick.

ROBERT. What about it?

CATHERINE. You couldn't work then.

ROBERT. No, if anything I was sharper.

CATHERINE. *(She can't help it; she laughs.)* Dad.

ROBERT. I was. Hey, it's true. The clarity — that was the amazing thing. No doubts.

CATHERINE. You were happy?

ROBERT. Yeah, I was busy.

CATHERINE. Not the same thing.

ROBERT. I don't see the difference. I knew what I wanted to do

only lost 53 1/4 days
out of 4 years

First real proof Catherine knows her math

Feels she is too old to accomplish anything
its too late

First clue to what Catherine is worried about

and I did it.

If I wanted to work a problem all day long, I did it.

If I wanted to look for information — secrets, complex and tantalizing messages — I could find them all around me: in the air. In a pile of fallen leaves some neighbor raked together. In box scores in the paper, written in the steam coming up off a cup of coffee. The whole world was talking to me.

If I just wanted to close my eyes, sit quietly on the porch and listen for the messages, I did that.

It was wonderful. *(Beat.)*

CATHERINE. How old were you? When it started.

ROBERT. Mid-twenties. Twenty-three, four. *(Beat.)*

Is that what you're worried about?

CATHERINE. I've thought about it.

ROBERT. Just getting a year older means nothing, Catherine.

CATHERINE. It's not just getting older.

ROBERT. It's me. *(Beat.)*

CATHERINE. I've thought about it.

ROBERT. Really?

CATHERINE. How could I not?

ROBERT. Well if that's why you're worried you're not keeping up with the medical literature. There are all kinds of factors. It's not simply something you inherit. Just because I went bughouse doesn't mean you will.

CATHERINE. Dad ...

ROBERT. Listen to me. Life changes fast in your early twenties and it shakes you up. You're feeling down. It's been a bad week. You've had a lousy couple years, no one knows that better than me. But you're gonna be okay.

CATHERINE. Yeah?

ROBERT. Yes. I promise you. Push yourself. Don't read so many magazines. Sit down and get the machinery going and I swear to you you'll feel fine. The simple fact that we can talk about this together is a good sign.

CATHERINE. A good sign?

ROBERT. Yes!

CATHERINE. How could it be a good sign?

ROBERT. Because! Crazy people don't sit around wondering if

Could happen anyway life could be gone and did nothing with it

PROOF YOU ARE CRAZY

they're nuts.

CATHERINE. They don't?

ROBERT. Of course not. They've got better things to do. Take it from me. A very good sign that you're crazy is an inability to ask the question, "Am I crazy?"

CATHERINE. Even if the answer is yes?

ROBERT. Crazy people don't ask. You see?

CATHERINE. Yes.

ROBERT. So if you're asking ...

CATHERINE. I'm not.

ROBERT. But if you were, it would be a very good sign.

CATHERINE. A good sign ...

ROBERT. A good sign that you're fine.

CATHERINE. Right.

ROBERT. You see? You've just gotta think these things through. Now come on, what do you say? Let's call it a night, you go up, get some sleep, and then in the morning you can —

CATHERINE. Wait. No.

ROBERT. What's the matter?

CATHERINE. It doesn't work.

ROBERT. Why not?

CATHERINE. It doesn't make sense.

ROBERT. Sure it does.

CATHERINE. No.

ROBERT. Where's the problem?

CATHERINE. The problem is you are crazy!

ROBERT. What difference does that make?

CATHERINE. You admitted — You just told me that you are.

ROBERT. So?

CATHERINE. You said a crazy person would never admit that.

ROBERT. Yeah, but it's ... oh. I see.

CATHERINE. So?

ROBERT. It's a point.

CATHERINE. So how can you admit it?

ROBERT. Well. Because I'm also dead. *(Beat.)* Aren't I?

CATHERINE. You died a week ago.

ROBERT. Heart failure. Quick. The funeral's tomorrow.

CATHERINE. That's why Claire's flying in from New York.

Hallucination? Dream? Ghost?

ROBERT. Yes.

CATHERINE. You're sitting here. You're giving me advice. You brought me champagne.

ROBERT. Yes. *(Beat.)*

CATHERINE. Which means ...

ROBERT. For you?

CATHERINE. Yes.

ROBERT. For you, Catherine, my daughter, who I love very much ... It could be a bad sign. *(They sit together for a moment. Noise off. Hal enters, twenty-eight, semi-hip clothes. He carries a backpack and a jacket, folded. He lets the door go and it bangs shut. Catherine sits up with a jolt.)*

CATHERINE. What?

HAL. Oh, God, sorry — Did I wake you?

CATHERINE. What?

HAL. Were you asleep? *(Beat. Robert is gone.)*

CATHERINE. You scared me, for Chrissake. What are you doing?

HAL. I'm sorry. I didn't realize it had gotten so late. I'm done for the night.

CATHERINE. Good.

HAL. Drinking alone? *(She realizes she is holding the champagne bottle. She puts it down quickly.)*

CATHERINE. Yes.

HAL. Champagne, huh?

CATHERINE. Yes.

HAL. Celebrating?

CATHERINE. No. I just like champagne.

HAL. It's festive.

CATHERINE. What?

HAL. Festive. *(He makes an awkward "party" gesture.)*

CATHERINE. Do you want some?

HAL. Sure.

CATHERINE. *(Gives him the bottle.)* I'm done. You can take the rest with you.

HAL. Oh. He thanks.

CATHERINE. Take it, I'm done.

HAL. No, I shouldn't. I'm driving. *(Beat.)*

Well. I can let myself out.

CATHERINE. Good.

HAL. When should I come back?

CATHERINE. Come back?

HAL. Yeah. I'm nowhere near finished. Maybe tomorrow?

CATHERINE. We have a funeral tomorrow.

HAL. God, you're right, I'm sorry. I was going to attend, if that's all right.

CATHERINE. Yes.

HAL. What about Sunday? Will you be around?

CATHERINE. You've had three days.

HAL. I'd love to get in some more time up there.

CATHERINE. How much longer do you need?

HAL. Another week. At least.

CATHERINE. Are you joking?

HAL. No. Do you know how much stuff there is?

CATHERINE. A week?

HAL. I know you don't need anybody in your hair right now. Look, I spent the last couple days getting everything sorted out. It's mostly notebooks. He dated them all; now that I've got them in order I don't have to work here. I could take some stuff home, read it, bring it back.

CATHERINE. No.

HAL. I'll be careful.

CATHERINE. My father wouldn't want anything moved and I don't want anything to leave this house.

HAL. Then I should work here. I'll stay out of the way.

CATHERINE. You're wasting your time.

HAL. Someone needs to go through your dad's papers.

CATHERINE. There's nothing up there. It's garbage.

HAL. There are a hundred and three notebooks.

CATHERINE. I've looked at those. It's gibberish.

HAL. Someone should read them.

CATHERINE. He was crazy.

HAL. Yes, but he wrote them.

CATHERINE. He was a graphomaniac, Harold. Do you know what that is?

HAL. I know. He wrote compulsively. Call me Hal.

precise

or is it she?

CATHERINE. There's no connection between the ideas. There's no ideas. It's like a monkey at a typewriter. One hundred and three notebooks full of bullshit.

HAL. Let's make sure they're bullshit.

CATHERINE. I'm sure.

HAL. I'm prepared to look at every page. Are you?

CATHERINE. No. I'M not crazy. *(Beat.)*

HAL. Well, I'm gonna be late ... Some friends of mine are in this band. They're playing at a bar up on Diversey. Way down the bill, they're probably going on around two, two-thirty. I said I'd be there.

CATHERINE. Great.

HAL. They're all in the math department. They're really good. They have this great song, you'd like it, called "i" — lowercase I. They just stand there and don't play anything for three minutes.

CATHERINE. "Imaginary Number."

HAL. It's a math joke.

You see why they're way down the bill.

CATHERINE. Long drive to see some nerds in a band.

HAL. God I hate when people say that. It is not that long a drive.

CATHERINE. So they are nerds.

HAL. Oh they're raging geeks. But they're geeks who, you know, can dress themselves ... hold down a job at a major university ... Some of them have switched from glasses to contacts. They play sports, they play in a band, they get laid surprisingly often, so in that sense they sort of make you question the whole set of terms — geek, nerd, wonk, dweeb, Dilbert, paste-eater.

CATHERINE. You're in this band, aren't you?

HAL. Okay, yes. I play drums. You want to come? I never sing, I swear to God.

CATHERINE. No thanks.

HAL. All right. Look, Catherine, Monday: What do you say?

CATHERINE. Don't you have a job?

HAL. Yeah, I have a full teaching load this quarter plus my own work.

CATHERINE. Plus band practice.

DESIRE

HAL. I don't have time to do this but I'm going to. If you'll let me. *(Beat.)* I loved your dad.

I don't believe a mind like his can just shut down. He had lucid

Needs to find answers on his own
Dedicated

moments. He had a lucid year, a whole year four years ago.

CATHERINE. It wasn't a year. It was more like nine months.

HAL. A school year. He was advising students ... I was stalled on my Ph.D. I was this close to quitting. I met with your dad and he put me on the right track with my research. I owe him.

CATHERINE. Sorry.

MORAL STANCE

HAL. Look. Let me — You're twenty-five, right?

CATHERINE. How old are you?

HAL. It doesn't matter. Listen:

CATHERINE. Fuck you, how old are you?

HAL. I'm twenty-eight, all right? When your dad was younger than both of us he made major contributions to three fields: game theory, algebraic geometry, and non-linear operator theory. Most of us never get our heads around one. He basically invented the mathematical techniques for studying rational behavior, and he gave the astrophysicists plenty to work over too. Okay?

CATHERINE. Don't lecture me.

HAL. I'm not. I'm telling you if I came up with one-tenth of the shit your dad produced I could write my own ticket to any math department in the country. *(Beat.)*

CATHERINE. Give me your backpack.

HAL. What?

CATHERINE. Give me your backpack.

HAL. Why?

CATHERINE. I want to look inside it.

HAL. What?

CATHERINE. Open it and give it to me.

HAL. Oh come on.

CATHERINE. You're not taking anything out of this house.

HAL. I wouldn't do that.

CATHERINE. You're hoping to find something upstairs that you can publish.

DESIRE

HAL. Sure.

CATHERINE. Then you can write your own ticket.

HAL. What? No! It would be under your dad's name. It would be for your dad.

CATHERINE. I don't believe you. You have a notebook in that

Dads work, important work

backpack.

HAL. What are you talking about?

CATHERINE. Give it to me.

HAL. You're being a little bit paranoid.

CATHERINE. PARANOID?

HAL. Maybe a little.

CATHERINE. Fuck you, HAL. I KNOW you have one of my notebooks.

HAL. I think you should calm down and think about what you're saying.

CATHERINE. I'm saying you're lying to me and stealing my family's property.

HAL. And I think that sounds paranoid.

CATHERINE. Just because I'm paranoid doesn't mean there isn't something in that backpack.

HAL. You just said yourself there's nothing up there. Didn't you?

CATHERINE. I —

HAL. Didn't you say that?

CATHERINE. Yes.

HAL. So what would I take?

Right? *(Beat.)*

CATHERINE. You're right.

HAL. Thank you.

CATHERINE. So you don't need to come back.

HAL. *(Sighs.)* Please. Someone should know for sure whether —

CATHERINE. I LIVED WITH HIM.

I spent my life with him. I fed him. Talked to him. Tried to listen when he talked. Talked to people who weren't there ...

Watched him shuffling around like a ghost. A very smelly ghost.

He was filthy. I had to make sure he bathed. My own father.

HAL. I'm sorry. I shouldn't have ...

CATHERINE. After my mother died it was just me here. I tried to keep him happy no matter what idiotic project he was doing. He used to read all day. He kept demanding more and more books. I took them out of the library by the carload. We had hundreds upstairs. Then I realized he wasn't reading: He believed aliens were sending him messages through the dewey decimal numbers on the library books. He was trying to work out the code.

Catherine is clever
she figures out Hal has a notebook
(although it is not where she thinks it is)
she also quickly turns Hal's words back on him
just as he did to her

hallucinations

apathy

delusions

HAL. What kind of messages?

CATHERINE. Beautiful mathematics. Answers to everything. The most elegant proofs, perfect proofs, proofs like music.

HAL. Sounds good.

CATHERINE. Plus fashion tips, knock-knock jokes — I mean it was NUTS, okay?

HAL. He was ill. It was a tragedy.

CATHERINE. Later the writing phase: scribbling, nineteen, twenty hours a day ... I ordered him a case of notebooks and he used every one.

I dropped out of school ... I'm glad he's dead.

HAL. I understand why you'd feel that way.

CATHERINE. Fuck you.

HAL. You're right. I can't imagine dealing with that. It must have been awful. I know you —

CATHERINE. You don't know me. I want to be alone. I don't want him around.

HAL. *(Confused.)* Him? I don't —

CATHERINE. You. I don't want you here.

HAL. Why?

CATHERINE. He's dead.

HAL. But I'm not —

CATHERINE. HE's dead; I don't need any protégés around.

HAL. There will be others.

CATHERINE. What?

HAL. You think I'm the only one? People are already working over his stuff. Someone's gonna read those notebooks.

CATHERINE. I'll do it.

HAL. No, you —

CATHERINE. He's my father, I'll do it.

HAL. You can't.

CATHERINE. Why not?

HAL. You don't have the math. It's all just squiggles on a page. You wouldn't know the good stuff from the junk.

CATHERINE. It's all junk.

HAL. If it's not we can't afford to miss any through carelessness.

CATHERINE. I know mathematics.

HAL. If there were anything up there it would be pretty high-

Interesting descriptive words
math seen as art not science

Seeing father

order. It would take a professional to recognize it.

CATHERINE. I think I could recognize it.

HAL. *(Patient.)* Cathy ...

CATHERINE. WHAT?

HAL. I know your dad taught you some basic stuff, but come on.

CATHERINE. You don't think I could do it.

HAL. I'm sorry; I know that you couldn't. *(Beat. Catherine angrily snatches his backpack.)* Hey! Oh come on. Give me a break. *(She opens the backpack and rifles through it.)* This isn't an airport. *(Catherine removes items one by one. A water bottle. Some workout clothes. An orange. Drumsticks. Nothing else. She puts everything back in and gives it back. Beat.)*

CATHERINE. You can come tomorrow. *(Beat. They are both embarrassed.)*

HAL. The University health service is, uh, very good.

My Mom died a couple years ago and I was pretty broken up. Also my work wasn't going that well ... I went over and talked to this doctor. I saw her for a couple months and it really helped.

CATHERINE. I'm fine. *(Beat.)*

HAL. Also exercise is great. I run along the lake a couple of mornings a week. It's not too cold yet. If you wanted to come sometime I could pick you up. We wouldn't have to talk ...

CATHERINE. No thanks.

HAL. All right.

I'm gonna be late for the show. I better go.

CATHERINE. Okay. *(Beat.)*

HAL. It's seriously like twenty minutes up to the club. We go on, we play, we're terrible but we buy everyone drinks afterward to make up for it. You're home by four, four-thirty, tops ...

CATHERINE. Good night.

HAL. Good night. *(Hal starts to exit. He has forgotten his jacket.)*

CATHERINE. Wait, your coat.

HAL. No, you *[don't have to.]* — *(She picks up his jacket. As she does a composition book that was folded up in the coat falls to the floor. Beat. Catherine picks it up, trembling with rage.)*

CATHERINE. I'm PARANOID?

HAL. Wait.

CATHERINE. You think I should go JOGGING?

Hal does not believe Catherine has much mathematical ability if any

Hal is understanding, compassionate, willing to help

HAL. Just hold on.
CATHERINE. Get out!
HAL. Can I please just —
CATHERINE. Get the fuck out of my house.
HAL. Listen to me for a minute.
CATHERINE. *(Waving the book.)* You stole this!
HAL. Let me explain!
CATHERINE. You stole it from ME, you stole it from my
FATHER — *(Hal snatches the book.)*
HAL. I want to show you something, will you calm down?
CATHERINE. Give it back.
HAL. Just wait a minute.
CATHERINE. I'm calling the police. *(She picks up the phone and
dials.)*
HAL. Don't. Look, I borrowed the book, all right? I'm sorry, I just
picked it up before I came downstairs and thought I'd—
CATHERINE. *(On phone.)* Hello?
HAL. I did it for a reason.
CATHERINE. Hello, Police? I — Yes, I'd like to report a robbery
in progress.
HAL. I noticed something — something your father wrote. All
right? Not math, something he wrote. Here, let me show you.
CATHERINE. A ROBBERY.
HAL. Will you put the fucking phone down and listen to me?
CATHERINE. *(On phone.)* Yes, I'm at 5724 South —
HAL. It's about you. See? YOU. It was written about you. Here's
your name: CATHY. See?
CATHERINE. South ... *(She pauses. She seems to be listening.)*
HAL. *(Reads.)* "A good day. Some very good news from
Catherine."
I didn't know what that referred to, but I thought you *[might]* ...
CATHERINE. When did he write this?
HAL. I think four years ago. The handwriting is steady. It must
have been during his remission.
There's more. *(A moment. Catherine hangs up the phone.)*
"Machinery not working yet but I am patient."
"The machinery" is what he called his mind, his ability to do
mathematics.

Dad is glad she is going to school
See him writing this in later scene

HAL. Just hold on.
CATHERINE. Get out!
HAL. Can I please just —
CATHERINE. Get the fuck out of my house.
HAL. Listen to me for a minute.
CATHERINE. *(Waving the book.)* You stole this!
HAL. Let me explain!
CATHERINE. You stole it from ME, you stole it from my
FATHER — *(Hal snatches the book.)*
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Catherine."
I didn't know what that referred to, but I thought you *[might]* ...
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HAL. I think four years ago. The handwriting is steady. It must
have been during his remission.
There's more. *(A moment. Catherine hangs up the phone.)*
"Machinery not working yet but I am patient."
"The machinery" is what he called his mind, his ability to do
mathematics.

Dad is glad she is going to school

See him writing this in later scene

CATHERINE. I know.

HAL. *(Reads.)* "I know I'll get there. I am an auto mechanic who after years of greasy work on a hopeless wreck turns the ignition and hears a faint cough. I am not driving yet but there's cause for optimism. Talking with students helps. So does being outside, eating meals in restaurants, riding busses, all the activities of 'normal' life.

"Most of all Cathy. The years she has lost caring for me. I almost wrote 'wasted.' Yet her refusal to let me be institutionalized — her keeping me at home, caring for me herself has certainly saved my life. Made writing this possible. Made it possible to imagine doing math again. Where does her strength come from? I can never repay her.

"Today is her birthday. She is twenty-one. I'm taking her to dinner."

Dated September fourth.

That's tomorrow.

CATHERINE. It's today.

HAL. You're right. *(She takes the book.)*

I thought you might want to see it. I shouldn't have tried to sneak it out. Tomorrow I was going to — it sounds stupid now. I was going to wrap it.

Happy birthday. *(Hal exits. Catherine is alone. She puts her head in her hands. She weeps. Eventually she stops, wipes her eyes. From off: a police siren, drawing closer.)*

CATHERINE. Shit.

Proof Catherine made the right decision to keep him home
Comes back again In fight with Claire

Hal is kind, thoughtful

Fade

Scene 2
Saturday September 4 morning

The next morning, Claire, stylish, attractive, drinks coffee from a mug. She has brought bagels and fruit out to the porch on a tray. She notices the champagne bottle lying on the floor. She picks it up and sets it on a table. Catherine enters. Her hair is wet from a shower.

Suggests has been awhile since Catherine has bathed

CLAIRE. Better. Much.

CATHERINE. Thanks.

CLAIRE. Feel better?

CATHERINE. Yeah.

CLAIRE. You look a million times better. Have some coffee.

CATHERINE. Okay.

CLAIRE. How do you take it?

CATHERINE. Black.

CLAIRE. Have a little milk. *(She pours.)* Want a banana? It's a good thing I brought food: There was nothing in the house.

CATHERINE. I've been meaning to go shopping.

CLAIRE. Have a bagel.

CATHERINE. No, I hate breakfast. *(Beat.)*

CLAIRE. You didn't put on the dress.

CATHERINE. Didn't really feel like it.

CLAIRE. Don't you want to try it on? See if it fits?

CATHERINE. I'll put it on later. *(Beat.)*

CLAIRE. If you want to dry your hair I have a hair drier.

CATHERINE. Nah.

CLAIRE. Did you use that conditioner I brought you?

CATHERINE. No, shit, I forgot.

CLAIRE. It's my favorite. You'll love it, Katie. I want you to try it.

CATHERINE. I'll use it next time.

CLAIRE. You'll like it. It has jojoba.

CATHERINE. What is "jojoba"?

CLAIRE. It's something they put in for healthy hair.

Values appearances

Claire is trying to help but in a way that gives her control
Claire needs order and the ability to control her life

CATHERINE. Hair is dead.

CLAIRE. What?

CATHERINE. It's dead tissue. You can't make it "healthy."

CLAIRE. Whatever, it's something that's good for your hair.

CATHERINE. What, a chemical?

CLAIRE. No, it's organic.

CATHERINE. Well it can be organic and still be a chemical.

CLAIRE. I don't know what it is.

CATHERINE. Haven't you ever heard of organic chemistry?

CLAIRE. It makes my hair feel, look, and smell good. That's the extent of my information about it. You might like it if you decide to use it.

CATHERINE. Thanks, I'll try it.

CLAIRE. Good.

If the dress doesn't fit we can go downtown and exchange it.

CATHERINE. Okay.

CLAIRE. I'll take you to lunch.

CATHERINE. Great.

CLAIRE. Maybe Sunday before I go back. Do you need anything?

CATHERINE. Like clothes?

CLAIRE. Or anything. While I'm here.

CATHERINE. Nah, I'm cool. *(Beat.)*

CLAIRE. I thought we'd have some people over tonight. If you're feeling okay.

CATHERINE. I'm feeling okay, Claire, stop saying that.

CLAIRE. You don't have any plans?

CATHERINE. No.

CLAIRE. I ordered some food. Wine, beer.

CATHERINE. We are burying Dad this afternoon.

CLAIRE. I think it will be all right. Anyone who's been to the funeral and wants to come over for something to eat, can. And it's the only time I can see any old Chicago friends. It'll be nice. It's a funeral but we don't have to be completely grim about it. If it's okay with you.

CATHERINE. Yes, sure.

CLAIRE. It's been a stressful time. It would be good to relax in a low-key way.

Unlike Catherine and her father Claire does not need to break things down to understand their function

Feels for Claire. Tries to be nicer

Mitch says hi.

CATHERINE. Hi, Mitch.

CLAIRE. He's really sorry he couldn't come.

CATHERINE. Yeah, he's gonna miss all the fun.

CLAIRE. He wanted to see you. He sends his love. I told him you'd see him soon enough.

We're getting married.

CATHERINE. No shit.

CLAIRE. Yes! We just decided.

CATHERINE. Yikes.

CLAIRE. Yes!

CATHERINE. When?

CLAIRE. January.

CATHERINE. Huh.

CLAIRE. We're not going to do a huge thing. His folks are gone too. Just City Hall, then a big dinner at our favorite restaurant for all our friends. And you, of course, I hope you'll be in the wedding.

CATHERINE. Yeah. Of course. Congratulations, Claire, I'm really happy for you.

CLAIRE. Thanks, me too. We just decided it was time. His job is great. I just got promoted...

CATHERINE. Huh.

CLAIRE. You will come?

CATHERINE. Yes, sure. January? I mean I don't have to check my calendar or anything. Sure.

CLAIRE. That makes me very happy. *(Beat.)* How are you?

CATHERINE. Okay.

CLAIRE. How are you feeling about everything?

CATHERINE. About "everything"?

CLAIRE. About Dad.

CATHERINE. What about him?

CLAIRE. How are you feeling about his death? Are you all right?

CATHERINE. Yes, I am.

CLAIRE. Honestly?

CATHERINE. Yes.

CLAIRE. I think in some ways it was the "right time." If there is ever a right time.

Do you know what you want to do now?

Even though she does not like Clair right now she still loves her and wants her to be happy

Claire is practical

CATHERINE. No.

CLAIRE. Do you want to stay here?

CATHERINE. I don't know.

CLAIRE. Do you want to go back to school?

CATHERINE. I haven't thought about it.

CLAIRE. Well there's a lot to think about.

How do you feel?

CATHERINE. Physically? Great. Except my hair seems kind of unhealthy. I wish there were something I could do about that.

CLAIRE. Come on, Catherine.

CATHERINE. What is the point of all these questions? *(Beat.)*

CLAIRE. Katie, some policemen came by while you were in the shower.

CATHERINE. Yeah?

CLAIRE. They said they were "checking up" on things here. Seeing how everything was this morning.

CATHERINE. *(Neutral.)* That was nice.

CLAIRE. They told me they responded to a call last night and came to the house.

CATHERINE. Yeah?

CLAIRE. Did you call the police last night?

CATHERINE. Yeah.

CLAIRE. Why?

CATHERINE. I thought the house was being robbed.

CLAIRE. But it wasn't.

CATHERINE. No. I changed my mind. *(Beat.)*

CLAIRE. First you call 911 with an emergency and then you hang up on them —

CATHERINE. I didn't really want them to come.

CLAIRE. So why did you call?

CATHERINE. I was trying to get this guy out of the house.

CLAIRE. Who?

CATHERINE. One of Dad's students.

CLAIRE. Dad hasn't had any students for years.

CATHERINE. No, he WAS Dad's student. Now he's — he's a mathematician.

CLAIRE. Why was he in the house in the first place?

CATHERINE. Well he's been coming here to look at Dad's note-

Plans are important to Claire, she likes knowing what to expect in life

sarcastic

books.

CLAIRE. In the middle of the night?

CATHERINE. It was late. I was waiting for him to finish and last night I thought he might have been stealing them.

CLAIRE. Stealing the notebooks.

CATHERINE. YES. So I told him to go.

CLAIRE. Was he stealing them?

CATHERINE. Yes. That's why I called the police —

CLAIRE. What is this man's name?

CATHERINE. Hal. Harold. Harold Dobbs.

CLAIRE. The police said you were the only one here.

CATHERINE. He left before they got here.

CLAIRE. With the notebooks?

CATHERINE. No, Claire, don't be stupid, there are over a hundred notebooks. He was only stealing ONE, but he was stealing it so he could give it BACK to me, so I let him go so he could play with his band on the north side.

CLAIRE. His band?

CATHERINE. He was late. He wanted me to come with him but I was like Yeah, right. *(Beat.)*

CLAIRE. *(Gently.)* Is "Harold Dobbs" your boyfriend?

CATHERINE. No!

CLAIRE. Are you sleeping with him?

CATHERINE. What? Euughh! No! He's a math geek!

CLAIRE. And he's in a band? A rock band?

CATHERINE. No a marching band. He plays trombone. Yes a rock band!

CLAIRE. What is the name of his band?

CATHERINE. How should I know?

CLAIRE. "Harold Dobbs" didn't tell you the name of his rock band?

CATHERINE. No. I don't know. Look in the paper. They were playing last night. They do a song called "Imaginary Number" that doesn't exist. *(Beat.)*

CLAIRE. I'm sorry, I'm just trying to understand: Is "Harold Dobbs"—

CATHERINE. Stop saying "Harold Dobbs."

CLAIRE. Is this ... person ...

Catherine lashes out when she feels threatened

CATHERINE. HAROLD DOBBS EXISTS.

CLAIRE. I'm sure he does.

CATHERINE. He's a mathematician at the University of Chicago. Call the fucking math department.

CLAIRE. Don't get upset. I'm just trying to understand! I mean if you found out some creepy grad student was trying to take some of Dad's papers and you called the police I'd understand, and if you were out here partying, drinking with your boyfriend, I'd understand. But the two stories don't go together.

CATHERINE. Because you made up the "boyfriend" story. I was here ALONE —

CLAIRE. Harold Dobbs wasn't here?

CATHERINE. No, he — YES, he was here, but we weren't "partying"!

CLAIRE. You weren't drinking with him?

CATHERINE. No!

CLAIRE. *(She holds up the champagne bottle.)* This was sitting right here. Who were you drinking champagne with? *(Catherine hesitates.)*

CATHERINE. With no one.

CLAIRE. Are you sure?

CATHERINE. Yes. *(Beat.)*

CLAIRE. The police said you were abusive. They said you're lucky they didn't haul you in.

CATHERINE. These guys were assholes, Claire. They wouldn't go away. They wanted me to fill out a report ...

CLAIRE. Were you abusive?

CATHERINE. This one cop kept spitting on me when he talked. It was disgusting.

CLAIRE. Did you use the word "dickhead"?

CATHERINE. Oh I don't remember.

CLAIRE. Did you tell one cop ... to go fuck the other cop's mother?

CATHERINE. NO.

CLAIRE. That's what they said.

CATHERINE. Not with that phrasing.

CLAIRE. Did you strike one of them?

CATHERINE. They were trying to come in the house!

Claire thinks Catherine is crazy

Mood problems – anger/hostility

Uses anger to mask other emotions

CLAIRE. Oh my God.

CATHERINE. I might have pushed him a little.

CLAIRE. They said you were either drunk or disturbed.

CATHERINE. They wanted to come in here and SEARCH MY HOUSE —

CLAIRE. YOU called THEM.

CATHERINE. Yes but I didn't actually WANT them to come. But they did come and then they started acting like they owned the place — pushing me around, calling me "girly," smirking at me, laughing: They were assholes.

CLAIRE. These guys seemed perfectly nice. They were off-duty and they took the trouble to come back here at the end of their shift to check up on you. They were very polite.

CATHERINE. Well people are nicer to you. (Beat.)

CLAIRE. Katie. Would you like to come to New York?

CATHERINE. Yes, I told you, I'll come in January.

CLAIRE. You could come sooner. We'd love to have you. You could stay with us. It'd be fun.

CATHERINE. I don't want to.

CLAIRE. Mitch has become an excellent cook. It's like his hobby now. He buys all these gadgets. Garlic press, olive oil sprayer ... Every night there's something new. Delicious, wonderful meals. The other day he made vegetarian chili!

CATHERINE. What the fuck are you talking about?

CLAIRE. Stay with us for a while. We would have so much fun.

CATHERINE. Thanks, I'm okay here.

CLAIRE. Chicago is dead. New York is so much more fun, you can't believe it.

CATHERINE. The "fun" thing is really not where my focus is at the moment.

CLAIRE. I think New York would be a really fun and ... safe ... place for you to —

CATHERINE. I don't need a safe place and I don't want to have any fun! I'm perfectly fine here.

CLAIRE. You look tired. I think you could use some downtime.

CATHERINE. Downtime?

CLAIRE. Katie, please. You've had a very hard time.

CATHERINE. I'm PERFECTLY OKAY.

Claire is more of a people person than Catherine

CLAIRE. I think you're upset and exhausted.

CATHERINE. I was FINE till you got here.

CLAIRE. Yes, but you —

HAL. *(From off.)* Catherine?

CLAIRE. Who is that? *(A beat. Hal enters.)*

HAL. Hey, I — *(Catherine stands and points triumphantly at him.)*

CATHERINE. HAROLD DOBBS!

HAL. *(Confused.)* Hi.

CATHERINE. OKAY? I really don't need this, Claire. I'm fine, you know, I'm totally fine, and then you swoop in here with these questions, and "Are you okay?" and your soothing tone of voice and "Oh, the poor policemen" — I think the police can handle themselves! — and bagels and bananas and jojoba and "Come to New York" and vegetarian chili, I mean it really pisses me off so just SAVE IT. *(Beat.)*

CLAIRE. *(Smoothly, to Hal.)* I'm Claire. Catherine's sister.

HAL. Oh, hi. Hal. Nice to meet you. *(Uncomfortable beat.)* I ... hope it's not too early. I was just going to try to get some work done before the uh — if uh, if ...

CLAIRE. Yes!

CATHERINE. Sure, okay. *(Hal exits. A moment.)*

CLAIRE. That's Harold Dobbs?

CATHERINE. Yes.

CLAIRE. He's cute.

CATHERINE. *(Disgusted.)* Eugh.

CLAIRE. He's a mathematician?

CATHERINE. I think you owe me an apology, Claire.

CLAIRE. We need to make some decisions. But I shouldn't have tried to start first thing in the morning. I don't want an argument. *(Beat.)* Maybe Hal would like a bagel? *(Catherine doesn't take the hint. She exits.)*

Claire and Catherine's relationship

Claire avoids difficult, emotional situations

Fade

Scene 3

Saturday September 4 night

Night. Inside the house a party is in progress. Loud music from a not-very-good but enthusiastic band. Catherine is alone on the porch. She wears a flattering black dress. Inside, the band finishes a number. Cheers, applause. After a moment Hal comes out. He wears a dark suit. He has taken off his tie. He is sweaty and revved-up from playing. He holds two bottles of beer. Catherine regards him. A beat.

CATHERINE. I feel that for a funeral reception this might have gotten a bit out of control.

HAL. Aw come on. It's great. Come on in.

CATHERINE. I'm okay.

HAL. We're done playing, I promise.

CATHERINE. No, thanks.

HAL. Do you want a beer?

CATHERINE. I'm okay.

HAL. I brought you one. *(Beat. She hesitates.)*

CATHERINE. Okay. *(She takes it, sips.)* How many people are in there?

HAL. It's down to about forty.

CATHERINE. Forty?

HAL. Just the hard-core partyers.

CATHERINE. My sister's friends.

HAL. No, mathematicians. Your sister's friends left hours ago.

The guys were really pleased to be asked to participate. They worshiped your dad.

CATHERINE. It was Claire's idea.

HAL. It was good.

CATHERINE. *(Concedes.)* The performance of "Imaginary Number" was ... sort of ... moving.

HAL. Good funeral. I mean not "good," but —

CATHERINE. No. Yeah.

HAL. Can you believe how many people came?

CATHERINE. I was surprised.

HAL. I think he would have liked it. *(She looks at him.)* Sorry, it's not my place to —

CATHERINE. No, you're right. Everything was better than I thought. *(Beat.)*

HAL. You look great.

CATHERINE. *(Indicates the dress.)* Claire gave it to me.

HAL. I like it.

CATHERINE. It doesn't really fit.

HAL. No, Catherine, it's good. *(A moment. Noise from inside.)*

CATHERINE. When do you think they'll leave?

HAL. No way to know. Mathematicians are insane. I went to this conference in Toronto last fall. I'm young, right? I'm in shape, I thought I could hang with the big boys. Wrong. I've never been so exhausted in my life. Forty-eight straight hours of partying, drinking, drugs, papers, lectures ...

CATHERINE. Drugs?

HAL. Yeah. Amphetamines, mostly. I mean I don't. Some of the older guys are really hooked.

CATHERINE. Really?

HAL. Yeah, they think they need it.

CATHERINE. Why?

HAL. They think math's a young man's game. Speed keeps them racing, makes them feel sharp. There's this fear that your creativity peaks around twenty-three and it's all downhill from there. Once you hit fifty it's over, you might as well teach high school.

CATHERINE. That's what my father thought.

HAL. I dunno. Some people stay prolific.

CATHERINE. Not many.

HAL. No, you're right. Really original work — it's all young guys.

CATHERINE. Young guys.

HAL. Young people.

CATHERINE. But it is men, mostly.

HAL. There are some women.

CATHERINE. Who?

HAL. There's a woman at Stanford, I can't remember her name.

CATHERINE. Sophie Germain.

Catherine is unsure of herself

it has been along time since she has been in this type of social situation or since she has needed to or wanted to dress up

Robert, Hal, and Catherine all share this fear

HAL. Yeah? I've probably seen her at meetings, I just don't think I've met her.

CATHERINE. She was born in Paris in 1776. *(Beat.)*

HAL. So I've definitely never met her.

CATHERINE. She was trapped in her house.

The French Revolution was going on, the Terror. She had to stay inside for safety and she passed the time reading in her father's study. The Greeks ... Later she tried to get a real education but the schools didn't allow women. So she wrote letters. She wrote to Gauss. She used a man's name. Uh, "Antoine-August Le Blanc." She sent him some proofs involving a certain kind of prime number, important work. He was delighted to correspond with such a brilliant young man.

Dad gave me a book about her.

HAL. I'm stupid. Sophie Germain, of course.

CATHERINE. You know her?

HAL. Germain Primes.

CATHERINE. Right.

HAL. They're famous. Double them and add one, and you get another prime. Like two. Two is prime, doubled plus one is five: also prime.

CATHERINE. Right. Or 92,305 times $2^{16,998}$ plus one.

HAL. *(Startled.)* Right.

CATHERINE. That's the biggest one. The biggest one known ... *(Beat.)*

HAL. Did he ever find out who she was? Gauss.

CATHERINE. Yeah. Later a mutual friend told him the brilliant young man was a woman.

He wrote to her: "A taste for the mysteries of numbers is excessively rare, but when a person of the sex which, according to our customs and prejudices, must encounter infinitely more difficulties than men to familiarize herself with these thorny researches, succeeds nevertheless in penetrating the most obscure parts of them, then without a doubt she must have the noblest courage, quite extraordinary talents and superior genius."

(Now self-conscious.) I memorized it ... *(Hal stares at her. He suddenly kisses her, then stops, embarrassed. He moves away.)*

HAL. Sorry. I'm a little drunk.

Work by a woman thought to be work by a man
Like Catherine's proof is thought to be done by her father

Prime number proof, like Catherine's proof
prime numbers are Catherine's favorite – is this because of
Sophie Germain

Has not opened up to anyone in a long time

CATHERINE. It's okay. (*Uncomfortable beat.*) I'm sorry about yesterday. I wasn't helpful. About the work you're doing. Take as long as you need upstairs.

HAL. You were fine. I was pushy.

CATHERINE. I was awful.

HAL. No. My timing was terrible. Anyway, you're probably right.

CATHERINE. What?

HAL. About it being junk.

CATHERINE. (*Nods.*) Yes.

HAL. I read through a lot of stuff today, just skimming. Except for the book I stole —

CATHERINE. Oh, God, I'm sorry about that.

HAL. No, you were right.

CATHERINE. I shouldn't have called the police.

HAL. It was my fault.

CATHERINE. No.

HAL. The point is, that book — I'm starting to think it's the only lucid one, really. And there's no math in it.

CATHERINE. No.

HAL. I mean, I'll keep reading, but if I don't find anything in a couple of days ...

CATHERINE. Back to the drums.

HAL. Yeah.

CATHERINE. And your own research.

HAL. Such as it is.

CATHERINE. What's wrong with it?

HAL. It's not exactly setting the world on fire.

CATHERINE. Oh come on.

HAL. It sucks, basically.

CATHERINE. Harold.

HAL. My papers get turned down. For the right reasons — my stuff is trivial. The big ideas aren't there.

CATHERINE. It's not about big ideas. It's work. You've got to chip away at a problem.

HAL. That's not what your dad did.

CATHERINE. I think it was, in a way. He'd attack a question from the side, from some weird angle, sneak up on it, grind away at it. He was slogging. He was just so much faster than anyone else

Robert's process - Possibly imitated by Catherine

that from the outside it looked magical.

HAL. I don't know.

CATHERINE. I'm just guessing.

HAL. Plus the work was beautiful. It's streamlined: no wasted moves, like a ninety-five-mile-an-hour fastball. It's just ... elegant.

CATHERINE. Yeah.

HAL. And that's what you can never duplicate. At least I can't.

It's okay. At a certain point you realize it's not going to happen, you readjust your expectations. I enjoy teaching.

CATHERINE. You might come up with something.

HAL. I'm twenty-eight, remember? On the downhill slope.

CATHERINE. Have you tried speed? I've heard it helps.

HAL. *(Laughs.)* Yeah. *(Beat.)*

CATHERINE. So, Hal.

HAL. Yeah?

CATHERINE. What do you do for sex?

HAL. What?

CATHERINE. At your conferences.

HAL. Uh, I uh —

CATHERINE. Isn't that why people hold conferences? Travel. Room service. Tax-deductible sex in big hotel beds.

HAL. *(Laughs, nervous.)* Maybe. I don't know.

CATHERINE. So what do you do? All you guys. *(Beat. Is she flirting with him? Hal is not sure.)*

HAL. Well we are scientists.

CATHERINE. So?

HAL. So there's a lot of experimentation.

CATHERINE. *(Laughs.)* I see. *(Beat. Catherine goes to him. She kisses him. A longer kiss. It ends. Hal is surprised and pleased.)*

HAL. Huh.

CATHERINE. That was nice.

HAL. Really?

CATHERINE. Yes.

HAL. Again?

CATHERINE. Yes. *(Kiss.)*

HAL. I always liked you.

CATHERINE. You did?

HAL. Even before I knew you. I'd catch glimpses of you when you

Past his time

Catherine knows how to flirt 'she just needed to remember

Big shift from the awkward romantic moments earlier

visited your dad's office at school. I wanted to talk to you but I thought, No, you do not flirt with your doctoral adviser's daughter.

CATHERINE. Especially when your adviser's crazy.

HAL. Especially then. *(Kiss.)*

CATHERINE. You came here once. Four years ago. Remember?

HAL. Sure. I can't believe you do. I was dropping off a draft of my thesis for your dad. Jesus I was nervous.

CATHERINE. You looked nervous.

HAL. I can't believe you remember that.

CATHERINE. I remember you. *(Kiss.)* I thought you seemed ... not boring. *(They continue to kiss.)*

Fade

Scene 4

Sunday September 5 morning

The next morning. Catherine alone on the porch, in a robe. Hal enters, half-dressed. He walks up behind her quietly. She hears him and turns.

HAL. How long have you been up?

CATHERINE. A while.

HAL. Did I oversleep?

CATHERINE. No. *(Beat. Morning-after awkwardness.)*

HAL. Is your sister up?

CATHERINE. No. She's flying home in a couple hours. I should probably wake her.

HAL. Let her sleep. She was doing some pretty serious drinking with the theoretical physicists last night.

CATHERINE. I'll make her some coffee when she gets up. *(Beat.)*

HAL. Sunday mornings I usually go out. Get the paper, have some breakfast.

CATHERINE. Okay. *(Beat.)*

HAL. Do you want to come?

CATHERINE. Oh. No. I ought to stick around until Claire leaves.

HAL. All right.

Do you mind if I stay?

CATHERINE. No. You can work if you want.

HAL. *(Taken aback.)* Okay.

CATHERINE. Okay.

HAL. Should I?

CATHERINE. If you want to.

HAL. Do you want me to go?

CATHERINE. Do you want to go?

HAL. I want to stay here with you.

CATHERINE. Oh ...

HAL. I want to spend the day with you if possible. I'd like to spend as much time with you as I can unless of course I'm coming on way too strong right now and scaring you in which case I'll begin backpedaling immediately ... *(She laughs. Her relief is evident; so is his. They kiss.)*

HAL. How embarrassing is it if I say last night was wonderful?

CATHERINE. It's only embarrassing if I don't agree.

HAL. Uh, so ...

CATHERINE. Don't be embarrassed. *(They kiss. After a moment Catherine breaks off. She hesitates, making a decision. Then she takes a chain from around her neck. There is a key on the chain. She tosses it to Hal.)* Here.

HAL. What's this?

CATHERINE. It's a key.

HAL. Ah.

CATHERINE. Try it.

HAL. Where?

CATHERINE. Bottom drawer of the desk in my dad's office.

HAL. What's in there?

CATHERINE. There's one way to find out, Professor.

HAL. Now? *(Catherine shrugs. Hal laughs, unsure if this is a joke or not.)* Okay. *(He kisses her quickly then goes inside. Catherine smiles to herself. She is happy, on the edge of being giddy. Claire enters, hum-*

over. She sits down, squinting.)
CATHERINE. Good morning.

Playful, sense of humor

Why give him the key now?

feels a connection with Hal, through math, through father, has seen he is a decent, honest guy and trusts him, wants to share work with someone who will not only understand it, but also a person she feels comfortable with and who will appreciate it

Allows herself to be vulnerable, this proof will determine her future, it will either be a sign of her mathematical ability, or it could be nothing [an illusion like her father; proof about the "cold"] it could be an instant sign she has lost her mind

She says later she knows it's good [to Claire] and that it works [to Hal at end] which both parallel her father's insistence his work is good when in reality it was nonsense

CLAIRE. Please don't yell please.

CATHERINE. Are you all right?

CLAIRE. No. *(Beat. She clutches her head.)* Those fucking physicists.

CATHERINE. What happened?

CLAIRE. Thanks a lot for leaving me all alone with them.

CATHERINE. Where were your friends?

CLAIRE. My stupid friends left — it was only eleven o'clock! — they all had to get home and pay their babysitters or bake bread or something. I'm left alone with these lunatics ...

CATHERINE. Why did you drink so much?

CLAIRE. I thought I could keep up with them. I thought they'd stop. They didn't. Oh God. "Have another tequila ..."

CATHERINE. Do you want some coffee?

CLAIRE. In a minute.

That BAND.

CATHERINE. Yeah.

CLAIRE. They were terrible.

CATHERINE. They were okay. They had fun. I think.

CLAIRE. Well as long as everyone had fun.

Your dress turned out all right.

CATHERINE. I love it.

CLAIRE. You do.

CATHERINE. Yeah, it's wonderful.

CLAIRE. I was surprised you even wore it.

CATHERINE. I love it, Claire. Thanks.

CLAIRE. *(Surprised.)* You're welcome. You're in a good mood.

CATHERINE. Should I not be?

CLAIRE. Are you kidding? No. I'm thrilled.

I'm leaving in a few hours.

CATHERINE. I know.

CLAIRE. The house is a wreck. Don't clean it up yourself. I'll hire someone to come in.

CATHERINE. Thanks. You want your coffee?

CLAIRE. No, thanks.

CATHERINE. *(Starting in.)* It's no trouble.

CLAIRE. Hold on a sec, Katie. I just ... *(Claire takes a breath.)*

I'm leaving soon. I —

CATHERINE. You said. I know.

CLAIRE. I'd still like you to come to New York.

CATHERINE. Yes; January.

CLAIRE. I'd like you to move to New York.

CATHERINE. Move?

CLAIRE. Would you think about it? For me?

You could stay with me and Mitch at first. There's plenty of room. Then you could get your own place. I've already scouted some apartments for you, really cute places.

CATHERINE. What would I do in New York?

CLAIRE. What are you doing here?

CATHERINE. I live here.

CLAIRE. You could do whatever you want. You could work, you could go to school.

CATHERINE. I don't know, Claire. This is pretty major.

CLAIRE. I realize that.

CATHERINE. I know you mean well. I'm just not sure what I want to do. I mean to be honest you were right yesterday. I do feel a little confused. I'm tired. It's been a pretty weird couple of years. I think I'd like to take some time to figure things out.

CLAIRE. You could do that in New York.

CATHERINE. And I could do it here.

CLAIRE. But it would be much easier for me to get you set up in an apartment in New York, and —

CATHERINE. I don't need an apartment, I'll stay in the house.

CLAIRE. We're selling the house. *(Beat.)*

CATHERINE. What?

CLAIRE. We — I'm selling it.

CATHERINE. WHEN?

CLAIRE. I'm hoping to do the paperwork this week. I know it seems sudden.

CATHERINE. No one was here looking at the place, who are you selling it to?

CLAIRE. The University. They've wanted the block for years.

CATHERINE. I LIVE HERE.

CLAIRE. Honey, now that Dad's gone it doesn't make sense. It's in bad shape. It costs a fortune to heat. It's time to let it go. Mitch agrees, it's a very smart move. We're lucky, we have a great offer —

CATHERINE. Where am I supposed to live?

Claire's main concerns are practicality and money

CLAIRE. Come to New York.

CATHERINE. I can't believe this.

CLAIRE. It'll be so good. You deserve a change. This would be a whole new adventure for you.

CATHERINE. Why are you doing this?

CLAIRE. I want to help.

CATHERINE. By kicking me out of my house?

CLAIRE. It was my house too.

CATHERINE. You haven't lived here for years.

CLAIRE. I know that. You were on your own. I really regret that, Katie.

CATHERINE. Don't.

CLAIRE. I know I let you down. I feel awful about it. Now I'm trying to help.

CATHERINE. You want to help now?

CLAIRE. Yes.

CATHERINE. Dad is dead.

CLAIRE. I know.

CATHERINE. He's dead. Now that he's dead you fly in for the weekend and decide you want to help? YOU'RE LATE. Where have you been?

CLAIRE. I —

CATHERINE. Where were you five years ago? You weren't helping then.

CLAIRE. I was working.

CATHERINE. I was HERE. I lived with him ALONE.

CLAIRE. I was working fourteen-hour days. I paid every bill here. I paid off the mortgage on this three-bedroom house while I was living in a studio in Brooklyn.

CATHERINE. You had your life. You got to finish school.

CLAIRE. You could have stayed in school!

CATHERINE. How?

CLAIRE. I would have done anything — I told you that. I told you a million times to do anything you wanted.

CATHERINE. What about Dad? Someone had to take care of him.

CLAIRE. He was ill. He should have been in a full-time professional care situation.

CATHERINE. He didn't belong in the nuthouse.

DESIRE

WILL

Claire wants to help Catherine, she wants to be there for her, she just does not understand her sister or what she needs

CLAIRE. He might have been better off.

CATHERINE. How can you say that?

CLAIRE. This is where I'm meant to feel guilty, right?

CATHERINE. Sure, go for it.

CLAIRE. I'm heartless. My own father.

CATHERINE. He needed to be here. In his own house, near the University, near his students, near everything that made him happy.

CLAIRE. Maybe. Or maybe some real, professional care would have done him more good than rattling around in a filthy house with YOU looking after him.

I'm sorry, Catherine, it's not your fault. It's my fault for letting you do it.

CATHERINE. I was right to keep him here.

CLAIRE. No.

CATHERINE. What about his remission? Four years ago. He was healthy for almost a year.

CLAIRE. And then he went right downhill again.

CATHERINE. He might have been worse in a hospital.

CLAIRE. And he MIGHT have been BETTER. Did he ever do any work again?

CATHERINE. No.

CLAIRE. NO.

And you might have been better.

CATHERINE. *(Keeping her voice under control.)* Better than what?

CLAIRE. Living here with him didn't do you any good. You said that yourself.

You had so much talent ...

CATHERINE. You think I'm like Dad.

CLAIRE. I think you have some of his talent and some of his tendency toward ... instability. *(Beat.)*

CATHERINE. Claire, in addition to the "cute apartments" that you've "scouted" for me in New York, would you by any chance also have devoted some of your considerable energies toward scouting out another type of —

CLAIRE. NO.

CATHERINE. — living facility for your bughouse little sister?

CLAIRE. NO! Absolutely not. That is not what this is about.

Reference to what Dad wrote in his notebook

Claire voices Catherine fears

CATHERINE. Don't lie to me, Claire, I'm smarter than you. (Beat.)

CLAIRE. The resources ... I've investigated —

CATHERINE. Oh my GOD.

CLAIRE. — if you WANTED to, all I'm saying is the doctors in New York and the people are the BEST, and they —

CATHERINE. FUCK YOU.

CLAIRE. It would be entirely up to you. You wouldn't LIVE anywhere, you can —

CATHERINE. I hate you.

CLAIRE. Don't yell, please, calm down.

CATHERINE. I HATE YOU. I — (Hal enters, holding a notebook. Claire and Catherine stop suddenly. Beat.)

CLAIRE. What are you [doing here?] ... (She looks at Catherine. Hal is nearly speechless. He stares at Catherine.)

HAL. How long have you known about this?

CATHERINE. A while.

HAL. Why didn't you tell me about it?

CATHERINE. I wasn't sure I wanted to. (Beat.)

HAL. Thank you.

CATHERINE. You're welcome.

CLAIRE. What's going on?

HAL. God, Catherine, thank you.

CATHERINE. I thought you'd like to see it.

CLAIRE. What is it?

HAL. It's incredible.

CLAIRE. What IS it?

HAL. Oh, uh, it's a result. A proof.

I mean it looks like a proof. I mean it is a proof, a very long proof, I haven't read it all of course, or checked it, I don't even know if I could check it, but if it is a proof of what I think it's a proof of, it's ... a very ... important ... proof.

CLAIRE. What does it prove?

HAL. It looks like it proves a theorem ... a mathematical theorem about prime numbers, something mathematicians have been trying to prove since ... since there were mathematicians, basically. Most people thought it couldn't be done.

CLAIRE. Where did you find it?

HAL. In your father's desk. Cathy told me about it.

Claire does not argue this statement

Parallels Sophie Germain story

CLAIRE. You know what this is?

CATHERINE. Sure.

CLAIRE. Is it good?

CATHERINE. Yes.

HAL. It's historic. If it checks out.

CLAIRE. What does it say?

HAL. I don't know yet. I've just read the first few pages.

CLAIRE. But what does it mean?

HAL. It means that during a time when everyone thought your dad was crazy ... or barely functioning ... he was doing some of the most important mathematics in the world. If it checks out it means you publish instantly. It means newspapers all over the world are going to want to talk to the person who found this notebook.

CLAIRE. Cathy.

HAL. Cathy.

CATHERINE. I didn't find it.

HAL. Yes you did.

CATHERINE. No.

CLAIRE. Well did you find it or did Hal find it?

HAL. I didn't find it.

CATHERINE. I didn't find it. I wrote it.

Curtain

Hal will not say anything until he is certain of it
he does not guess or speculate, every thing must be done logically
and in a precise order

Quality of the work is that of Roberts best discoveries

ACT TWO

Scene 1

September 4, 1995

Robert is alone on the porch. He sits quietly, enjoying the quiet, the September afternoon. A notebook nearby, unopened. He closes his eyes, apparently dozing. It is four years earlier than the events in Act One. Catherine enters quietly. She stands behind her father for a moment.

ROBERT. Hello.

CATHERINE. How did you know I was here?

ROBERT. I heard you.

CATHERINE. I thought you were asleep.

ROBERT. On an afternoon like this? No.

CATHERINE. Do you need anything?

ROBERT. No.

CATHERINE. I'm going to the store.

ROBERT. What's for dinner?

CATHERINE. What do you want?

ROBERT. Not spaghetti.

CATHERINE. All right.

ROBERT. Disgusting stuff.

CATHERINE. That's what I was going to make.

ROBERT. I had a feeling. Good thing I spoke up. You make it too much.

CATHERINE. What do you want?

ROBERT. What do you have a taste for?

CATHERINE. Nothing.

ROBERT. Nothing at all?

CATHERINE. I don't care. I thought pasta would be easy.

ROBERT. Pasta, oh God don't even say the word "pasta." It

sounds so hopeless, like surrender: "Pasta would be easy." Yes, yes it would. Pasta. It doesn't MEAN anything. It's just a euphemism people invented when they got sick of eating spaghetti.

CATHERINE. Dad, what do you want to eat?

ROBERT. I don't know.

CATHERINE. Well I don't know what to get.

ROBERT. I'll shop.

CATHERINE. No.

ROBERT. I'll do it.

CATHERINE. No, Dad, rest.

ROBERT. I wanted to take a walk anyway.

CATHERINE. Are you sure?

ROBERT. Yes. What about a walk to the lake? You and me.

CATHERINE. All right.

ROBERT. I would love to go to the lake. Then on the way home we'll stop at the store, see what jumps out at us.

CATHERINE. It's warm. It would be nice, if you're up for it.

ROBERT. You're damn right I'm up for it. We'll work up an appetite. Give me ten seconds, let me put this stuff away and we're out the door.

CATHERINE. I'm going to school. *(Beat.)*

ROBERT. When?

CATHERINE. I'm gonna start at Northwestern at the end of the month.

ROBERT. Northwestern?

CATHERINE. They were great about my credits. They're taking me in as a sophomore.

I wasn't sure when to talk to you about it.

ROBERT. Northwestern?

CATHERINE. Yes.

ROBERT. What's wrong with Chicago?

CATHERINE. You still teach there. I'm sorry, it's too weird, taking classes in your department.

ROBERT. It's a long drive.

CATHERINE. Not that long, half an hour.

ROBERT. Still, twice a day ...

CATHERINE. Dad, I'd live there. *(Beat.)*

ROBERT. You'd actually want to live in Evanston?

— testing, is he really well?

} smart enough to be accepted and allow transfer of credits in college previously

} previously studied at U of C

CATHERINE. Yes. I'll still be close. I can come home whenever you want.

You've been well — really well — for almost seven months. I don't think you need me here every minute of the day. *(Beat.)*

ROBERT. This is all a done deal? You're in.

CATHERINE. Yes.

ROBERT. You're sure.

CATHERINE. Yes.

ROBERT. Who pays for it?

CATHERINE. They're giving me a free ride, Dad. They've been great.

ROBERT. On tuition, sure. What about food, books, clothes, gas, meals out — do you plan to have a social life?

CATHERINE. I don't know.

ROBERT. You gotta pay your own way on dates, at least the early dates, say the first three, otherwise they expect something.

CATHERINE. The money will be fine. Claire's gonna help out.

ROBERT. When did you talk to Claire?

CATHERINE. I don't know, a couple weeks ago.

ROBERT. You talk to her before you talk to me?

CATHERINE. There were a lot of details to work out. She was great, she offered to take care of all the expenses.

ROBERT. This is a big step. A different city —

CATHERINE. It's not even a long distance phone call.

ROBERT. It's a huge place. They're serious up there. I mean serious. Yeah the football's a disaster but the math guys don't kid around. You haven't been in school. You sure you're ready? You can get buried up there.

CATHERINE. I'll be all right.

ROBERT. You're way behind.

CATHERINE. I know.

ROBERT. A year, at least.

CATHERINE. Thank you, I KNOW! Look, I don't know if this is a good idea. I don't know if I can handle the work. I don't know if I can handle any of it.

ROBERT. For Chrissake, Catherine, you should have talked to me.

CATHERINE. Dad. Listen. If you ever ... if for any reason it ever turned out that you needed me here full time again —

scholarship

relationship with Claire was better in the past
looked to her for advice, support

willing to give up own life for her father

ROBERT. I WON'T. That's not *[what I'm talking about.]* —

CATHERINE. I can always take a semester off, or —

ROBERT. No. Stop it. I just — the end of the MONTH? Why didn't you say something before?

CATHERINE. Dad, come on. It took a while to set this up, and until recently, until very recently, you weren't —

ROBERT. You just said yourself I've been fine.

CATHERINE. Yes, but I didn't know — I hoped, but I didn't know, no one knew if this would last. I told myself to wait until I was sure about you. That you were feeling okay again. Consistently okay.

ROBERT. So I'm to take this conversation as a vote of confidence? I'm honored.

CATHERINE. Take it however you want. I believed you'd get better.

ROBERT. Well thank you very much.

CATHERINE. Don't thank me. I had to. I was living with you.

ROBERT. All right, that's enough, Catherine. Let's stay on the subject.

CATHERINE. This is the subject! There were LIBRARY BOOKS stacked up to the ceiling upstairs, do you remember that? You were trying to decode MESSAGES —

ROBERT. The fucking books are gone, I took them back myself. Why do you bring that garbage up? *(Knocking off. Beat. Catherine goes inside to answer the door. She returns with Hal. He carries a manila envelope. He is nervous.)*

ROBERT. Mr. Dobbs.

HAL. Hi. I hope it's not a bad time.

ROBERT. Yes it is, actually, you couldn't have picked worse.

HAL. Oh, I, uh —

ROBERT. You interrupted an argument.

HAL. I'm sorry. I can come back.

ROBERT. It's all right. We needed a break.

HAL. Are you sure?

ROBERT. Yes. The argument was about dinner. We don't know what to eat. What's your suggestion? *(A beat while Hal is on the spot.)*

HAL. Uh, there's a great pasta place not too far from here.

ROBERT. NO!

wanting to go back to school, encouraged by Claire does not want to take the chance unless her father is well enough to manage without her

CATHERINE. *(With Robert.)* That is a BRILLIANT idea.

ROBERT. Oh dear Jesus God no.

CATHERINE. *(With Robert.)* What's it called? Give me the address.

ROBERT. No! Sorry. Wrong answer but thank you for trying.
(Hal stands there, looking at both of them.)

HAL. I can come back.

ROBERT. Stay. *(To Catherine.)* Where are you going?

CATHERINE. Inside.

ROBERT. What about dinner?

CATHERINE. What about him?

ROBERT. What are you doing here, Dobbs?

HAL. My timing sucks. I am really sorry.

ROBERT. Don't be silly.

HAL. I'll come to your office.

ROBERT. Stop. Sit down. Glad you're here. Don't let the dinner thing throw you, you'll bounce back. *(To Catherine.)* This should be easier. Let's back off the problem, let it breathe, come at it again when it's not looking.

CATHERINE. Fine. *(Exiting.)* Excuse me.

ROBERT. Sorry, I'm rude. Hal, this is my daughter Catherine.
(To Catherine.) Don't go, have a drink with us. Catherine, Harold Dobbs.

CATHERINE. Hi.

HAL. Hi.

ROBERT. Hal is a grad student. He's doing his Ph.D, very promising stuff. Unfortunately for him his work coincided with my return to the department and he got stuck with me.

HAL. No, no, it's been — I've been very lucky.

CATHERINE. How long have you been at U. of C.?

HAL. Well I've been working on my thesis for —

ROBERT. Hal's in our "Infinite" program. As he approaches completion of his dissertation, time approaches infinity. Would you like a drink, Hal?

HAL. Yes I would.

And uh, with all due respect ... *(He hands Robert the envelope.)*

ROBERT. Really? *(He opens it and looks inside.)*

You must have had an interesting few months.

fun, teasing, joking relationship with dad

how he sees math as well?

sense of humor

HAL. *(Cheerfully.)* Worst summer of my life.

ROBERT. Congratulations.

HAL. It's just a draft. Based on everything we talked about last spring. *(Robert pours a drink. Hal babbles.)*

I wasn't sure if I should wait till the quarter started, or if I should give it to you now, or hold off, do another draft, but I figured fuck it I, I mean I just ... let's just get it over with, so I thought I'd just come over and see if you were home, and —

ROBERT. Drink this.

HAL. Thanks. *(He drinks.)*

I decided, I don't know, if it feels done, maybe it is.

ROBERT. Wrong. If it feels done there are major errors.

HAL. Uh, I —

ROBERT. That's okay, that's good, we'll find them and fix them.

Don't worry. You're on your way to a solid career, you'll be teaching younger, more irritating versions of yourself in no time.

HAL. Thank you.

ROBERT. Catherine's in the math department at Northwestern, Hal. *(Catherine looks up, startled.)*

HAL. Oh, who are you working with?

CATHERINE. I'm just starting this fall. Undergrad.

ROBERT. She's starting in ... three weeks?

CATHERINE. A little more. *(Beat.)*

ROBERT. They have some good people at Northwestern. O'Donohue. Kaminsky.

CATHERINE. Yes.

ROBERT. They will work your ass off.

CATHERINE. I know.

ROBERT. You'll have to run pretty hard to catch up.

CATHERINE. I think I can do it.

ROBERT. Of course you can. *(Beat.)*

HAL. You must be excited.

CATHERINE. I am.

HAL. First year of school can be great.

CATHERINE. Yeah?

HAL. Sure, all the new people, new places, getting out of the house.

CATHERINE. *(Embarrassed.)* Yes.

notice Hal, think he is not boring

HAL. (*Embarrassed.*) Or, no, I —

ROBERT. Absolutely, getting the hell out of here, thank God, it's about time. I'll be glad to see the back of her.

CATHERINE. You will?

ROBERT. Of course. Maybe I want to have the place to myself for a while, did that ever occur to you? (*To Hal.*) It's awful the way children sentimentalize their parents. (*To Catherine.*) We could use some quiet around here.

CATHERINE. Oh don't worry, I'll come back. I'll be here every Sunday cooking up big vats of pasta to last you through the week.

ROBERT. And I'll drive up, strut around Evanston, embarrass you in front of your classmates.

CATHERINE. Good. So we'll be in touch.

ROBERT. Sure. And if you get stuck with a problem, give me a call.

CATHERINE. Okay. Same to you.

ROBERT. Fine. Make sure to get me your number. (*To Hal.*) I'm actually looking forward to getting some work done.

HAL. Oh, what are you working on?

ROBERT. Nothing. (*Beat.*)

Nothing at the moment.

Which I'm glad of, really. This is the time of year when you don't want to be tied down to anything. You want to be outside. I love Chicago in September. Perfect skies. Sailboats on the water. Cubs losing. Warm, the sun still hot ... with the occasional blast of Arctic wind to keep you on your toes, remind you of winter. Students coming back, bookstores full, everybody busy.

I was in a bookstore yesterday. Completely full, students buying books ... browsing ... Students do a hell of a lot of browsing, don't they? Just browsing. You see them shuffling around with their backpacks, goofing off, taking up space. You'd call it loitering except every once in a while they pick up a book and flip the pages: "Browsing." I admire it. It's an honest way to kill an afternoon. In the back of a used bookstore, or going through a crate of somebody's old record albums — not looking for anything, just looking, what the hell, touching the old book jackets, seeing what somebody threw out, seeing what they underlined ... maybe you find something great, like an old thriller with a painted cover from the forties, or a textbook one of your professors used when he was

teasing

forgive each other for earlier argument

always looking for new information, a chance to learn,
finding connections

a student — his name is written in it very carefully ... Yeah, I like it. I like watching the students. Wondering what they're gonna buy, what they're gonna read. What kind of ideas they'll come up with when they settle down and get to work ...

I'm not doing much right now. It does get harder. It's a stereotype that happens to be true, unfortunately for me — unfortunately for you, for all of us.

CATHERINE. Maybe you'll get lucky.

ROBERT. Maybe I will.

Maybe you'll pick up where I left off.

CATHERINE. Don't hold your breath.

ROBERT. Don't underestimate yourself.

CATHERINE. Anyway. *(Beat.)*

ROBERT. Another drink? Cathy? Hal?

CATHERINE. No thanks.

HAL. Thanks, I really should get going.

ROBERT. Are you sure?

HAL. Yes.

ROBERT. I'll call you when I've looked at this. Don't think about it till then. Enjoy yourself, see some movies.

HAL. Okay.

ROBERT. You can come by my office in a week. Call it —

HAL. The eleventh?

ROBERT. Yes, we'll ... *(Beat. He turns to Catherine. Grave.)*

I am sorry. I used to have a pretty good memory for numbers.

Happy birthday.

CATHERINE. Thank you.

ROBERT. I am so sorry. I'm embarrassed.

CATHERINE. Dad, don't be stupid.

ROBERT. I didn't get you anything.

CATHERINE. Don't worry about it.

ROBERT. I'm taking you out.

CATHERINE. You don't have to.

ROBERT. We are going out. I didn't want to shop and cook. Let's go to dinner. Let's get the hell out of this neighborhood. What do you want to eat? Let's go to the North Side. Or Chinatown. Or Greektown. I don't know what's good anymore.

CATHERINE. Whatever you want.

also wondering what Catherine will do, believes she is capable of doing great things

[evidence in first scene]

forgets birth day, first sign lucidity slipping?

thinks of other before self
wants to make people happy
does not want to be any trouble

ROBERT. Whatever you want goddamnit, Catherine, it's your birthday. *(Beat.)*

CATHERINE. Steak.

ROBERT. Steak. Yes.

CATHERINE. No, first beer, really cold beer. Really cheap beer.

ROBERT. Done.

CATHERINE. That Chicago beer that's watery with no flavor and you can just drink gallons of it.

ROBERT. They just pump the water out of Lake Michigan and bottle it.

CATHERINE. It's so awful.

ROBERT. I have a taste for it myself.

CATHERINE. Then the steak, grilled really black, and potatoes and creamed spinach.

ROBERT. I remember a place. If it's still there I think it will do the trick.

CATHERINE. And dessert.

ROBERT. That goes without saying. It's your birthday, hooray. And there's the solution to our dinner problem. Thank you for reminding me, Harold Dobbs.

CATHERINE. *(To Hal.)* We're being rude. Do you want to come?

HAL. Oh, no, I shouldn't.

ROBERT. Why not? Please, come.

CATHERINE. Come on. *(A tiny moment between Hal and Catherine. Hal wavers, then:)*

HAL. No, I can't, I have plans. Thank you though. Happy birthday.

CATHERINE. Thanks. Well. I'll let you out.

ROBERT. I'll see you on the eleventh, Hal.

HAL. Great.

CATHERINE. I'm gonna change my clothes, Dad. I'll be ready in a sec. *(Hal and Catherine exit. A moment. It's darker. Robert looks out at the evening. Eventually he picks up the notebook and a pen. He sits down. He opens to a blank page. He writes.)*

ROBERT. "September fourth.

A good day ... " *(He continues to write.)*

Fade

from the notebook Hal stole

Scene 2

Sunday September 5

Morning. An instant after the end of Act One: Catherine, Claire, and Hal.

HAL. You wrote this?

CATHERINE. Yes.

CLAIRE. When?

CATHERINE. I started after I quit school. I finished a few months before Dad died.

CLAIRE. Did he see it?

CATHERINE. No. He didn't know I was working on it. It wouldn't have mattered to him anyway, he was too sick.

HAL. I don't understand — you did this by yourself?

CATHERINE. Yes.

CLAIRE. It's in Dad's notebook.

CATHERINE. I used one of his blank books. There were a bunch of them upstairs. *(Beat.)*

CLAIRE. *(To Hal.)* Tell me exactly where you found this?

HAL. In his study.

CATHERINE. In his desk. I gave him the —

CLAIRE. *(To Catherine.)* Hold on. *(To Hal.)* Where did you find it?

HAL. In the bottom drawer of the desk in the study, a locked drawer: Catherine gave me the key.

CLAIRE. Why was the drawer locked?

CATHERINE. It's mine, it's the drawer I keep my private things in. I've used it for years.

CLAIRE. *(To Hal.)* Was there anything else in the drawer?

HAL. No.

CATHERINE. No, that's the only —

CLAIRE. Can I see it? *(Hal gives Claire the book. She pages through it. Beat.)* I'm sorry, I just ... *(To Catherine.)* The book was in the

CLAIRE. You mean Dad dictated it to you.

CATHERINE. No, it's my proof. It's mine. I wrote it.

* lines added from other script version

He would not have been able to write it

Catherine; drawer

Nothing else to prove it's Catherine's drawer

... You told him where to find it ... You gave him the key ... You wrote this incredible thing and you didn't tell anyone?

CATHERINE. I'm telling you both now. After I dropped out of school I had nothing to do. I was depressed, really depressed, but at a certain point I decided Fuck it, I don't need them. It's just math, I can do it on my own. So I kept working here. I worked at night, after Dad had gone to sleep. It was hard but I did it. *(Beat.)*

CLAIRE. Catherine, I'm sorry, but I just find this very hard to believe.

CATHERINE. Claire. I wrote. The proof.

CLAIRE. I'm sorry, I —

CATHERINE. Claire ...

CLAIRE. This is Dad's handwriting.

CATHERINE. It's not.

CLAIRE. It looks exactly like it.

CATHERINE. It's my writing.

CLAIRE. I'm sorry —

CATHERINE. Ask Hal. He's been looking at Dad's writing for weeks. *(Claire gives Hal the book. He looks at it. Beat.)*

HAL. I don't know.

CATHERINE. Hal, come on.

CLAIRE. What does it look like?

HAL. It looks ... I don't know what Catherine's handwriting looks like.

CATHERINE. It LOOKS like THAT.

HAL. Okay. It ... okay. *(Beat. He hands the book back.)*

CLAIRE. I think — you know what? I think it's early, and people are tired, and not in the best state to make decisions about emotional things, so maybe we should all just take a breath ...

CATHERINE. You don't believe me?

CLAIRE. I don't know. I really don't know anything about this.

CATHERINE. Never mind. I don't know why I expected you to believe me about ANYTHING.

CLAIRE. Could you tell us the proof? That would show it was yours.

CATHERINE. You wouldn't understand it.

CLAIRE. Tell it to Hal.

CATHERINE. *(Taking the book.)* We could talk through it

Catherine can show she knows what it is saying

together. It might take a while.

CLAIRE. (*Taking the book.*) You can't use the book.

CATHERINE. For God's sake, it's forty pages long. I didn't MEMORIZE it. It's not a muffin recipe. (*Beat.*) This is stupid. It's my book, my writing, my key, my drawer, my proof. Hal, tell her!

HAL. Tell her what?

CATHERINE. Whose book is that?

HAL. I don't know.

CATHERINE. What is the matter with you? You've been looking at his other stuff, you know there's nothing even remotely like this!

HAL. Look, Catherine —

CATHERINE. We'll go through the proof together. We'll sit down — if Claire will please let me have my book back —

CLAIRE. (*Giving her the book.*) All right, talk him through it.

HAL. That might take days and it still wouldn't show that she wrote it.

CATHERINE. Why not?

HAL. Your dad might have written it and explained it to you later. I'm not saying he did, I'm just saying there's no proof that you wrote this.

CATHERINE. Of course there isn't, but come on! He didn't do this, he couldn't have. He didn't do any mathematics at all for years. Even in the good year he couldn't work: You know that. You're supposed to be a scientist. (*Beat.*)

HAL. You're right. Okay. Here's my suggestion. I know three or four guys at the department, very sharp, disinterested people who knew your father, knew his work. Let me take this to them.

CATHERINE. WHAT?

HAL. I'll tell them we've found something, something potentially major, we're not sure about the authorship; I'll sit down with them. we'll go through the thing carefully —

CLAIRE. Good.

HAL. — and figure out exactly what we've got. It would only take a couple of days, probably, and then we'd have a lot more information.

CLAIRE. I think that's an excellent suggestion.

CATHERINE. You can't.

CLAIRE. Catherine.

Decline in functioning

CATHERINE. No! You can't take it.

HAL. I'm not "taking" it.

CATHERINE. This is what you wanted.

HAL. Oh come on, Jesus.

CATHERINE. You don't waste any time, do you? No hesitation. You can't wait to show them your brilliant discovery.

HAL. I'm trying to determine what this is.

CATHERINE. I'm telling you what it is.

HAL. You don't know!

CATHERINE. I WROTE it.

HAL. IT'S YOUR FATHER'S HANDWRITING. *(Beat. Pained.)* At least it looks an awful lot like the writing in the other books. Maybe your writing looks exactly like his, I don't know.

CATHERINE. *(Softly.)* It does look like his.

I didn't show this to anyone else. I could have. I wanted you to be the first to see it. I didn't know I wanted that until last night. It's ME. I trusted you.

HAL. I know.

CATHERINE. Was I wrong?

HAL. No. I —

CATHERINE. I should have known she wouldn't believe me but why don't you?

HAL. This is one of his notebooks. The exact same kind he used.

CATHERINE. I told you. I just used one of his blank books. There were extras.

HAL. There aren't any extra books in the study.

CATHERINE. There were when I started writing the proof. I bought them for him. He used the rest up later.

HAL. And the writing.

CATHERINE. You want to test the handwriting?

HAL. No. It doesn't matter. He could have dictated it to you, for Chrissake. It still doesn't make sense.

CATHERINE. Why not?

HAL. I'm a mathematician.

CATHERINE. Yes.

HAL. I know how hard it would be to come up with something like this. I mean it's impossible. You'd have to be ... you'd have to be your dad, basically. Your dad at the peak of his powers.

CATHERINE. I'm a mathematician too.

HAL. Not like your dad.

CATHERINE. Oh he's the only one who could have done this?

HAL. The only one I know.

CATHERINE. Are you sure?

HAL. Your father was the most —

CATHERINE. Just because you and the rest of the geeks worshiped him doesn't mean he wrote this proof, Hal!

HAL. He was the best. My generation hasn't produced anything like him. He revolutionized the field twice before he was twenty-two. I'm sorry, Catherine, but you took some classes at Northwestern for a few months.

CATHERINE. My education wasn't at Northwestern. It was living in this house for twenty-five years.

HAL. Even so, it doesn't matter. This is too advanced. I don't even understand most of it.

CATHERINE. You think it's too advanced.

HAL. Yes.

CATHERINE. It's too advanced for YOU.

HAL. You could not have done this work.

CATHERINE. But what if I did?

HAL. Well what if?

CATHERINE. It would be a real disaster for you, wouldn't it? And for the other geeks who barely finished their Ph.D's, who are marking time doing lame research, bragging about the conferences they go to — WOW — playing in an awful band, and whining that they're intellectually past it at twenty-eight, BECAUSE THEY ARE. *(Beat. Hal hesitates, then abruptly exits. Beat. Catherine is furious and so upset she looks dazed.)*

CLAIRE. Katie.

Let's go inside.

Katie? *(Catherine opens the book and tries to rip out the pages, destroy it. Claire goes to take it from her. They struggle. Catherine gets the book away. They stand apart, breathing hard. After a moment, Catherine throws the book to the floor. She exits.)*

Fade

Scene 3

Monday September 6

The next day. The porch is empty. Knocking, off. No one appears. After a moment Hal comes around the side of the porch and knocks on the back door.

HAL. Catherine? *(Claire enters.)*

I thought you were leaving.

CLAIRE. I had to delay my flight. *(Beat.)*

HAL. Is Catherine here?

CLAIRE. I don't think this is a good time, Hal.

HAL. Could I see her?

CLAIRE. Not now.

HAL. What's the matter?

CLAIRE. She's sleeping.

HAL. Can I wait here until she gets up?

CLAIRE. She's been sleeping since yesterday. She won't get up. She won't eat, won't talk to me. I couldn't go home. I'm going to wait until she seems okay to travel.

HAL. Jesus, I'm sorry.

CLAIRE. Yes.

HAL. I'd like to talk to her.

CLAIRE. I don't think that's a good idea.

HAL. Has she said anything?

CLAIRE. About you? No.

HAL. Yesterday ... I know I didn't do what she wanted.

CLAIRE. Neither of us did.

HAL. I didn't know what to say. I feel awful.

CLAIRE. Why did you sleep with her? *(Beat.)*

HAL. I'm sorry, that's none of your business.

CLAIRE. Bullshit. I have to take care of her. It's a little bit harder with you jerking her around.

HAL. I wasn't jerking her around. It just happened.

CLAIRE. Your timing was not great.

Catherine appears almost catatonic

Suggests Claire has dealt with Catherine in a situation like this before

HAL. It wasn't my timing, it was both of our —

CLAIRE. Why'd you do it? You know what she's like. She's fragile and you took advantage of her.

HAL. No. It's what we both wanted. I didn't mean to hurt her.

CLAIRE. You did.

HAL. I'd like to talk to Catherine, please.

CLAIRE. You can't.

HAL. Are you taking her away?

CLAIRE. Yes.

HAL. To New York.

CLAIRE. Yes.

HAL. Just going to drag her to New York.

CLAIRE. If I have to.

HAL. Don't you think she should have some say in whether or not she goes?

CLAIRE. If she's not going to speak, what else can I do?

HAL. Let me try. Let me talk to her.

CLAIRE. Hal, give up. This has nothing to do with you.

HAL. I know her. She's tougher than you think, Claire.

CLAIRE. What?

HAL. She can handle herself. She can handle talking to me — maybe it would help. Maybe she'd like it.

CLAIRE. Maybe she'd like it? Are you out of your mind? You're the reason she's up there right now! You have no idea what she needs. You don't know her! She's my sister. Jesus, you fucking mathematicians: You don't think. You don't know what you're doing. You stagger around creating these catastrophes and it's people like me who end up flying in to clean them up. (Beat.)

She needs to get out of Chicago, out of this house. I'll give you my number in New York. You can call her once she's settled there. That's it, that's the deal.

HAL. Okay. (Beat. Hal doesn't move.)

CLAIRE. I don't mean to be rude but I have a lot to do.

HAL. There's one more thing. You're not going to like it.

CLAIRE. Sure, take the notebook.

HAL. (Startled.) I —

CLAIRE. Hold on a sec, I'll get it for you. (She goes inside and returns with the notebook. She gives it to Hal.)

Symptoms of mutism

HAL. I thought this would be harder.

CLAIRE. Don't worry, I understand. It's very sweet you want to see Catherine but of course you'd like to see the notebook too.

HAL. *(Huffy.)* It's — No, it's my responsibility — as a professional I can't turn my back on the necessity of the —

CLAIRE. Relax. I don't care. Take it. What would I do with it?

HAL. You sure?

CLAIRE. Yes, of course.

HAL. You trust me with this?

CLAIRE. Yes.

HAL. You just said I don't know what I'm doing.

CLAIRE. I think you're a little bit of an idiot but you're not dishonest. Someone needs to figure out what's in there. I can't do it.

It should be done here, at Chicago: my father would like that. When you decide what we've got let me know what the family should do.

HAL. Thanks.

CLAIRE. Don't thank me, it's by far the most convenient option available. I put my card in there, call me whenever you want.

HAL. Okay. *(Hal starts to exit. Claire hesitates, then:)*

CLAIRE. Hal.

HAL. Yeah?

CLAIRE. Can you tell me about it? The proof. I'm just curious.

HAL. It would take some time. How much math have you got?
(Beat.)

CLAIRE. I'm a currency analyst. It helps to be very quick with numbers. I am. I probably inherited about one-one-thousandth of my father's ability. It's enough.

Catherine got more, I'm not sure how much.

Fade

Scene 4

Winter. About three and a half years earlier. Robert is on the porch. He wears a T-shirt. He writes in a notebook. After a moment we hear Catherine's voice from off.

CATHERINE. Dad? *(Catherine enters wearing a parka. She sees her father and stops.)*

What are you doing out here?

ROBERT. Working.

CATHERINE. It's December. It's thirty degrees.

ROBERT. I know. *(Catherine stares at him, baffled.)*

CATHERINE. Don't you need a coat?

ROBERT. Don't you think I can make that assessment for myself?

CATHERINE. Aren't you cold?

ROBERT. Of course I am! I'm freezing my ass off!

CATHERINE. So what are you doing out here?

ROBERT. Thinking! Writing!

CATHERINE. You're gonna freeze.

ROBERT. It's too hot in the house. The radiators dry out the air. Also the clanking — I can't concentrate. If the house weren't so old we'd have central air heating but we don't so I have to come out here to get any work done.

CATHERINE. I'll turn off the radiators. They won't make any noise. Come inside, it isn't safe.

ROBERT. I'm okay.

CATHERINE. I've been calling. Didn't you hear the phone?

ROBERT. It's a distraction.

CATHERINE. I didn't know what was going on. I had to drive all the way down here.

ROBERT. I can see that.

CATHERINE. I had to skip class. *(She brings him a coat and he puts it on.)* Why don't you answer the phone?

ROBERT. Well I'm sorry, Catherine, but it's question of priorities

and work takes priority, you know that.

CATHERINE. You're working?

ROBERT. Goddamnit I am working! I say "I" — the machinery. The machinery is working. Catherine, it's on full blast. All the cylinders are firing, I'm on fire. That's why I came out here, to cool off. I haven't felt like this for years.

CATHERINE. You're kidding.

ROBERT. No!

CATHERINE. I don't believe it.

ROBERT. I don't believe it either! But it's true. It started about a week ago. I woke up, came downstairs, made a cup of coffee and before I could pour in the milk it was like someone turned the LIGHT on in my head.

CATHERINE. Really?

ROBERT. Not the light, the whole POWER GRID. I LIT UP and it's like no time has passed since I was twenty-one.

CATHERINE. You're kidding!

ROBERT. No! I'm back! I'm back in touch with the source — the font, the — whatever the source of my creativity was all those years ago I'm in contact with it again. I'm SITTING on it. It's a geyser and I'm shooting right up into the air on top of it.

CATHERINE. My God.

ROBERT. I'm not talking about divine inspiration. It's not funneling down into my head and onto the page. It'll take work to shape these things; I'm not saying it won't be a tremendous amount of work. It will be a tremendous amount of work. It's not going to be easy. But the raw material is there. It's like I've been driving in traffic and now the lanes are opening up before me and I can accelerate. I see whole landscapes — places for the work to go, new techniques, revolutionary possibilities. I'm going to get whole branches of the profession talking to each other. I / I'm sorry, I'm being rude, how's school?

CATHERINE. (*Taken aback.*) Fine. —

ROBERT. You're working hard?

CATHERINE. Sure.

ROBERT. Faculty treating you all right?

CATHERINE. Yes. Dad —

ROBERT. Made any friends?

quickjump in conversation

CATHERINE. Of course. I —
ROBERT. Dating?
CATHERINE. Dad, hold on.
ROBERT. No details necessary if you don't want to provide them.
I'm just interested.
CATHERINE. School's great. I want to talk about what you're
doing.
ROBERT. Great, let's talk.
CATHERINE. This work.
ROBERT. Yes.
CATHERINE. (*Indicating the notebook.*) Is it here?
ROBERT. Part of it, yes.
CATHERINE. Can I see it?
ROBERT. It's all at a very early stage.
CATHERINE. I don't mind.
ROBERT. Nothing's actually complete, to be honest. It's all in
progress. I think we're talking years.
CATHERINE. That's okay. I don't care. Just let me see anything.
ROBERT. You really want to?
CATHERINE. Yes.
ROBERT. You're genuinely interested.
CATHERINE. Dad, of course!
ROBERT. Of course. It's your field.
CATHERINE. Yes.
ROBERT. You know how happy that makes me. (*Beat.*)
CATHERINE. Yes.
ROBERT. I think there's enough here to keep me working the rest
of my life.
Not just me.
I was starting to imagine I was finished, Catherine. Really fin-
ished. Don't get me wrong, I was grateful I could go to my office,
have a life, but secretly I was terrified I'd never work again. Did
you know that?
CATHERINE. I wondered.
ROBERT. I was absolutely fucking terrified.
Then I remembered something and a part of the terror went
away. I remembered you.
Your creative years were just beginning. You'd get your degree,

aware of what his illness has taken from him

do your own work. You were just getting started.

If you hadn't gone into math that would have been all right. Claire's done well for herself. I'm satisfied with her.

I'm proud of you.

I don't mean to embarrass you. It's part of the reason we have children. We hope they'll survive us, accomplish what we can't.

Now that I'm back in the game I admit I've got another idea, a better one.

CATHERINE. What?

ROBERT. I know you've got your own work. I don't want you to neglect that. You can't neglect it. But I could probably use some help. Work with me. If you want to, if you can work it out with your class schedule and everything else, I could help you with that, make some calls, talk to your teachers ...

I'm getting ahead of myself.

Well, Jesus, look, enough bullshit, you asked to see something. Let's start with this. I've roughed something out. General outline for a proof. Major result. Important. It's not finished but you can see where it's going. Let's see: *(He selects a notebook.)* Here. *(He gives it to Catherine. She opens it and reads.)* It's very rough. *(After a long moment Catherine closes the notebook. A beat.)*

CATHERINE. Dad. Let's go inside.

ROBERT. The gaps might make it hard to follow. We can talk it through.

CATHERINE. You're cold. Let's go in.

ROBERT. Maybe we could work on this together. This might be a great place to start. What about it? What do you think? Let's talk it through.

CATHERINE. Not now. I'm cold too. It's really freezing out here. Let's go inside.

ROBERT. I'm telling you it's stifling in there, goddamn it. The radiators. Look, read out the first couple of lines. That's how we start: You read, and we go line by line, out loud, through the argument. See if there's a better way, a shorter way. Let's collaborate.

CATHERINE. No. Come on.

ROBERT. I've been waiting years for this. This is something I want to do. Come on, let's do some work together.

CATHERINE. We can't do it out here. It's freezing cold. I'm

wants to see daughter continue his work

taking you in.

ROBERT. Not until we talk about the proof.

CATHERINE. No.

ROBERT. GODDAMNIT CATHERINE OPEN THE GOD-DAMN BOOK AND READ ME THE LINES. *(Beat. Catherine opens the book. She reads slowly, without inflection.)*

CATHERINE. "Let X equal the quantity of all quantities of X. Let X equal the cold. It is cold in December. The months of cold equal November through February. There are four months of cold, and four of heat, leaving four months of indeterminate temperature. In February it snows. In March the Lake is a lake of ice. In September the students come back and the bookstores are full. Let X equal the month of full bookstores. The number of books approaches infinity as the number of months of cold approaches four. I will never be as cold now as I will in the future. The future of cold is infinite. The future of heat is the future of cold. The bookstores are infinite and so are never full except in September ..." *(She stops reading and slowly closes the book. Robert is shivering uncontrollably.)* It's all right. We'll go inside.

ROBERT. I'm cold.

CATHERINE. We'll warm you up. *(Catherine puts her arms around him and helps him to his feet.)*

ROBERT. Don't leave. Please.

CATHERINE. I won't.

Let's go inside.

Fade

Robert is unaware he is losing touch with reality

Robert says he has not done any significant work in years and at this point and after there would not have been any way he could have written the proof

Scene 5

The present. A week after the events in Scene 3. Claire on the porch. Coffee in takeout cups. Claire takes a plane ticket out of her purse, checks the itinerary. A moment. Catherine enters with bags for travel. Claire gives her a cup of coffee. Catherine drinks in silence. Beat.

CATHERINE. Good coffee.

CLAIRE. It's all right, isn't it?

We have a place where we buy all our coffee. They roast it themselves, they have an old roaster down in the basement. You can smell it on the street. Some mornings you can smell it from our place, four stories up. It's wonderful. "Manhattan's Best": Some magazine wrote it up. Who knows. But it is very good.

CATHERINE. Sounds good.

CLAIRE. You'll like it.

CATHERINE. Good. *(Beat.)*

CLAIRE. You look nice.

CATHERINE. Thanks, so do you. *(Beat.)*

CLAIRE. It's bright.

CATHERINE. Yes.

CLAIRE. It's one of the things I do miss. All the space, the light. You could sit out here all morning.

CATHERINE. It's not that warm.

CLAIRE. Are you cold?

CATHERINE. Not really. I just —

CLAIRE. It has gotten chilly. I'm sorry. Do you want to go in?

CATHERINE. I'm okay.

CLAIRE. I just thought it might be nice to have a quick cup of coffee out here.

CATHERINE. No, it is.

CLAIRE. Plus the kitchen's all put away. If you're cold —

CATHERINE. I'm not. Not really.

is she trying to convince Catherine that she will like it, or is she trying to convince herself Catherine will be happy

CLAIRE. Want your jacket?

CATHERINE. Yeah, okay. *(Claire gives it to her. Catherine puts it on.)* Thanks.

CLAIRE. It's that time of year.

CATHERINE. Yes.

You can feel it coming. *(Beat. Catherine stares out at the yard.)*

CLAIRE. Honey, there's no hurry.

CATHERINE. I know.

CLAIRE. If you want to hang out, be alone for a while —

CATHERINE. No. It's no big deal.

CLAIRE. We don't have to leave for twenty minutes or so.

CATHERINE. I know. Thanks, Claire.

CLAIRE. You're all packed.

CATHERINE. Yes.

CLAIRE. If you missed anything it doesn't really matter. The movers will send us everything next month. *(Catherine doesn't move. Beat.)* I know this is hard.

CATHERINE. It's fine.

CLAIRE. This is the right decision.

CATHERINE. I know..

CLAIRE. I want to do everything I can to make this a smooth transition for you. So does Mitch.

CATHERINE. Good.

CLAIRE. The actual departure is the hardest part. Once we get there we can relax. Enjoy ourselves.

CATHERINE. I know. *(Beat.)*

CLAIRE. You'll love New York.

CATHERINE. I can't wait.

CLAIRE. You'll love it. It's the most exciting city.

CATHERINE. I know.

CLAIRE. It's not like Chicago, it's really alive.

CATHERINE. I've read about that.

CLAIRE. I think you'll truly feel at home there.

CATHERINE. You know what I'm looking forward to?

CLAIRE. What?

CATHERINE. Seeing Broadway musicals. *(Beat.)*

CLAIRE. Mitch can get us tickets to whatever you'd like.

CATHERINE. And Rockefeller Center in winter — all the skaters.

parallels scene between Catherine and Robert

mask emotions

CLAIRE. Well, you —

CATHERINE. Also, the many fine museums! (Beat.)

CLAIRE. I know how hard this is for you.

CATHERINE. Listening to you say how hard it is for me, is what's hard for me.

CLAIRE. Once you're there you'll see all the possibilities that are available.

CATHERINE. Restraints, lithium, electroshock.

CLAIRE. SCHOOLS. In the New York area alone there's NYU, Columbia —

CATHERINE. Bright college days! Football games, road trips, necking on the "quad."

CLAIRE. Or if that's not what you want we can help you find a job. Mitch has terrific contacts all over town.

CATHERINE. Does he know anyone in the phone sex industry?

CLAIRE. I want to make this as easy a transition as I can.

CATHERINE. It's going to be easy, Claire, it's gonna be so fuckin' easy you won't believe it.

CLAIRE. Thank you.

CATHERINE. I'm going to sit quietly on the plane to New York. And live quietly in a cute apartment. And answer Doctor Von Heimlich's questions very politely.

CLAIRE. You can see any doctor you like, or you can see no doctor.

CATHERINE. I would like to see a doctor called Doctor Von Heimlich: Please find one. And I would like him to wear a monocle.

And I'd like him to have a very soft, very well-upholstered couch, so that I'll be perfectly comfortable while I'm blaming everything

on you. (Claire's patience is exhausted.)

CLAIRE. Don't come.

CATHERINE. No, I'm coming.

CLAIRE. Stay here, see how you do.

CATHERINE. I could.

CLAIRE. You can't take care of yourself for five days.

CATHERINE. Bullshit!

CLAIRE. You slept all week. I had to cancel my flight. I missed a week of work — I was this close to taking you to the hospital! I couldn't believe it when you finally dragged yourself up.

CATHERINE. I was tired!

CLAIRE. You were completely out of it, Catherine, you weren't speaking!

CATHERINE. I didn't want to talk to you. *(Beat.)*

CLAIRE. Stay here if you hate me so much.

CATHERINE. And do what?

CLAIRE. You're the genius, figure it out. *(Claire is upset, near tears. She digs in her bag, pulls out a plane ticket, throws it on the table. She exits. Catherine is alone. She can't quite bring herself to leave the porch. A moment. Hal enters — not through the house, from the side. He is badly dressed and looks very tired. He is breathless from running.)*

HAL. You're still here. *(Catherine is surprised. She doesn't speak.)* I saw Claire leaving out front. I wasn't sure if you — *(He holds up the notebook.)* This fucking thing ... checks out.

I have been over it, twice, with two different sets of guys, old geeks and young geeks. It is weird. I don't know where the techniques came from. Some of the moves are very hard to follow. But we can't find anything wrong with it! There might be something wrong with it but we can't find it. I have not slept. *(He catches his breath.)* It works. I thought you might want to know.

CATHERINE. I already knew. *(Beat.)*

HAL. I had to swear these guys to secrecy. They were jumping out of their skins. See, one e-mail and it's all over. I threatened them. I think we're safe, they're physical cowards. *(Beat.)* I had to see you.

CATHERINE. I'm leaving.

HAL. I know. Just wait for a minute, please?

CATHERINE. What do you want? You have the book. She told me you came by for it and she gave it to you. You can do whatever you want with it. Publish it.

HAL. Catherine.

CATHERINE. Get Claire's permission and publish it. She doesn't care. She doesn't know anything about it anyway.

HAL. I don't want Claire's permission.

CATHERINE. You want mine? Publish. Go for it. Have a press conference. Tell the world what my father discovered.

HAL. I don't want to.

CATHERINE. Or fuck my father, pass it off as your own work. Who cares? Write your own ticket to any math department in the

proof for Claire that Catherine needs to be looked after

evidence the proof was hers

country.

HAL. I don't think your father wrote it. (Beat.)

CATHERINE. You thought so last week.

HAL. That was last week. I spent this week reading the proof.

I think I understand it, more or less. It uses a lot of newer mathematical techniques, things that were developed in the last decade. Elliptic Curves. Modular Forms. I think I learned more mathematics this week than I did in four years of grad school.

CATHERINE. So?

HAL. So the proof is very ... hip.

CATHERINE. Get some sleep, Hal.

HAL. What was your father doing the last ten years? He wasn't well, was he?

CATHERINE. Are you done?

HAL. I don't think he would have been able to master those new techniques.

CATHERINE. But he was a genius.

HAL. But he was nuts.

CATHERINE. So he read about them later.

HAL. Maybe. The books he would have needed are upstairs. (Beat.) Your dad dated everything. Even his most incoherent entries he dated. There are no dates in this.

CATHERINE. The handwriting —

HAL. — looks like your dad's. Parents and children sometimes have similar handwriting, especially if they've spent a lot of time together. (Beat.)

CATHERINE. Interesting theory.

HAL. I like it.

CATHERINE. I like it too. It's what I told you last week.

HAL. I know.

CATHERINE. You blew it.

HAL. I —

CATHERINE. It's too bad, the rest of it was really good. All of it: "I loved your dad." "I always liked you." "I'd like to spend every minute with you ... " It's killer stuff. You got laid AND you got the notebook! You're a genius!

HAL. You're giving me way too much credit.

I don't expect you to be happy with me. I just wanted ... I

it is a theory – there is still no way to prove it

don't know. I was hoping to discuss some of this with you before you left. Purely professional. I don't expect anything else.

CATHERINE. Forget it.

HAL. I mean we have questions. Working on this must have been amazing. I'd love just to hear you talk about some of this.

CATHERINE. No.

HAL. You'll have to deal with it eventually, you know. You can't ignore it, you'll have to get it published. You'll have to talk to someone.

Take it, at least. Then I'll go. Here.

CATHERINE. I don't want it.

HAL. Come on, Catherine. I'm trying to correct things.

CATHERINE. You CAN'T. Do you hear me?

You think you've figured something out? You run over here so pleased with yourself because you changed your mind. Now you're certain. You're so ... sloppy. You don't know anything. The book, the math, the dates, the writing, all that stuff you decided with your buddies, it's just evidence. It doesn't finish the job. It doesn't prove anything.

HAL. Okay, what would?

CATHERINE. NOTHING.

You should have trusted me. *(Beat.)*

HAL. I know. *(Beat. Catherine gathers her things.)*

So Claire sold the house?

CATHERINE. Yes.

HAL. Stay in Chicago. You're an adult.

CATHERINE. She wants me in New York. She wants to look after me.

HAL. Do you need looking after?

CATHERINE. She thinks I do.

HAL. You looked after your dad for five years.

CATHERINE. So maybe it's my turn.

I kick and scream but I don't know. Being taken care of, it doesn't sound so bad. I'm tired.

And the house is a wreck, let's face it. It was my dad's house ...

(Beat.)

HAL. Nice house.

CATHERINE. It's old.

HAL. I guess.

CATHERINE. It's drafty as hell.

The winters are rough.

HAL. That's just Chicago.

CATHERINE. Either it's freezing inside, or the steam's on full blast and you're stifling.

HAL. I don't mind cold weather. Keeps you alert.

CATHERINE. Wait a few years.

HAL. I've lived here all my life.

CATHERINE. Yeah?

HAL. Sure. Just like you.

CATHERINE. Still.

I don't think I should spend another winter here. *(Beat.)*

HAL. There is nothing wrong with you.

CATHERINE. I think I'm like my dad.

HAL. I think you are too.

CATHERINE. I'm ... afraid I'm like my dad.

HAL. You're not him.

CATHERINE. Maybe I will be.

HAL. Maybe. Maybe you'll be better. *(Pause/He offers her the book. This time she takes it. She looks down at the book, runs her fingers over the cover.)*

CATHERINE. It didn't feel "amazing" or — what word did you use?

HAL. Yeah, amazing.

CATHERINE. Yeah. It was just connecting the dots.

Some nights I could connect three or four. Some nights they'd be really far apart, I'd have no idea how to get to the next one, if there was a next one.

HAL. He really never knew?

CATHERINE. No. I worked after midnight. He was usually in bed.

HAL. Every night?

CATHERINE. No. When I got stuck I watched TV. Sometimes if he couldn't sleep he'd come downstairs, sit with me. We'd talk. Not about math, he couldn't. About the movie we were watching. I'd explain the stories.

Or about fixing the heat. Decide we didn't want to. We liked the radiators even though they clanked in the middle of the night.

Catherine easily discusses the proof, along with how and when she wrote it

make the air dry.

Or we'd plan breakfast, talk about what we were gonna eat together in the morning.

Those nights were usually pretty good.

I know ... it works ... But all I can see are the compromises, the approximations, places where it's stitched together. It's lumpy. Dad's stuff was way more elegant. When he was young. *(Beat.)*

HAL. Talk me through it? Whatever's bothering you. Maybe you'll improve it.

CATHERINE. I don't know ...

HAL. Pick anything. Give it a shot? Maybe you'll discover something elegant. *(A moment. Hal sits next to her. Eventually she opens the book, turns the pages slowly, locates a section. She looks at him.)*

CATHERINE. Here: *(She begins to speak.)*

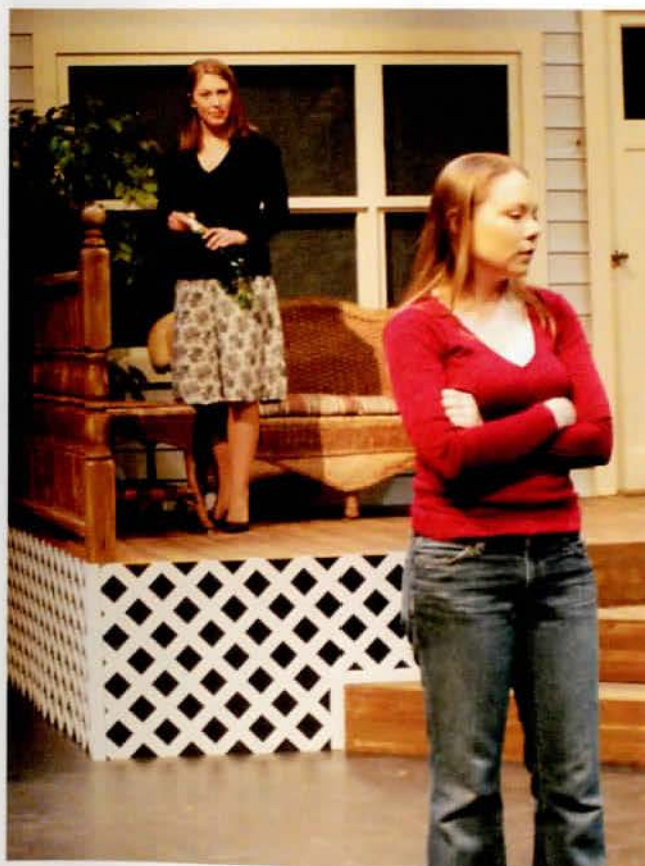
Curtain

Hal sees her as the person she wishes to be from his perspective, she is a smart, capable woman Catherine has begun to regain confidence in herself, both through fighting for herself and from Hal's belief in her

Appendix O: Production Photographs



Act 1. Scene 2: Catherine and Claire



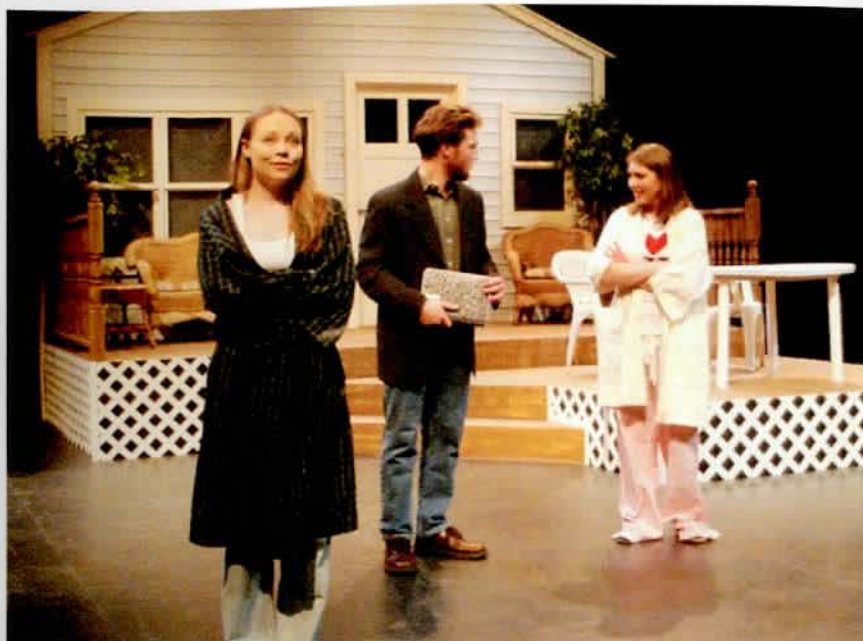
Act 1, Scene 2:
Claire and
Catherine



Act 1. Scene 3: Hal and Catherine



Act 1, Scene 4: Catherine and Claire



Act 2. Scene 2: Catherine, Hal, and Claire



Act 2. Scene 4: Catherine and Robert



Act 2. Scene 4: Catherine and Robert



Act 2, Scene 5: Hal and Catherine



Act 2, Scene5: Hal and Catherine