

Table of Contents

Volume 4 • 1997 - 2003

Jason Vickers	1523
Eugene L. Watson	1563
Jeff Wegner	1575
Marsha L. Wilson	1599
Marsha L. Wilson	1605

Writer's Notes

From Jason Vickers

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From Jason Vickers

For a writer, standing in front of any kind of audience and explaining his work is a terrifying experience. We are used to, and quite comfortable with presenting our work in an envelope. Explaining our process and defining our work is something better left to those who read our product.

However, talking about our work can part of a cathartic process. The folder on my computer which I store all my work in is titled "Katharsis," and for good reason. While for me, my process is a obvious, clearly defined progression from one point to another, even the simple act of explaining how I go from one topic from another can be at best confusing, at worst a mental crisis.

That said, I am now going to step out of my chosen arena and try to shed some light on why I choose to sit hunched over a computer screen for upwards of ten hours a day.

I got into writing around sixth grade. As a kid, I was cursed with a small build, and I wasn't extremely athletic. When I couldn't live out my dayborn fantasies of success on the ice or the field, I would dream up grand stories of last-minute heroics. Pretty soon, those stories graduated into fantasies about being a warrior, traveling to exotic lands and bringing people together. Looking back now, I'm convinced the genre a writer chooses is totally dependent on how he or she grew up. As I got older, and my interests changed, I went from dreaming dreams of power to trying to make my friends laugh.

To this day, maybe because I'm still eight years old at heart, I'm certain that the only reason I should write is to make someone else's life a little happier. I get my kicks out of the process of writing. Seeing someone else become enthralled with my work is like being paid twice for the same job.

As part of my McNair's project, two acts from the play I wrote were performed last year at my college. The one-act plays "The Choice" and "Wish" were picked up by Concord's local chapter of Alpha Psi Omega for their spring performance. Needless to say, this was at the same time the most exciting and scariest moment of my short life.

"The Choice" was an experiment in law. I wanted to test how far the audience would go to accept a performance about abortion. In writing the play, I put my personal feelings about abortion aside and tried

to write a play about the skewed logic of some of America's laws.

"The Choice" is a play about a young woman who has given birth to a premature baby, and has decided to have an abortion nearly two weeks after delivery. In the world that "The Choice" takes place in, the logic behind abortions has been extended. Not only can a child be aborted right up until the moment of birth, in this world, a child may be aborted until nine months after conception, regardless of whether or not the baby has been born. Needless to say, this play was hard to pull off.

In the first draft of "The Choice," a narrator enters before the play begins and explains that what the audience is about to see is a performance highlighting the absurdity of some American laws, and how simple logic can get out of hand. I chose to eliminate the narrator character because I felt he slowed down the action of the collection, and in some cases, could insult the intelligence of the audience.

After the performance, I was quick to realize the error of my ways. A lot of the members of the audience expressed confusion when they saw the baby being aborted. Throughout the play, the bulk of the action is carried by the mother and the daughter, and the child is not mentioned as a human being. My hope was to show the perceived ignorance of our own culture's treatment of the unborn. However, instead of the audience realizing what they were making the same labels as the actors, they merely were confused by the action.

As I look at another draft of the play (a work is never "complete") I feel like I could address this problem rather easily, with a few well-placed lines here and there. My goal was to make the audience afraid that something this blatantly horrible could happen in our culture, and to question the labels they put on things they take for granted. I realize it will take another draft to break the hold those labels have over the audience which prevented them from "getting it."

The other play from the compilation that was produced was "Wish." In "Wish" a young man realizes the woman he is with is not the person he thought. Unlike "The Choice," "Wish" does not address great social issues or try to teach a lesson. While I believe all writing serves a purpose, it does not necessarily have to instruct. In the compilation's sequence, "Wish" immediately follows "The Choice" and it was written solely to break the tension of the previous play. Unfortunately in production, "Wish" was performed the night after "The Choice."

With every piece of work, I strive to try something new. In "Wish" that something was a split

stage. When I write, the work takes on a mind of its own. In all of these short plays, they were originally hatched as short stories. However, as they were written, they grew into plays, as the dialogue took over from the descriptive detail.

This presented a small problem in "Wish" as the construction of a large portion of the jokes comes from the back and forth banter between the girls and the guys. While this problem would easily be solved in television by quick editing, such scene changes are too cumbersome for the stage. Instead of a curtain dividing up the stage, as I saw it in my *Mind's Eye*, fellow McNair's scholar and director Cindy Boyce decided to let the audience figure things out on their own. The stage was divided into two unique rooms, but as one side took the action, the other side simply went about their business, the characters going so far as to subtly react to dialogue on the other side. Cindy's excellent blocking briefly called into doubt the writer's determination that directors were merely a necessary evil.

Briefly.

I had many people approach me after the play was over and ask me if what Shannon and Pete went through was somehow related to my life. It was. I once tried writing about things I don't fully understand, and I found it produced a terribly daft product. In "Wish" I took a period in my life and said "Wouldn't it be funny if?"

I have never said how true the play is to my own life, but everything I put down on paper has some correlation to my own experience. The line, however, is where I get to hide. If it weren't for that smidge of anonymity, I would be an accountant.

While I found that "Wish" was received much more warmly than "The Choice," I thought "The Choice" was a much more important piece of work, and is something that I will always be glad I have written. I like ideas to be challenged, whether I agree with them or not. I've found too much of our culture merely acceptant of our current norms, and heady debate is reserved for fashion on late night television. Writing these two plays, and seeing them produced on stage, was watching two sides of the same coin. My ego took a huge hit when people left "The Choice" confused. I definitely needed that kind of wake-up call to make my work clearer.

And seeing 200 people burst into laughter at jokes I had written the following night was a vindication of sorts, and probably kept me from becoming preachy in my rewrite of "The Choice." It

allowed me to see that I could have success, and get what I wanted from my head to the minds of 200 other people.

The rewrite of "The Choice" will most likely be a short one, as I have found concision to be a commodity for writers, especially those who want to influence the masses.

Brain Stew

A play by Jason Vickers

May God have mercy....

"Frankenstein Fly"

[Open. We see on stage a table with five chairs. The stage is set up to look like a cafeteria. Two of the chairs are empty, but the remaining three are occupied by Woody, Mick and Chris. Mick is sitting on the far end, with Chris and Woody on the other. They are laughing]

Mick: Now I swear, this works! All you gotta do is take a fly, kill the bastard, then bring him back to life.

Chris: No tall order.

Mick: No, dumbass, you don't squash him or anything, then it doesn't work. You've gotta kill him without actually hurting him.

Woody: Another contradiction in terms.

Mick: Would you just shut up and listen?

Woody: Okay, okay. You were at work....[expects Mick to finish]

Mick: Yeah, I was cleaning tables, no big deal, when I see this fly buzzin' around and I think, 'Hmm...' So I stood there real quiet until the fly landed on the table. I reached down and grabbed my spray bottle and let that little bastard have it. He was floppin' around on the table, couldn't get his wings moving, so I got a glass and trapped him.

Woody: But the spray cleaner won't kill him?

Mick: Nah, you've gotta SMASH a fly to kill it.

Chris: Anyway...

Mick: Yeah, anyway, I brought the fly up to the front and kinda flopped 'im down on the counter and said 'Remember how I said you could bring a fly back to life?' [Points emphatically in front of him] 'Don't go anywhere!'

Chris: Where'd you go?

Mick: Back to cleaning tables. Hell, I had time.

Woody: [To Chris] Just as a mental note, don't ever go to Roy Roger's at 3:00 in the morning.

Chris: That's probably a good idea.

Mick: Yeah yeah yeah, anyway, after about fifteen minutes, I finished up cleaning the

tables -

Woody: Never washing your hands.

Mick: [Gives sidelong glance to Woody] and I came back up front. Crystal and Roger had been up front watching my fly the whole time. I'd told them a few weeks back about bringing flies back to life in high school. Now Crystal isn't exactly the sharpest knife in the drawer, but she's a good waitress. [Pauses a beat] Roger's the kinda guy who never finished high school, but he's got a lot of common sense. When I got up there, they were kinda huddled around the glass, watching the fly buzz around the inside. I went around back and got a glass of water. Crystal and Roger didn't say anything. Now I picked the glass up with the fly in it, turned it right-side up, and dumped the water in it. Then I put my hand over it. After a few minutes, I turned it over, just to make good and sure that the fly was dead.

Woody: You drowned a fly?

Mick: Well what the hell did you expect? Putting him in the microwave?

Chris: ...ANYway...(expects Mick to continue)

Mick: Alright, so the fly was kinda floating in the water, not moving or anything, so I plucked him out and flopped him down on the table. I said 'Now Crystal, is that fly dead?' She looked down at the fly, then up at me, then back down at the fly again. She looked like I'd just asked her if she'd give the thing mouth-to-mouth for me. Roger was doing all he could to keep from laughing his ass off, so finally I told her to push it around a bit to make sure it was dead.

[pauses another beat]

Well, she did, but it took her a while to realize the fly was dead. She'd push it around and it'd flop over. Finally, she looked back up at me and said [imitates a redneck, raspy female voice] "That fly's dead as shit."

Woody: [imitates Mick's voice] ...not the sharpest knife in the drawer.

Mick: Exactly. [short pause] Now, I kinda blew on the fly for a minute, gettin' him all dried off -

Woody: [chuckling] Was it good for the fly?

Mick: [ignores Woody] After the little bastard was all dry, I opened up the salt shaker - you've gotta take the lid completely off in order to get enough salt - and covered him with it. After that, I looked up at Roger and Crystal and said [points to imaginary people] "Now wait!"

Pretty soon, the salt started moving. Crystal took a couple of steps back, but Roger just leaned forward. Now sometimes you've gotta help out the fly and brush some of the salt off him. I reached down with my pinkie [imitates brushing motion on the table] and dug him out. The little bugger crawled out and started cleaning himself off.

Chris: What'd Roger and Crystal say?

Mick: Well, Crystal was just about scared shitless. She kept saying "That fly was *dead!* I pushed him around with my finger." Then she'd hold up the finger she pushed the fly across the table with like she was saying that her finger was lying to her. [Chris and Woody laugh more] Roger...well, he just stood there looking at that fly. He asked me how I thought they could do that.

Woody: How DO they do that?

Mick: Well, fly's have only got something like six chromosomes, so I guess it's just a lack of evolution. That's what I told Roger, anyway. I really don't have any idea how they come back from the dead.

Chris: So what'd Roger say?

Mick: [chuckles] Well, he said [imitates older man's voice] "I never would have thought something like that. Maybe those things have one up on us after all." [pauses a beat] I just looked at him and went [SLAMS fist on table] "They're still flies." [Chris and Mick practically die laughing]

[Lights fade out on Chris, Woody and Mick. Lights go up on The Narrator, an older man, pushing forty or forty-five. He folds his hands in front of him in a melodramatic manner and looks solemnly up at the audience]

"Harvester of Students"

Act I

[On the hallway door are the posted grades from the last test. Nathan and Kathy are passing by and spot their grades.]

Nathan: [does a little celebration jig] Oh yeah! An 89! Thank You, God! [he stops his dance and notices Kathy, who is less than happy about her grade]

Kathy: A 54? How?

Nathan: You got a 54?

Kathy: Yeah, apparently. It's right there.

Nathan: How? I thought you...

Kathy: I did.

Nathan: Then how did you get that grade and I get mine?

Kathy: I don't know. You don't think he knows, do you?

Nathan: If he did, then we both would have gotten a 54. Probably worse. He doesn't know.

Kathy: Then why did I get this grade? How did you do so much better than I did?

Nathan: I don't know. Maybe you'd better go talk to him.

Kathy: But what if he knows? Then we're both screwed.

Nathan: If he knew, we would have already been screwed. He *doesn't* know.

Kathy: Okay. These are his office hours, I'll just go talk to him now.

Nathan: I'll be down in the computer lab. When you get finished, just come down and get me and we'll go to dinner.

Kathy: Okay. Wish me luck. [Nathan takes Kathy's hand and hugs her.]

Nathan: You'll be fine. It's probably just a computer glitch in the grades or something.

Kathy: I hope so.

Nathan: It probably is. I'll be waiting on you down in the computer lab.

Kathy: Okay. See you then. [Nathan exits stage right and Kathy continues down the hall. Lights down.]

Act II

[Lights go up. On stage is an office. The basics are there: desk, chair, books, a large chest in the corner. On the wall are diplomas from different schools. There is classical music playing softly in the background. Dr. Braham is sitting at his desk talking to someone on the phone.]

Dr. Braham: Listen, Mike, you don't have to worry about it. Everything's taken care of. [pause] Yes, I know - Look, do you trust me? [another pause] Did you hear what I asked? Do you trust me? [shorter pause] Okay, yeah. [brief pause] No, no I wasn't. [long pause] It's not your place to worry about it. Let me take care of it. [pause] Okay. [There is a knock on the door.] Look, somebody's here. I've gotta go. Call you back? [short pause] Okay. Talk to you then.

Dr. Braham: [hangs up phone] Come in.

Kathy: [she peeks her head around the door to see if he is busy, then comes on it] Hi Dr. Braham.

Dr. Braham: Please, it's Ken.

Kathy: Okay, Ken, I've got a question.

Ken: Come on in. [waits for Kathy to be seated] What's on your mind?

Kathy: It's just this last test.

Ken: Yeah, that was a hard one. What about it?

Kathy: Well...it's my grade.

Ken: Just a minute. [Fumbles through his gradebook until he reaches the appropriate class] Ooo, I remember grading that one.

Kathy: Yeah, well I just passed by the grade list outside and it said I got a 54. I was wondering if you had my test.

Ken: No Kathy, I'm sorry. I left them all at home.

Kathy: But you said you remembered grading it?

Ken: Yes. I was suprised to see such a smart girl miss so many questions that I thought were easy. Yours was one of the first papers I graded, and I was afraid I'd made the test too hard. As it turned out, it must have been something on your end. Was anything going on last Thursday?

Kathy: No. When I left, I thought I did pretty well on it. I remember commenting to Nathan that I thought I got an A, no worse than a B.

Ken: Nathan is your boyfriend?

Kathy: [shyly] Yeah. He waited on me after the test.

Ken: [solemnly] I see.

Kathy: [Seems not to notice what Dr. Braham has just said] I was so happy. I thought I did so well this last time, and that I was going to get an A in the class. You know your class is one of the toughest on campus? [He nods] That's why I was so mad when I saw my grade. I *know* I did better than a 54 on that test.

Ken: How?

Kathy: [she now realizes that Dr. Braham's demeanor has changed.] What do you mean 'how?'

Ken: Well, obviously from your grade you didn't know the material that well, but you seemed to think that you got a good grade. *Now* you know that you didn't know the material that well, and you still seem to think you got a good grade. Why?

Kathy: [pauses a second] Well, if you had the test here, I might be able to...[changes gears] What I mean is, I thought I knew what I was doing, and it just seems that I *couldn't* get a 54 on this test.

Ken: This test?

Kathy: Yeah, I really worked hard getting ready for this test. I studied my ass off.

Ken: You are familiar with my policy towards cheating, aren't you?

Kathy: [well-acted surprise] You think I cheated? [she waits for Dr. Braham to answer, but he waits her out. After a long pause:] I didn't cheat on this test. [she laughs a little. Dr. Braham leans forward a bit in his chair, interested] Do you think I'd have gotten such a bad grade if I had cheated?

Ken: I think you'd be convinced that you got a *good* grade if you cheated off someone who did.

Kathy: Do you not believe me?

Ken: [opens up grade book] Your last three test grades. Your *only* test grades: 75, 79 and 72. A solid "C" student. Your quiz grades and lab grades were much better, and you were bordering on an A for the course. That's why I was so distraught to see such a bad grade on this last test. I expected a lot of work from you to get a good grade on this test. I know *you* expect me to look for a lot of hard work from you. You're a smart girl, Kathy.

Kathy: [again, well-acted mock-astonishment. Almost undiscernable] You're calling me a liar. You think I told you that I worked really hard because it's what you wanted and expected to hear. Then you think that I cheated on this test.

Ken: I didn't say that. I said 'you expect me to look for a lot of hard work from you,' not 'you think you can pull one over on me.' Be careful what you're saying.

Kathy: I was ready for this test, I swear! I knew all the material.

Ken: Which is why I was so disappointed in seeing such a bad grade.

Kathy: [she's finally had enough] I *didn't* get a bad grade on this test!! I got a fucking 89!

Ken: You did?

Kathy: [she realizes she has painted herself into a corner.] Look, I've got to go to dinner before the cafeteria closes. [she gets up quickly and heads for the door]

Ken: Wait. [it is spoken coldly. It is definitely not a request. Kathy stops] You have an opportunity to save your grade in this class. College policy on cheating is failure of the course and possible expulsion. That means both you and Nathan. I knew you cheated, I just wanted to see if you would fess up to it. [his anger is rising by the second] Instead I get an obstinate little bitch who comes into my office and tells me that I need to change her grade. That she *couldn't* have gotten such a bad grade on a test that she worked so *hard* on. Don't feed me that shit. I've seen it for nine years.

Kathy: [she doesn't apologize, it wouldn't do a lot of good judging from Dr. Braham's demeanor] You said something about saving my grade in the class?

Ken: Yes.

Kathy: What do I have to do? I'll do anything you need to keep me and Nathan in school.

Ken: [he waits a long time. Kathy is on the far side of the room, with her back against the door. Finally, Ken gets up out of his chair and comes around the desk. He doesn't come any closer to her, though.] It's very simple. [he takes a long look at her body] Very simple.

Kathy: [she has picked up on what she thinks the doctor wants.] That? [she takes a step forward]

Ken: You'll have your "A."

Kathy: [she drops the bookbag that just a few minutes earlier she put on her shoulders in fear to the floor] And you won't say anything? About me or Nathan?

Ken: Not a word. Hell, I'll give him an "A" too.

Kathy: You won't tell Nathan?

Ken: [a bit surprised] Oh no. I won't tell anyone.

Kathy: Just once? One time is all I have to do it?

Ken: Yes. This is the last time.

Kathy: Last time?

Ken: [short pause] Sorry, I meant the only time. You won't have to do anything else.

Kathy: Okay. I'll do it. [she steps back and starts to unbutton her shirt. Before the first button comes out, Dr. Braham has his hands around her throat.]

Ken: The last time! The last time! Never again! [Kathy is wildly beating on Dr. Braham's arms and wrists, to no avail. Her knees go weak, and she begins to drop to the floor.]

Ken: Little cheater! Cheater and *liar!* [Kathy kicks at him, drawing nothing but air, however. Dr. Braham forces her down further, and she struggles on the floor. The life is quickly draining out of her body, and soon she is still. He picks up her arms and drags her over to the large chest in the corner of his office. He opens it and puts her in. He then walks back over to the door and gets her bookbag. He throws it indifferently into the chest and drops the lid.]

[Dr. Braham then sits back down at his desk and leans back in his chair. He sighs a big sigh. He laces his fingers and pushes the backs of his hands out into the air, popping his knuckles. Then he picks up the phone and punches some numbers.]

Ken: Hey, Mikel It's Dr. Braham. Give me a call when you get back, I've got what you needed. I *told* you that everything would be fine, didn't I? I'll be home this evening. Patty and the kids are going to a movie, so you can drop by and pick it up around eight or so. I'll be waiting. Later.

[Lights fade out.]

Act II: The Choice

Girl: So what can we do?

Boy: I can get a job, you can leave the kid with your mom and stay in school.

Girl: My mom? *Yeah, riiiiight.* You know how mom feels about things like this. She'll never let me live something like that down.

Boy: Maybe. I just don't feel too good about it.

Girl: Waitaminute, face the facts here. If *you* had been wearing a condom, like I wanted, we wouldn't be here.

Boy: Yeah, if you weren't so fucking easy...[the girl looks hurt, but she remains focused]

Girl: This isn't going to get us anywhere. We're both adults, right? It's *our* decision.

Boy: Yeah, you're right.

Girl: And this is our decision, right? This is what you want to do?

Boy: Yeah. It's the only thing we can do. Neither one of us can afford a baby. I don't know

about you, but God knows I'm not ready to be a father. I've got three years of college left. Maybe grad school.

Girl: I know. I've got plans too. We're just not ready for a child yet.

Boy: Who's gonna tell your mom?

Girl: She's my mom. It's my responsibility.

Boy: Do you want me to be there?

Girl: You know mom doesn't like you. I think it'd just make a bad situation worse.

Boy: Are you sure you want to do this?

Girl: Are you?

Boy: No, but it's what's gotta be done, I guess.

Girl: I guess so too.

Boy: If you could have it another way, what would you do?

Girl: Besides not having the baby in the first place?

Boy: Yeah.

Girl: I'd have enough money to support the kid and keep it.

Boy: What about me?

Girl: What do you mean?

Boy: Well, you said "I." Does that mean you wouldn't marry me?

Girl: I'm not ready for marriage. Maybe I would eventually, but not at first. The taxes are better for single moms anyway. You could live with me, we just wouldn't get married.

Boy: [looks suprised] Oh, okay.

Girl: Look, I really don't want to go through with this either, but there's no other option. I can't have something like this now. You know that just as well as me.

Boy: Yeah.

Girl: I just don't want it to seem like I'm pushing this on you. This has to be something

both of us decide.

Boy: I know. I know you're not pushing anything on me, I just wish there was some other way.

Girl: I do too.

Boy: But there's not.

Girl: I know.

Boy: I'd better go before your mom gets here. Gimme a call after. Ya know, to let me know how it went.

Girl: I will. It'll be okay, I promise. Mom'll understand eventually, if not at first.

Boy: [Puts on his coat] Did you ever think this would happen?

Girl: No.

Boy: I mean, I never thought I'd meet someone like you. I always heard about things like love, I've seen a bunch of movies on the subject. Hell, I've seen some of my friends go through it. I just never thought something like you would happen to me. [He walks around to the front of the couch and kneels down in front of her]

Girl: [slightly alarmed] What are you doing?

Boy: Nothing. Just getting down here where I can see you. I love you. We're going to get through things bigger than this in life. I promise.

Girl: [relieved] Yeah, we are.

Boy: We'll make it.

Girl: Yeah, I think we will. I love you too.

Boy: [stands up] You think after this is taken care of that we should stop... [he lets the subject go unannounced]

Girl: [with clarity] No. I don't see why we should. We can just be more careful.

Boy: [relieved a bit. It is obvious the talk of grad school was just that. He is not a smart man.] Yeah, okay. Good.

Girl: This won't happen again, I'll make sure of it. I'll get on the pill if I have to.

Boy: That's a good idea. [he starts to say something else, but the door opens. It's the girl's Mother.]

Boy: Oh, hi. I was just leaving. I've gotta go to class in a few minutes.

Mother: Oh, it's okay son. Don't let me rush you off or anything. [You can tell that that's exactly what she wants. She doesn't want him in the house with her daughter]

Boy: [He also knows what Mother is really thinking] No, I'd better go. I've already missed Chemistry once, and I need to study for this next test.

Mother: [cheerily] Well you'd better get a move on, then. [she directs him to the door]

Boy: [to girl] I'll see you this evening, okay?

Girl: Which movie do you want to see? You never said.

Boy: How 'bout that movie about the guy hitch hiking across Arizona?

Girl: That sounds good; I've been wanting to see it anyway.

Mother: A man your father works with said it was very good.

Boy: Okay, I'll pick you up at nine.

Girl: That's fine.

Mother: We'll see you later.

Boy: Okay. [exits]

Girl: So how was your day mother?

Mother: Oh it was great. We had a breakthrough with one of the kids on probation this afternoon.

Girl: The one who tried to burn the place down?

Mother: [nods as she hangs up her coat] Um hmm.

Girl: What happened?

Mother: He had been making a nuisance of himself all morning until the minister came in and talked to him for a while.

Girl: Nuisance?

Mother: Um hmm. He tried to break one of the mirrors, and he hit one of the nurses.

Girl: Wow.

Mother: Father Walker just went right in while he was throwing a tantrum and sat down on his bed, plain as day. The boy punched him once in the mouth, but the Father never moved. He just waited him out.

Girl: What happened then?

Mother: The boy just broke down. He cried for the longest time. Father Walker brought him out, while he was still crying, mind you, and took him to the chapel. He was saved not thirty minutes later.

Girl: I thought all that boy needed was a good spanking.

Mother: Me too. I guess he'd had enough of that in his life, though. No, that's not right. He wasn't spanked like you or your brother was. That poor boy was beaten.

Girl: It would be something to screw someone up, I guess. Being beaten like that.

Mother: Some people just aren't cut out to be parents, that's all. You have to take a test to get a driver's license, but any idiot can have a kid. [she looks at her daughter with a hard stare]

Girl: [quietly] Yeah.

Mother: [switches gears] So how was your day? You never talk about yourself anymore.

Girl: Oh, not bad. Got an A on my accounting test.

Mother: That's good. You're really going to be a success if you keep it up and let me help you.

Girl: I know. I appreciate all you've done for me, too.

Mother: [looks skyward] That's a rarity. A teenager who'll say "thank you."

Girl: [quietly, again] Mom, I've got something to tell you....something you may not like.

Mother: [suddenly cautious] What? [the girl is silent for a few moments, her head down] Is it about the baby?

Girl: Yeah mom, it is.

Mother: What is it? Do you need money?

Girl: No mom. Jack and I were talking....

Mother: [with a touch of anger] About what?

Girl: [slightly frustrated, but more scared] It's not like that. You know he doesn't lord over me.

Mother: I know, it's just the opposite. That boy doesn't have a backbone.

Girl: No, mother, he does.

Mother: What were you two talking about?

Girl: *We* decided that it would be better if we had an abortion. [mother is quiet for a long time. She sits down at the chair furthest away from the girl and gives her a hard look]

Mother: Who's decision was this?

Girl: It was our decision. We made it together.

Mother: Who brought it up first?

Girl: [quietly] I did.

Mother: And *why* do you want to have an abortion?

Girl: You know that we can't afford a baby. Jack's got three years left in college, I've got three. Maybe graduate school after that. We couldn't get the grades we need if we had to look after a baby.

Mother: You know I want to help, don't you? You know that all I've done is to help you, right?

Girl: Mom, you can't look after this baby for another six or eight years.

Mother: I looked after you, didn't I?

Girl: That was when you were thirty. You're not thirty anymore.

Mother: You just don't want to have the aggravation.

Girl: [approaching tears. Not there yet, but she's on the way] That's not it. I wanted this baby. I -

Mother: [with acid in her voice] No, you *wanted* to have sex, but now you can't face the consequences.

Girl: That's not it.

Mother: That's exactly it, and you know it.

Girl: Do *you* think I [pauses] WE, can take care of a baby?

Mother: You're not going to marry him.

Girl: [realizes her mistake] No, I am!

Mother: You said "I." You're lying to him. You've been lying to me. You're not going to marry him.

Girl: So what if I don't. There are plenty of single mothers in the world.

Mother: I thought you were going to have an abortion?

Girl: I'm saying it's MY FUCKING CHOICE!! If I want to keep it, I can, and if I don't, I don't have to.

Mother: [lowers her voice to normal tones] You're talking about a human being.

Girl: [doesn't notice what her mother has said] Everything here is my choice. I don't have to marry Jack if I don't want, and I don't have to be a mother if I don't want. I carried that baby for eight months in MY body, and I gave birth to it. If I don't want it, then I don't have to have it.

Mother: [shaken] Is this how Jack feels?

Girl: [with venom] It's *exactly* how Jack feels.

Mother: Does he know that you don't want to marry him.

Girl: He knows the truth. He knows that we're not getting married right now. Hell, I might marry him eventually, but not right now.

Mother: And you want to have an abortion?

Girl: No mom, I'm *going* to have an abortion. I can't have this burden right now.

Mother: Do you know what you're talking about?

Girl: [sarcastically] Yes, *mother*. I'm talking about my life and my future.

Mother: What about the baby? What about that little miracle in the bedroom?

Girl: You just don't get it, do you?

Mother: I don't see what there is *to* get.

Girl: It's perfectly legal for me to abort this child right now.

Mother: I know it is. Can you live with this?

Girl: Yes, I can. I will.

Mother: I only ask because I'm not sure if *I* can live with this.

Girl: Oh mother, you don't have to worry about it. It's my call, and it's my conscience.

Mother: And it's my grandchild.

Girl: You did nothing to bring that kid into this world.

Mother: But I raised you. [she gets up and walks stage left, turning ever so slightly away from her daughter. Now, quietly] And I thought I raised you better.

Girl: You weren't saying that when the kid was born. All you could talk about was how cute it was and how much it looked like my dear old grandma. You never once mentioned how *sinful* it was to have a kid out of wedlock. To fuck out of wedlock. You never gave it any attention, that part. All you cared about was the kid, not me.

Mother: I didn't see how crying over what had already happened would solve anything. I just tried to do the right thing and support you. I've been as nice as I can to Jack, too. You know I don't like him, but I've always given him the benefit of the doubt.

Girl: You've just made the best of a bad situation, in your mind. I'm not the choir girl, like you were.

Mother: [stops herself from following her daughter further down that path] I want you to know, that if you want to do this, then you will. But if you want, you can leave the baby with me, I'll take care of it until you're settled down and have a home and a job. If that takes three years or eight, I'll do it.

Girl: Thank you mother, but no. This is what has to be done. You know why. Even if you won't admit it, you know.

Mother: Franny, please, that child is a miracle.

Girl: [shouting] Oh don't give me that, mom. That kid is no more a miracle than someone shitting a turd two days after eating a peanut butter and jelly sandwich. That's all it is.

Mother: [she finally sees that her daughter's mind is made up] Okay, do what you want. Just know that I will do whatever you need if you change your mind. [she is visibly hurt]

Girl: Mom...

Mother: It's just that you carried that child in your body, inside your *body* for Christ's sake, for eight months, and *now* you want to abort.

Girl: I just didn't know how much work it would be. I didn't know how difficult it would be. Please mom, don't think I want to do this. This was not the first option. But it's what I've got to do. Believe me, I'll be thinking of this for the rest of my life.

Mother: I know you will. [she heads for the door]

Girl: Where are you going?

Mother: To the nursery. I'm going to go spend some time with your nameless baby.

Girl: What is it that you want me to do? Let you lord over my life and fuck up that child like you fucked up me? Let you take care of that kid during the day and go out at night and get drunk with a different guy every week?

Mother: That was years ago. I've apologized to everyone about that again and again. I apologize for that every day. I've learned from my mistakes, and you *told* me that you had forgiven me for it.

Girl: I can forgive, but never forget. I - [she is cut off by her mother's anger]

Mother: [shouting] Now listen to me! I will *not* let you dredge up my past to try to make an excuse for copping out on *your* mistakes. I have to live with my mistakes every day; I can't thank Uncle Sam and have a doctor flush my past down the toilet. This is *not* about me. It's about you and that nameless baby in that room. [she is standing on the balls of her feet, leaning forward with the force of her rising anger]

Girl: If you could get rid of your past, even now, you would. You'd do it in a heartbeat.

Mother: If I could get rid of my past, I wouldn't be me.

Girl: Maybe that wouldn't be such a bad thing.

Mother: [in tears] I am *not* letting you abort that child.

Girl: [with cold precision] The law is on my side. I can have you arrested if you try to stop

me.

Mother: [she sits down, nearly missing the chair. She stares at her daughter for a minute, then wipes the tears from her eyes, trying to regain her composure. She sits up a little straighter, smoothing out her skirt.] If you do this, I don't want to ever speak to you again.

Girl: [sees victory in sight] Fine. I've heard that before too.

Mother: [stands up and addresses her more like she's talking to a stranger] You're going to find out that you can't always count on things staying the same. You may have heard that from me before, but you will never hear *anything* from me again. [before the girl can reply, she slams the door behind her.

[The girl stares at the door for a few seconds, then breaks down in tears. From the other room, the cries of the baby in question can be heard, and it causes the girl to break down even more. She stands up and wipes her eyes with the back of her arm. Still crying, she picks up the phone]

Girl: [recovering from her tears, but only a little] Hey, Jack? [short pause] Yeah, I'm fine. Mom'll get over it eventually. [another short pause] No, it was an argument, but not what I expected. She didn't quote the Bible or anything. [pause] Yeah. Look, I want to go now. [short pause] No, not to the movie, I want to go do it now. [long pause] Yeah, I can meet you there. It's on 49th Street. I'll wait on you before we go in, okay? [pause] Be there in half an hour. [she hangs up and goes to the closet to get her coat. She exits stage right. Lights down.]

Act II

[Lights go up on a room that is very plain. There is a table, two chairs, and a cot in the room. Otherwise, it's bare. First the Doctor enters, holding a black bag, the doctor's norm. Then the Boy and Girl, stage right. The Girl is holding the baby wrapped in a large blanket. You can't see the baby, but you can tell it's there.]

Doctor: Now this procedure should only take a few seconds. A minute at most. There will be no pain.

Girl: Are you sure? No pain?

Doctor: Yes, quite. Only that of the needle.

Girl: The...the stuff doesn't hurt?

Doctor: No. It stops the nervous system first. I assure you, the baby will feel no pain.

Girl: What...what will happen to the baby?

Doctor: After administration, the baby should start to feel sleepy. It's just like getting very tired very fast. No disorientation, no pain.

Girl: Okay.

Doctor: [reaches in bag and gets out a clipboard] Now if you will just sign this last paper.

Boy: I thought we'd already signed all the papers.

Doctor: It's just a precautionary measure. Federal law requires we give one last chance to the parent or parents to renege. The way of doing this is for you both to sign this document stating that this is what you want.

Boy: [quietly. He feels very small] Okay. [The Doctor hands the clipboard to the Boy, and he takes the offered pen and signs it. The Doctor then offers it to the Girl]

Girl: Here Jack, hold her. [the Boy takes the baby while the Girl signs the paper. After she finishes, she takes the baby back.]

Doctor: Now most clients don't want to be in the room while the procedure is being performed. Do you wish to be present?

Girl: [she looks at the Boy. He nods in the negative] No, I don't want to either.

Doctor: Then that's it.

Girl: [quietly] Yeah, I guess it is. [she pauses for a long time, looking at the child in her arms. The turmoil is evident on her face.]

Doctor: Miss? [the doctor's word breaks her trance, and she hands the baby, still wrapped in the blanket, to the Doctor. She and the Boy then take a long pause before slowly exiting stage right. Just before the door shuts, the Girl takes one last look back, then the door closes.]

[The Doctor places the baby on the table and reaches for his bag. He pulls out a syringe and looks at the baby. Lights go down to almost complete black, and you can hear the baby start to cry. It's cries fade until you can hear nothing. Lights go completely black.]

[Intermission]

Act III: Wish

Shannon: [in mid-conversation]so this Tri-Delt tells Dr. Northridge 'Don't you think we've heard enough of your bitching for one day?'

Pete: [laughs, but it is merely a puffing of air out of his lungs. There is a smile on his face]

So what did she do?

Shannon: Oh God, she went apeshit. Called the guy a Neanderthal and told him to get the fuck out of her class.

Pete: Get the fuck out?

Shannon: Well, no, she didn't say 'fuck,' but she told him to get out.

Pete: I didn't think that little woman had that kind of anger in her.

Shannon: I guess it's always the people you don't expect to be the ones who go all the way out of it.

Pete: Yeah, something like that.

Shannon: So, what are we doing tonight?

Pete: I don't know. Didn't really give it much thought. I figured we might go see a movie or something.

Shannon: [disappointedly] A movie?

Pete: Yeah, there's that new one out about the guy going across Arizona I thought we could see. You said you wanted to see it.

Shannon: Yeah, I did.

Pete: What's wrong?

Shannon: [In the classic female tone] Nothing.

Pete: Nothing? Really, what's wrong?

Shannon: Only that it will be our seven month anniversary tomorrow, and I thought we could do something nice.

Pete: But you said on Wednesday that you wanted to see this movie.

Shannon: Yeah, but I didn't mean tonight.

Pete: [a little bewildered] But you said that after I asked you what you wanted to do this weekend.

Shannon: I don't want to have to tell you what we should do on our anniversary. I thought you would want to do something a little nicer than Macado's and a movie.

Pete: But I thought that's what you wanted to do! Hell, you *said* that's what you wanted to do.

Shannon: I don't know.

Pete: What do you want to do? We can do something different.

Shannon: We'll just stay here.

Pete: [getting more and more frustrated] What am I supposed to do? I'm not a mind reader.

Shannon: I just don't know if you love me, is all. All you ever want to do is go to the movies or stay here and rent a movie. We never do anything nice, and I hardly ever get to be seen with you in public. It's like you don't want to be seen with me.

Pete: WHAT? I've been with you since August. As soon as I saw you I knew I wanted to be with you! It's not that I don't want to be seen with you, I do. It's just that there's not a whole lot to do around here. Even you have to admit that.

Shannon: We could GO somewhere sometime. We don't have to do everything in this little nothing town. There are parks near here. There's a museum an hour away.

Pete: What is it, really?

Shannon: [lowers head a bit] I just don't feel like I'm good enough for you.

Pete: Oh God, that's totally wrong. I love you. Any guy here would just about break his legs to be with you.

Shannon: [doesn't hear what he's saying or pretends not to hear] I'm just an ugly, fat kid who drags you down.

Pete: No you're not, and you know it.

Shannon: Yes I am. The only reason I'm with you is because you're the only person who will have me. I don't know why.

Pete: Good God, Shannon, you're beautiful. You *know* that stuff isn't true.

Shannon: [becoming angry] How am I supposed to? You never seem to show any affection to me. You're always interested in going to the movies or playing football or working on your car. You never show any affection towards me. I'm just a piece of meat to you.

Pete: Where are you getting this? Where in the hell do you come up with this idea that

you're so inferior to me? Where am I almost every evening of my life now? With you.

Shannon: Only because you feel like you have to.

Pete: If I didn't want to, I'd break up with you.

Shannon: [the words 'break up' have slowed her down, but only a little] I'm nothing.

Pete: If you're nothing, then why am I with you? Why do you have a 3.7 GPA? Why are you a Presidential Scholar?

Shannon: Nobody else on campus would be with me. Nobody.

Pete: I tell you what. Get on the phone, call up Mick, and ask him if he'd go out with you. Just as a hypothetical. See what he says. Tell him it's to prove a point.

Shannon: I can't do that. We both know what he'd say.

Pete: Yeah, we do.

Shannon: And he'd only say it to make me feel better.

Pete: Any guy up here would be thrilled to be with you.

Shannon: That's not true.

Pete: Wanna bet?

Shannon: What does it matter? There's no way to tell without breaking up with you.

Pete: So do you want to break up with me?

Shannon: [quickly] No! I'm just saying that anyone we asked wouldn't be truthful knowing we were together.

Pete: And you really don't think anyone up here wants to be with you?

Shannon: Yes. I mean yes, no one wants to be with me.

Pete: Alright, I'll tell you what. We go our separate ways this weekend. You tell your friends that we've broken up, and I'll tell mine. You do whatever the hell you want all weekend. I don't care. I'll meet you back here Sunday evening. If you're not convinced by then that I'm right, then we'll just see what happens.

Shannon: [astonishingly] Are you serious?

Pete: Yes. I've had enough of hearing from you that you're not good enough for anyone other than me. Do you know how that makes me feel? I want you to go this weekend and prove to yourself that you *are* good enough for me. I don't care what you do, but if you're not convinced by Sunday then you never will be.

Shannon: What am I supposed to do?

Pete: I don't care. Do whatever you need to convince yourself.

Shannon: And you'll be here for me on Sunday?

Pete: Yeah.

Shannon: And I can do whatever I want?

Pete: Yes. This weekend you are totally free.

Shannon: Will this change anything with us?

Pete: Hopefully.

Shannon: [pauses] Okay. I'll do it.

Pete: [gets up to leave] I'll see you on Sunday, then.

Shannon: [goes over to him at the door] I love you, Pete.

Pete: I know. I love you too. [They kiss briefly, then he leaves. Lights go down.]

[Lights up on the stage. It is cut in half by a curtain that serves as a wall between Pete's and Shannon's world. Shortly after lights go up, they go down on Pete's side. On Shannon's side of the stage (stage right) there is a party going on in her room. Over on Pete's side of the stage, the guys are playing poker and drinking. The mood truly does look like two different sides of the world. Music can be heard from the party over in Pete's side, but they ignore it. When one side is dark, it is meant only to signify that the attention should go to the lighted side. All the sounds from the opposing side can be heard on the light side. For instance, when Pete and his buddies are seen playing cards, music and dialogue can still be heard by the audience, but not Pete and Co. Same for both sides. Woody, Mick and Chris here are the same characters as in the opening act.]

[Shannon's room]

Amy: [she is holding a bottle of some type of ambiguous alcohol. Pearl Jam can be heard in the background, but not so loud as to obstruct the dialogue. Amy is sitting on the couch talking to Sara] ...yeah, so Pete told her that that was enough. Said he'd had enough of her bitching and told her it was over. Plain and simple.

Sara: I can't believe that. I saw Pete with her on Thursday and things looked okay. They were hugging and holding hands.

Amy: [takes a drink] I guess a lot of things can change in a day.

Sara: Still, that's awfully quick.

Amy: Shannon took it pretty hard, from the way she acted around me when she told me.

Sara: I guess that's why she decided to hold the party. Today would have been seven months for them.

Amy: Yeah, that's gotta be hard on a girl. Where is she, anyway? [Just then Shannon enters. She is dressed much the same as the previous day, but her attitude is very different]

Shannon: [grabs Amy's beer and takes a long pull] So what are you two talking about?

Sara: Nothing. We were just wondering if you were alright.

Shannon: Oh I'm fine [she says as she finishes off the beer]

Amy: What about what happened with Pete?

Shannon: What about it? He was here, now he's gone. I've got my beer to carry on. [She giggles freely] Besides, the way I look at it, I'm better off anyway. I'm finally free. I can do whatever I want, when I want. I don't have to answer to any *guy* anymore.

Bruce: [from backstage] Shannon!

Shannon: Just a minute Bruce. You've waited this long, you can wait another five minutes. [Amy and Sara exchange a worried glance, but say nothing]

Amy: So who's Bruce?

Shannon: A friend, Amy. I met him in Dr. Northridge's class last week. He's a really nice guy. I mean, he waits on me, he takes me places, and best of all, he's good looking.

Sara: Shannon, he's been here thirty minutes.

Shannon: That still doesn't mean he's not good looking.

Bruce: [offstage] Shannon!

Shannon: Coming! [to Amy and Sara] I've gotta run. Bruce doesn't like to be kept waiting.

[Shannon skips/runs offstage, leaving Amy and Sara]

Amy: Bruce is the Tri-Delt, right?

Sara: Yeah.

Amy: He's the same guy that got into a fight with Pete at homecoming. If the cops hadn't been there....

Sara: I know. This isn't like Shannon at all.

Amy: She must be getting over it pretty quickly.

Sara: [sarcastically] Yeah.

[the lights switch over to Pete's room. Pete, Mick, Chris and Woody are all around the table. They too are drinking, but beer is their choice instead of hard liquor.]

Pete: ...so I told her she had free reign this weekend.

Woody: Are you sure that's a good idea?

Pete: I've gotta get completely away from her in order for her to realize that she likes being around me. It won't work any other way.

Chris: [begins shuffling the cards] So nobody else knows?

Pete: Nope. Just you guys. We weren't supposed to tell anyone, but I don't think you guys really count.

Mick: Nah, we don't count. [to Chris] You wanna hurry it up, my beer's gettin' warm.

Chris: Don't get your panties in a bunch. [to Pete] What do you think she'll do?

Pete: I don't know. Probably just do homework this weekend and hang out with her friends.

Woody: Pretty much what you're doing.

Pete: Yeah.

Woody: So what's the point?

Pete: To make her see that I really do like being with her, and that she likes to be with me. To make her understand that single life sucks.

Chris: [finishes dealing cards] I second that.

Woody: [To Chris] Gimme two. So Pete, what if she does more than just sits in her room all weekend? You *did* give her free reign. She could do a lot of things.

Pete: But she won't. I know her.

[the lights cut back to Shannon's room]

Amy: You know something else about Bruce?

Sara: [she pulls her legs up on the couch, knees touching her shoulders. She is anxious to hear the gossip] What?

Amy: I went out with him last fall. All he tried to do was get in my pants.

Sara: You think that's what he's doing with Shannon?

Amy: Oh yeah. Definitely.

Sara: Should we do something?

Amy: It's not really our place. If she wants to do that, it's her life.

Sara: I just hope she doesn't get hurt.

Amy: Well, from the way she was talking to him before they went in, I don't think she's interested in getting hurt.

Sara: That's so unlike Shannon.

Amy: When you've been with someone so long and then they just dump you without so much as a reason, I can understand not acting like yourself.

Sara: Would you let me do something like that if it happened to me?

Amy: Do you honestly think you *would* do something like that?

Sara: [concedes] Okay. Still, I think Shannon might regret doing this.

Amy: Oh, she will. No doubt about that. But she thinks it can help her recover.

Sara: [takes a drink] Like drinking to wash your problems away.

Amy: [laughs] Exactly.

Shannon: [from the other room, shouting] Oh God, Bruce! Tell me how good I look!

[Amy and Sara look at each other and stifle laughs]

[lights cut back to Pete's room]

Woody: But what if she *does* do something like that? What are you going to do then?

Pete: Oh, come on Woody. You know Shannon almost as well as I do. You know she won't.

Woody: Maybe you're right, but it's not a good idea to not be prepared for something like that.

Mick: [to Chris] I raise you ten.

Chris: I admire a man with balls.

Mick: I bet you do.

Chris: I call.

Mick: Full boat. Kings over queens.

Chris: Oh wow. Goddam. Looks like you got me beat. All I got is a couple of pair. [Mick reaches for the money] Waitaminute, Mick. You haven't seen my hand.

Mick: Yeahyeahyeah, a couple pair.

Chris: [can barely contain his laughter. Pete and Woody also see what is going on. Mick is clueless] A pair of aces, aaaand, a pair of aces! Well would you look at that. Bitch!

Mick: [sits back and throws his cards on the table] Oh fuck you.

Chris: [picks up the change in the center of the table. They are only playing for quarters and dimes] Looks like I've got laundry money for tomorrow. Pleasure doing business with you.

Mick: You're a dick.

Chris: I try.

[lights switch back to Shannon's room]

Shannon: [from the other room, still] Oh God, tell me how good I look! TELL ME!!

Amy: Maybe we should turn up the music.

Sara: No, leave it alone.

Amy: Do you want to hear this stuff?

Sara: Eh, yeah, you're right. Turn it up.

Shannon: Oh yes, Bruce!!!

[lights cut back to Pete's room]

Pete: Did you hear something?

Woody: No, why?

Pete: I could have sworn I heard Shannon just now.

Chris: It's your imagination.

Pete: I dunno. I guess you're right. I'm just paranoid.

Shannon: YES YES YES YES YES!!!!!!

Chris: Damn right you are. [they have dealt another hand] How many you want?

Shannon: ALL OF IT!! I WANT IT ALL!!!!

Pete: Gimme three. [takes cards]

Woody: You going to Church tomorrow, Pete?

Shannon: OH GOD, OH GOD, OHGODOHGODOHGOD!!!!!!

Pete: Yeah, I'd say. I need to atone for all this sin I'm taking part in tonight.

Chris: I heard that. Drinking and swearing and playing poker.

Woody: Hey, at least he's going.

Chris: Are you saying that I'm a sinner?

Shannon: YES YES YES YES YES YES YES!!!!!!

Woody: No, just that Church isn't all that bad for you.

Chris: Yeah, I guess you're right. Mabye I will go.

Mick: You won't and you know it. You won't be able to get up early enough.

Chris: Then wake me up before you go. I will.

Pete: Really?

Shannon: OH GOD, YES!!!!

Chris: Sure, why not?

[back to Amy and Sara's side]

[they are both laughing hysterically, but trying to contain it under their hands.]

Amy: Some friends we are.

Sara: Hey, the girl's gotta make her own mistakes.

Amy: I made a mistake with that guy. He's not as tough as he looks. He called me for three weeks after the party. He does have a tender side.

Sara: [giggling] I guess Shannon is getting to see that tender side up close. [Amy laughs out loud]

[Back to Woody's side]

[They are in the midst of a deep conversation]

Woody: Thinking like that will get you in the same place we've gotten with that Camel fucker in Iraq.

Mick: Oh Jesus.

Woody: I'm serious, Pete. If you just start assuming things about Shannon [Mick cuts him off]

Mick: You'll be lying balls up in the desert, waiting for some Iraqi soldier to cut off your ears and piss on your face. Is that about right, Wood?

Woody: [To Mick] Where were you in '91?

Mick: In high school, learning to drive. [Woody laughs, and flips him off]

Woody: Still, Pete, you're asking for trouble. How well do you know Shannon?

Pete: Well, well enough to ask her to marry me. [the others are stunned for a second]

Chris: Bullshit! You went out with Julia for two years and never mentioned marriage to me.

Pete: But that was when we were back in high school. Shannon's different.

Chris: I think Woody might be right, though.

Mick: Can we get back to the card game, please?

Chris: Why? So I can take more of your money? [to Pete] How well *do* you know Shannon?

Shannon: [gives out a low moan]

Pete: Better than you knew Amy, I'll say that. [Amy looks at the guys from across the stage at the mention of her name, but says nothing]

Chris: That was low, man. [Chris starts to say something else, but Mick interrupts them]

Mick: Dammit boys, who cares? Either you're going to find out something you want to know about Shannon or you're not. It doesn't really matter either way. All I care about is getting a little more drunk and playing a few more hands before I pass out.

Pete: [waits for a second, looking at Mick. Finally] Alright. That doesn't seem like a bad idea. [he starts a new hand] I'll find out Sunday.

Mick: Good man. I'm heading to the fridge for more beer. Anybody want some? [they all answer in the affirmative, and Mick heads out as the lights come down]

[lights go down on both sides]

[lights go up. It is now Sunday evening, and Pete has just returned to Shannon's room.]

Pete: [Shannon runs to him and gives him a giant bearhug] Woah, take it easy.

Shannon: You were right, Pete. I'm so sorry.

Pete: So you believe me now?

Shannon: [passionately] Oh, yes. I'll never doubt your word again.

Pete: So what did you do this weekend?

Shannon: [deflectively] Oh, nothing. Just hung around with Amy and Sara on Saturday and saw a movie this afternoon.

Pete: Not the one we were going to see?

Shannon: Oh no. I saw "The Mark of a Good Man."

Pete: Oh, okay.

Shannon: So what did you do?

Pete: Not much. Just played cards with the guys on Saturday and went to Church today. We finally got Chris to go.

Shannon: That's good.

Pete: Did you go?

Shannon: Nah, I don't think I'm going to go anymore.

Pete: WHAT? Choir girl is quitting Church?

Shannon: Yeah, it's just not my thing.

Pete: Wow, that's new.

Shannon: It's not going to affect anything, is it?

Pete: Oh, no. It's okay. Hell, I'm not the most devout of Church-goers either.

Shannon: Good.

Pete: So what was it that made up your mind?

Shannon: About Church?

Pete: No, about the whole weekend deal. What was it that convinced you?

Shannon: [this stops her. She didn't expect him to ask this] That convinced me? Oh, yeah. Just not being with you for the weekend. My friends are okay, but I wouldn't really trust them if I needed it.

Pete: That's it?

Shannon: [pauses slightly] Yeah.

Pete: [you can tell he's not convinced. Something has just reared up in the back of his mind] Okay, so tell me what you did Saturday night.

Shannon: I did. I just hung out with my friends and listened to music.

Pete: That's it?

Shannon: Well....I did drink a little.

Pete: Oh Shannon, I thought you'd quit.

Shannon: It was just a little. [she is very happy talking about drinking, and Pete sees it.] I just can't seem to help myself sometimes.

Pete: What else did you do?

Shannon: Nothing.

Pete: I know you Shannon. What else did you do?

Shannon: Nothing Pete, I swear.

Pete: [getting angry] This is it, Shannon, what did you do?

Shannon: Pete, what's wrong.

Pete: I smell a rat. My gut's talking to me. What else did you do?

Shannon: Don't you believe me?

Pete: What did you do, dammit?

Shannon: Bruce was there.

Pete: Bruce? Bruce the Tri-Delt?

Shannon: [quietly] Yeah.

Pete: [almost in the parental tone] Shannon?

Shannon: You said I could have free reign, that I could do whatever I wanted.

Pete: You screwed Bruce.

Shannon: You TOLD me I could do whatever I wanted to convince myself. I wanted to see if I really could get any guy on campus.

Pete: Oh come on! Bruce is a thug. The only requirement for him to screw you is if you're female. You know that.

Shannon: You *told* me that I could do whatever I wanted. You gave me permission.

Pete: Not to screw somebody.

Shannon: You never said that.

Pete: I thought you knew.

Shannon: Well, I didn't.

Pete: What do you mean, you didn't? We've been together for seven months, I thought that meant something.

Shannon: It does. You don't understand how confused I was. I really didn't know if I was pretty or not.

Pete: So instead of listening to all the things I've told you for seven months, you decide the best way to figure it out was to screw the dumbest guy on campus.

Shannon: Listen to yourself. Don't you understand that even though you were telling me all this stuff for seven months, it wasn't working? I needed this.

Pete: What? You *needed* this? You *needed* a guy who's been in jail four times this year to jump in your pants? The guy's mother has been on Jerry Springer, for God's sake!

Shannon: You just don't understand. You told me that I could do whatever I wanted. You *told* me that. And now you're changing the rules?

Pete: That was never a rule that could be changed. I thought you knew.

Shannon: [cruelly] Well I didn't. [Pete gets up to leave]

Shannon: Where are you going?

Pete: Somewhere else. I can't stay here. [whether he is mad or crying cannot be seen, but you can't tell]

Shannon: Pete? [he doesn't respond. He puts on his jacket] Pete!

Pete: [angrily] What?

Shannon: I still love you. [Pete goes out the door and slams it behind him.]

[lights go black]

Act IV: Vodka, Ginseng, and the Walking Hard-On

Woody: So Sulli told me that this Ginseng extract is really good for a safe alternative to Vivarin.

Chris: Where do you get it?

Woody: Sulli said Wal-Mart. Said they had it in bottles of 60 pills. He said it was something like six bucks.

Mick: You wanna know something?

Woody: [chuckles] Oh God, sure, why not?

Mick: Take a root of Ginseng. You can find it out in the forest anywhere. Dry it out really well in the basement -

Chris: We live in dorms, Mick.

Mick: - or in your closet. Anyway, make sure it's good and dry, take about a third of it and drop it down into a bottle of Russia's finest vodka, and let it sit for about a week.

Woody: Why?

Mick: [looks at Woody] Heh. Because -

Chris: Hey, look at this.

Mick: [frustrated that his story has been interrupted] What?

Chris: [hands him his buscuit] Check that out.

Mick: [hits it on his plate a few times. It sounds like a rock hitting porcelain.] Jesus, that thing's hard as a rock.

Chris: Hockey, anyone?

Mick: Yeah, no kidding. We've got the puck right here.

Woody: [to Mick] Anyway?

Mick: Yeah, anyway, you let that little bastard soak in the vodka for about a week before finals. Be sure to take it out BEFORE you drink any of it.

Chris: Why?

Mick: Because, if you leave it, it'll saturate more and more ginseng into less and less vodka. You don't want it too potent.

Chris: Oh.

Woody: What do you use it for?

Mick: Well, after it's soaked, you use it like those ginseng pills you were talking about. For staying awake at night.

Chris: Why else?

Mick: Well...there are other side effects.

Woody: Like what?

Mick: Well, not only will you be a walking hard-on for three weeks after taking one drink, it'll also cure anything that was ever wrong with you. Ever.

Woody: Okay buddy.

[just then, a man walks by their table and grabs Woody's backpack. The man takes off running in the other direction.]

Woody: Hey! Asshole! [he grabs the biscuit as the man turns around instinctively. Woody beans the man in the side of the head, and he drops to the ground]

Mick: Well, I'll be damned. Those biscuits have a use after all.

End.

**DISTRIBUTIONAL SURVEY OF GOLDEN-WINGED
AND BLUE-WINGED WARBLERS**

Eugene L. Watson

DISTRIBUTIONAL SURVEY OF GOLDEN-WINGED AND BLUE-WINGED WARBLERS

MCNAIR SCHOLARSHIP PROGRAM

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ABSTRACT

The Golden-winged Warbler population has decreased from much of its former range throughout the northeastern US and southern Canada. This decline has been attributed to habitat alterations induced by man. These habitat alterations have accelerated the expansion of its dominant sister species, the Blue-winged Warbler. Blue-wings replace Golden-wings through genetic introgression and ecological competition.

This work is part of a larger, long-term study to understand how Golden-wings are replaced by Blue-wings. We assessed several habitat components of the two species in areas of sympatry and allopatry. We found no correlation of species type (Golden-wing, Blue-wing, or mixed populations with hybrids) with edge type (stage of succession), edge size (in meters), canopy type (open or closed) and presence or absence of water. There was a significant correlation between locality and species (Spearman's rank correlation, $r = 0.411$, $p = 0.03$), which indicates that presence or absence of these birds is determined by site locality factors other than vegetation. Kruskal-Wallis test ($t = 5.79$, $p = 0.06$) disclosed no significant differences between Golden-wings, Blue-wings, and mixed populations for edge type, edge size, presence or absence of water, and canopy type.

Results of this study refute the hypothesis that Golden-wings are habitat specialists and may indicate that these two species have very similar habitat requirements. Additional research is needed to determine whether Blue-wings exclude Golden-wings from optimal breeding territories.

INTRODUCTION

The interactions between Golden-winged (*Vermivora chrysoptera*) and Blue-winged (*V. pinus*) Warblers are probably the most studied of any pair of hybridizing bird species in North America (Carter 1944; Parks 1951; Short 1963; Gill & Lanyon 1964; Ficken & Ficken 1968; Gill & Murray 1972a,b; Murray & Gill 1976; Adkisson and Campbell 1977). Golden-winged and Blue-winged Warblers are sister species that have a long history of secondary contact, ecological competition, and replacement of Golden-wing genes by Blue-wing genes (Gill 1997).

Common in overgrown fields and brushy swamps throughout their range, Golden-wings and Blue-wings are inconspicuous and often overlooked (Gill et al. in press). Originally from Central and South America the Golden-winged Warbler migrates to eastern parts of North America every year around the months of early April and mid May for mating and reproduction (Gill et al. in press). This periodic trek results in numerous birds lost due to predation and exhaustion while crossing stormy seas, but this migration has also opened the door for other species to migrate, namely their sister species the Blue-winged Warbler. Blue-wing populations swelled in numbers and expanded in distribution as people changed the landscape, by cutting the forests and abandoning fallow fields that progressed into regrowth habitats favored by this and other shrubland birds. Ornithologist eager to add rare species to their collections and birders eager to add species to their local lists documented arrivals of pioneering Blue-wings. Adding to the anticipation were the prospects of finding the attractive hybrids, the Brewster's Warbler and even more rare Lawrence's Warbler (Gill et al. in press).

The Golden-winged Warbler has been expanding its range northward and eastward in the eastern United States for almost two centuries (Gill 1980; Confer 1992). The Blue-winged Warbler, however, was formerly allopatric to the Golden-winged Warbler and was restricted almost entirely to areas west of the Alleghenies (Gill 1980). The Blue-winged Warbler also has had a major range expansion, which began later than the Golden-winged Warbler and is still continuing (e.g., see Kibbe 1978). The Golden-winged Warbler is now allopatric only at its extreme northern range and at its highest nesting elevations in the Appalachian Mountains (Gill 1980; Canterbury et al. 1993).

While the Golden-winged Warbler expanded northward and eastward during this century, it has disappeared from much of its southern range (Confer 1992). Regions first colonized by Golden-winged Warblers more than a century ago are now devoid of nesting Golden-winged Warblers. These include, for example, southern New Jersey, coastal portions of Connecticut, Rhode Island, southern Massachusetts, and the southern portions of the Hudson River valley (see Gill 1980).

Numerous studies have sought to find out how Blue-wings replace Golden-wings. However, we still lack an adequate explanation on whether ecological competition, hybrid introgression, or both factors lead to the decline of Golden-winged Warblers. A complete understanding will only come with additional studies.

This study focuses on West Virginia where Golden-wings occur in highest densities, but are rapidly declining (Canterbury et al. 1993, 1996). It is logical to wonder whether competition between the two species or genetic introgression of the Blue-winged Warbler with the Golden-winged Warbler could account for the disappearance of Golden-winged Warblers in West Virginia, since the interactions between these two species are strikingly different from New York (J. Confer, pers. comm.). Unfortunately, there is no evidence that distinguishes competition from genetic introgression as a possible cause of the elimination of Golden-winged Warblers (Gill 1980). There is, however, some evidence that suggests that edge habitat may be critical to the success of Golden-wings and to our understanding of the nature of the problem (Canterbury, unpubl. ms.). Edge habitats have been disclosed as important areas for biodiversity in tropical rainforests and other habitats (Smith et al. 1997). Thus, there is a critical need to assess the distribution of Golden-wings, how many viable populations remain without encroaching Blue-wings, and whether edge habitat is a significant predictor of their distributions. The principal goal of this study is to determine if the distribution of Golden-winged and Blue-winged Warblers is correlated with edge habitat and other physical factors of the habitat. Furthermore, data collected during this study will be used as part of a long-term research project, which seeks to gain a better understanding of the reasons why the

changes in range have occurred and especially why the Golden-winged Warbler has declined in some areas.

METHODS

This study is part of a long-term research project now in its twelfth year and conducted by researchers from the Three Rivers Avian Center (TRAC). We surveyed for Golden-winged and Blue-winged Warblers at several localities in southcentral West Virginia. We used tape recorded songs of Golden-wing and Blue-winged Warblers to verify the identity and territory of each bird. We captured territorial male Golden-winged and Blue-winged Warblers by the song playback method, which involved placing a mounted "dummy" Golden-wing or Blue-wing near a taped, conspecific song recording and a mist net

(Canterbury 1994). This often attracts these birds into mist nets for banding (Canterbury 1994). Captured territorial males were banded with a unique color band system and aluminum bands from the United States Fish and Wildlife Service for identification purposes (Canterbury 1994).

In order to determine the kind of edge used by a particular Golden-winged or Blue-winged Warbler, territorial boundaries were estimated by observing singing males in Raleigh, Summers, and Mercer counties in southern West Virginia during the spring and summer of 1998. All territories were delineated by flagging boundaries of singing males during at least three visits to their territories and with a Global Positioning System (GPS). Because males occasionally take long flights beyond the area most frequently used, we selected boundary lines of only singing males observed at a particular location during at least three separate visits.

Edge succession was measured at predetermined distances along a particular transect for each territory. All transects were placed perpendicular to the edge and extended into unusual features along the perimeter in order to avoid bias in our samples. Edge type (successional stage, canopy cover, and moisture gradient) was scored similar to Confer and Knapp (1979, 1981). Edge succession was scored as predominately herb (early secondary succession, score of 0), shrub (mid secondary succession, score of 1) or tree (late secondary succession, score of 2) type. We also measured the edge width with a metric tape measure. Edge width was defined as the

distance from a road to a segment of nearest singing perches. We scored territories as wet or dry (see Ficken and Ficken 1968). We scored dry territories (those having no visible signs of water) as 0 and wet territories (those having standing or running water) as 1. Canopy was scored 0 for open, 1 for partially closed, and 2 for closed canopy. These subjective assessments of vegetation and physical components of Golden-wing and Blue-wing territories have been shown to be adequate methods (Confer and Knapp 1979, 1981).

All habitat measurements were conducted in August and September after completion of summer growth and after birds left territories, so that we did not disturb nesting activities. Disturbance of nesting Golden-wings could be potentially harmful for this highly imperilled species.

Statistical analyses were performed on the average scored observation for each categorical variable and testing for species differences. We tested our data for normality because of small sample sizes. All statistical analyses were performed on SPSS (SPSS Inc., 1993). Significance values are reported as $p < 0.05$.

RESULTS

Data for each independent variable (e.g., edge size and moisture score) were not normally distributed (Shapiro-Wilks' test). We found no correlation of species (Golden-wing, Blue-wing, or mixed populations with hybrids) with edge type, canopy type, and the presence or absence of water (Table 1). There was a significant correlation between locality and species (Spearman's rank correlation, $r = 0.411$, $p = 0.30$), which indicates that presence or absence of these birds is determined by site locality factors other than vegetation. Kruskal-Wallis test ($t = 5.79$, $p = 0.06$) disclosed no significant differences between Golden-wings, Blue-wings, and mixed populations (with hybrid phenotypes) for edge type, edge size, presence or absence of water, and canopy type (Table 2, Figures 1 and 2). Edge size did not vary significantly between Golden-wings and Blue-wings (Figures 1 and 2). The median edge size of 24 Golden-wings was 6.5 meters, while Blue-wings ($n = 11$) had a median edge size of 4.55 meters. Both species generally occupied mid-

successional edges with open canopies and dry territories, although Blue-wings occurred more often in territories with partially closed canopies (Figure 2 and see scoring methods).

DISCUSSION

Results of this study do not support the hypothesis that golden-wings are habitat specialists. In fact our data supports the idea that Golden-wings and Blue-wings share much of the same habitat. In the assessment of habitat components, namely, edge type, edge size, canopy type and presence or absence of water we found no direct correlation between these variables and species type. We found no significant determinant of species type in this study. However, sample sizes obtained are small and we believe this study should be completed with larger sample sizes.

There was a significant correlation between locality and species, which suggests that location is a significant predictor of species type. This is most likely related to the changes in range experienced by these species and may support the theory the Blue-wings are replacing Golden-wings. Other evidence suggests that Golden-wings are first excluded from low elevation sites during the initial stages of secondary contact, and that elevation is a significant determinant of the presence or absence of these warblers (Canterbury et al. 1996).

There was also a considerable correlation between moisture and edge size (see Table 1), which may determine abundance of bird numbers. Future studies should address whether the occurrence of these warblers can be predicted from edge size and moisture gradients. It must be stressed, however, that Golden-wings and Blue-wings vary considerable in selection of dry and wet territories, and that habitat selection is dependent upon a complex mosaic of factors, such as stage of transient hybridization, age of secondary contact, and numerous habitat variables (Canterbury et. al. 1996). In conclusion, additional research is needed to further determine whether physical conditions favor Golden-wing nesting sites.

ACKNOWLEDGMENTS

We thank Dollie Stover, Ryan Alter, and Tiffany Sparks for assistance in data collection. Sandra Canterbury and Tommy Stover assisted with travel and logistic support. This study

would not have been possible without funding from the McNair Scholarship Program and Nongame Wildlife Program of the West Virginia Division of Natural Resources.

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Table 1. Spearman's rank correlation coefficients of variables measured.

	Edge	Canopy	Herb ¹	Shrub ¹	Tree ¹	Tree ¹ size	Moisture
Species	0.032	0.257	-0.240	0.157	0.066	0.193	0.010
Edge		0.377*	-0.233	-0.372	0.498**	0.642**	0.300
Canopy	0.377*		-0.016	-0.328	0.256	0.522**	0.166
Herb	-0.233	-0.016		-0.221	-0.438*	0.488**	0.179
Shrub	-0.372	-0.328	-0.221		-0.388*	-0.299	0.166
Tree	0.498**	0.256	-0.438	-0.388*		0.488**	-0.082
Tree size	0.642**	0.522*	0.488**	-0.299	0.488**		-0.258
Moisture	0.300	0.166	0.179	0.166	-0.082	-0.258	

* p < 0.05, ** p < 0.01. ¹ Data contributed by Tiffany Sparks.

Table 2. Kruskal-Wallis test of the effects of edge size, edge succession, canopy type, and presence or absence of moisture on grouping variable species. ¹

	Golden-wings (n = 14)	Blue-wings (n = 10)	Hybrids / mixed populations (n = 4)	
	Mean Rank			Test statistic and
	significance			
Edge Size	15.54	10.25	21.50	5.79 (p > 0.055)
Edge Succession	14.14	15.15	14.13	0.113 (p > 0.945)
Canopy	12.93	16.40	15.25	2.42 (p > 0.298)
Moisture	13.50	18.10	9.00	5.670 (p > 0.059)

¹ Total sample size = 28 birds.

**Examining crisis management effectiveness:
An application of the Pearson and Clair framework**

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for his helpful editing comments.**

Abstract

This research examined 45 crisis events that occurred at a variety of different organizations. The results indicate that organizations following an accommodative strategy had more successful crisis management effectiveness outcomes than organizations that followed a defensive strategy. The crisis events were also analyzed according to their types: accidents, product safety & health, and scandals. In terms of crisis management effectiveness, no significant differences were found among the three groups. Implications for management follow.

Examining crisis management effectiveness: An application of the Pearson and Clair framework

A crisis event can happen to any organization. Three crisis types include human induced *scandals* such as employee lawsuits and fraud, *accidents*, including fires and airline disasters, and *product safety/health incidents* such as product tampering and recalls (Marcus & Goodman, 1991). Unfortunately, gauging management success in dealing with crisis events has been troublesome. Although practitioner literature abounds with antidotal advice, actual success is often hard to achieve and even difficult to define. The actual success or failure in dealing with a crisis may depend largely on how one defines success.

Recently, (Pearson & Clair, 1998) proposed that the results of crisis management actually fall along a continuum ranging from total failure through midground success to total success. In addition, the criterion for success can be classified under seven categories: signal detection, incident containment, business resumption, effects on learning, effects on reputation, resource availability, and decision making. Therefore, determining an organization's success or failure in managing a crisis involves more than just a final analysis of "yes we were successful," or "no were not successful."

A review of the crisis management literature reveals that management responses often fall under two main categories: accommodative and defensive (Barton, 1993, Hartley, 1993, and Marcus & Goodman, 1991). Accommodative responses seek to accept responsibility for the crisis and try to make restitution to the appropriate stakeholders. Defensive responses seek to deny responsibility for the crisis and place the blame on some other party.

This present study seeks to determine which method of corporate response, accommodative or defensive, is actually more successful. Furthermore, success will be defined using the framework proposed by Pearson & Clair (1998). The paper begins with defining crisis management, reviewing the categories of crisis events, and presenting research in crisis management. Next, the paper presents the study methodology followed by the research results. Implications for management conclude the paper.

Review

Defining Crisis and Crisis Management

The term *crisis* is often heavily overused (Barton, 1993). From an organizational perspective, however, four common themes emerge: 1) crisis events have a low probability of occurring (Barton, 1993; Pearson & Clair, 1998; Shrivastava, Mitroff, Miller, & Miglani, 1988), 2) they can have a highly damaging impact (Irvine & Millar, 1997; Mitroff, Shrivastava, & Udwadia, 1987), 3) they require decisive action (Barton, 1993; Crandall & Menefee, 1996; Fink, 1986), and 4) they need attention within an expedient time frame (Greening & Johnson, 1996; Pauchant, Mitroff, & Ventolo, 1992; Quarantelli, 1988). Although various definitions of organizational crisis have been proposed, Pearson & Clair (1998) have recently synthesized the literature and offer the following:

“An organizational crisis is a low-probability, high-impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly.” (Pearson & Clair, 1998: 60)

As a response to a crisis event, decisions made in *crisis management* seek to mitigate the impact of a crisis. Again, Pearson & Clair (1998) offer the most recent definition which takes into

account a stakeholder perspective:

“Organizational crisis management is a systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that occur.” (Pearson & Clair, 1998: 61).

Categories of Crisis Events

A number of topologies and classifications of crisis events exist in the literature. Crises have been classified by various 2 x 2 matrices (Marcus & Goodman, 1991; Myers & Holusha, 1986), by cluster analysis (Pearson & Mitroff, 1993), by categories proposed by crisis management researchers (Coombs, 1995; Irvine & Millar, 1997; Richardson, 1995) and more recently, by factor analysis (Crandall, McCartney, & Ziemnowicz, 1999).

This study utilizes the classification proposed by Marcus & Goodman (1991) because of its parsimonious approach to a rather complicated research area. Their framework classifies crises into three categories: accidents, product safety and health incidents, and scandals.

Accidents. Accidents are characterized as being one time events, with a definite number of victims. Litigation inevitably follows and oftentimes, the players are high profile figures (i.e., attorneys, CEOs, activist groups). Examples include the Exxon oil spill and the Union Carbide gas leak in Bhopal, India.

Product safety and health incidents. Unlike accidents, product safety and health incidents involve repeated events that eventually bring harm to the organization. Examples include the Ford Pinto case and more recently, breast implant complications. Like accidents, litigation is almost certain and often accompanied by high compensation awards to the victims.

Scandals. Scandals are not one time events, but a series of events with “obscure origins and no immediate victims” (Marcus & Goodman, 1991: 287). Unlike the previous two crisis events,

scandals do not always involve litigation, but if it does occur, the awards are often small.

Examples include bribery charges against Lockheed and the insider trading scandal involving Drexel, Warner, and Lambert.

Research in Crisis Management

While the crisis management literature has been growing steadily, two concerns have been raised. First, there are few empirical studies in the area:

“As interest among academics and practitioners grows, extensive additional research is needed to better inform those who study organizational crises and to better assist those who manage them. The crisis management literature, although replete with speculation and prescription, has undergone scant empirical testing.” (Pearson & Clair, 1998: 73)

Second, there is a lack of integration of previous research, resulting in a disjointed array of multi disciplinary studies (Pearson & Clair, 1998) that has been labeled a “Tower of Babel” effect (Shrivastava, 1993). Nonetheless, the academic development of crisis management appears to be promising. This current study seeks to address both of these concerns by offering an empirical study that synthesizes past research.

Measuring Crisis Management Success

Measuring the success of crisis management interventions can be difficult. In fact, Pearson and Clair (1998) argue that crisis management interventions will result in varying degrees of both success and failure. For example, an organization may do a good job handling the resumption of operations after a hurricane, but a poor job of dealing with the media.

Pearson and Clair (1998) offer a framework for measuring crisis management success by examining seven areas of crisis concern: signal detection, incident containment, business resumption, effects on learning, effects on reputation, resource availability, and decision making.

Each crisis concern area is then evaluated according to three levels of outcomes: failure outcomes (no success at handling the crisis), midground outcomes (limited success), and success (satisfactory success in handling the crisis). A summary of the Pearson and Clair framework appears in Table 1.

Insert Table 1 About Here

Because varying degrees of success are possible in crisis management, it is apparent that the type of crisis in question and the crisis management strategy taken, will have an impact on overall success outcomes. The following discussion focuses on these two areas.

Accommodative vs. Defensive Strategies

Strategies for dealing with a crisis can take on several dimensions. Hickman & Crandall (1997) outline five key areas that should be addressed when a crisis hits: strategic management, information systems, human resources, operations, and public information/communications. The overall manner of an organization's response to a crisis is predetermined by its' strategic management orientation. This in turn will dictate how the other four areas are addressed.

In its most simple form, the tone of management response can be either accommodative or defensive. Accommodative responses exist when management takes responsibility for problems related to the crisis, extends apologies if necessary, willingly makes restitution, and takes actions to remedy the situation (Marcus & Goodman, 1991). These actions will impact how soon information systems and operations are resumed, how the human resources are managed, and perhaps most visibly, how information is communicated to the organizations key stakeholders

including stockholders, customers, the general public, and suppliers. Johnson & Johnson's response to the Tylenol tampering incidents illustrates an organization that took an accommodative approach to handling a crisis.

Defensive responses exist when management denies responsibility for the problem, blames other parties for the crisis, and seeks to continue generating revenue, even if some stakeholders are negatively impacted (Hartley, 1993, Marcus & Goodman, 1991). The A.H. Robins Company and its handling of the Dalkon Shield incident illustrates a defensive response.

Business text and case books abound with examples of crisis events handled with both accommodative and defensive responses. The prevailing view of many business writers is that accommodative responses are more noble than defensive responses and result in more tangible benefits to the affected organization. Reasons given for taking accommodative responses include: 1) it is the most ethical response, therefore, it is in the overall best interest of the organization (Hartley, 1993), 2) it results in better media relations (Barton, 1993), and 3) it results in a better public image of the organization (Warner, 1994). While these reasons are intuitively appealing, they have not been subject to much empirical testing. Therefore, this study proposes the following:

Hypothesis 1 - Organizations utilizing accommodative strategies will experience higher success outcomes than organizations utilizing defensive strategies.

Comparing the types of crisis events

While strategy responses have merit in determining the success or failure outcomes of a crisis, a discussion on the particular types of crises is noteworthy as well. In other words, regardless of whether an organization utilizes accommodative or defensive strategies, it may be

possible that the type of crisis in question may predispose its subsequent success or failure outcomes.

This study looks at three broad categories of crisis types: accidents, product safety & health incidents, and scandals. We propose that the uniqueness of each category will cause crisis response success outcomes to vary from one category to the next with scandals being the least successful and accidents yielding the most successful outcomes.

A characteristic of a scandal is that a denial of responsibility is usually present (Marcus & Goodman, 1991). Such a response is typical of a defensive posture on the part of management, and one that loses credibility as the crisis wears on. Since defensive strategies are not encouraged in the crisis management literature, it follows that scandals, by their very nature, may be the least successful crisis to resolve.

Accidents on the other hand can be tightly linked to a probable cause, a cause which often puts the blame on the organization. Therefore, the denial of responsibility in the face of public scrutiny is to no advantage to the organization. Classic crisis management theory maintains that the organization follow an accommodative strategy and move on, thus, the chances for a successful resolution of the crisis are more probable.

Product safety and health incidents are harder to pinpoint in terms of probable cause. In some cases, the cause can be linked to the organization (Ford Pinto) while in other cases, the cause may lie outside the organization (Tylenol tampering). Therefore, we predict that these types of crises will have mid-range success outcomes and lie somewhere between scandals and accidents.

Hypothesis 2 - Of the three crisis types: scandals, product safety/health incidents, and accidents, scandals will yield the least successful outcomes while accidents will yield the most successful outcomes.

Methodology

Case selection

This study used a database consisting of case studies and news stories. The criteria for the selection of the cases were as follows: 1) they were considered a major crisis, and 2) they could be classified into one of the three categories of study: scandals, product safety/health incidents, or accidents. Table 2 lists the cases used in this study and their subsequent reference sources.

Insert Table 2 About Here

Data analysis

Each crisis event case was reviewed by the authors and evaluated on a number of criteria. The crisis management strategy used by the organization was classified as either accommodative or defensive, based on the information as related in the case. The crisis success outcomes were based on the following framework categories offered by Pearson & Clair (1998): signal detection, incident containment, business resumption, effects on learning, effects on reputation, resource availability, and decision making. Each category was then scored as either a failure, mid-ground success, or success. A score of 0 was assigned for a failure, a score of 1 for mid-ground success, and a score of 2 for success.

Results

A total of forty nine crisis events were reviewed in this study. Four of the studies were excluded in the final data analysis. Three of the cases did not fit the parameters of falling into one of the three crisis categories, accidents, product safety & health, or scandals. The other case was excluded because of an extreme bias on the part of the case writer. The resulting forty five cases were included in the data analysis for this study.

Table 3 presents the comparison of accommodative and defensive crisis management strategies in relation to the seven crisis concern areas. A total of sixteen organizations followed an accommodative strategy, while twenty nine organizations used a defensive strategy. The resulting means for each of the seven crisis concern categories are presented. Signal detection and incident containment revealed no significant differences between the two strategies. In other words, crisis management effectiveness appears to be the same, regardless of which strategy is followed.

Defensive strategies were the most effective in the area of business resumption (t-statistic = -2.952, p=.005). Accommodative strategies were more effective in relation to effects on learning (t-statistic = 5.2112, p=.000), effects on reputation (t-statistic = 3.529, p=.002), resource availability (t-statistic = 3.272, p=.002), and decision making (t-statistic = 4.632, p=.000).

Insert Table 3 About Here

Table 4 presents the comparisons of the three types of crisis events and their relation to the seven crisis concern areas. Accidents comprised 12 cases, product safety & health comprised

14 cases, while scandals consisted of the remaining 19 cases. With the exception of business resumption, there were no significant differences among the three types of crisis.

In the area of business resumption, organizations experiencing scandals appear to resume operations the fastest, with a mean of 1.7368. Organizations experiencing product safety & health crises revealed a mean of 1.5000, while organizations experiencing accidents revealed a mean of 1.0000. The F-statistic of 6.396, ($p=.004$), indicates that the means are different among the three types of crisis events. The follow-up Scheffé test indicated that significant mean differences existed between scandals and accidents.

Insert Table 4 About Here

Discussion

Hypothesis 1

Table 3 indicates partial support for hypothesis 1. Four of the seven areas of crisis concern revealed higher crisis management effectiveness with an accommodative strategy rather than a defensive strategy. These four areas, effects on learning, effects on reputation, resource availability, and decision making all appear to follow classic crisis management predictions.

The research indicates that business resumption reveals an opposite finding from what was predicted. In other words, organizations that follow defensive strategies appear to be “up and running” faster than organizations that follow accommodative strategies. This finding appears to result from the paradoxical situation that just because an organization is back in operation, it does not mean that all is well. Some organizations maintain a defensive posture and run full-throttle,

meanwhile their reputation, stock prices, and market share continue to decline. One example is A.H. Robbins and their futile battle to keep the Dalkon Shield alive is just one example. GM also tried the defensive strategy with its ill fated Corvair and as a result, encountered a massive loss in public goodwill.

The defensive strategy, by definition, denies responsibility for the problem and blames other parties while seeking to generate revenue (Marcus & Goodman, 1991). Denials by management often lead to various investigations. This action buys time for the organization while they maintain their regular levels of operations. Thus defensive actions mitigate the chances of operational downtime.

Hypothesis 2

Table 4 reveals little support for hypothesis 2. Other than the area of business resumption, scandals do not appear to have higher success outcomes in relation to accidents or product safety & health crisis events. Business resumption though, is a dominant goal of any organization facing a crisis. However, for those organizations experiencing scandals such as rumors (Brooklyn Bottling), questionable pricing practices (Burroughs Wellcome, General Dynamics, Lockheed, and Sears), questionable products (Beech-Nut, Intel, and STP) or boycotts (NIKE), operational downtime is usually minimal or non-existent. Instead, organizational efforts are focused on legal battles and maintaining public goodwill.

The other areas of crisis concern showed no significant differences among the three types of crises. This finding reveals that crisis events share commonalities that are mutually exclusive of their origins. For example, incident containment ranked the lowest in success outcomes across all three types of crises while signal detection ranked second lowest across all three types. Both of

these crisis concern areas reveal an organization's strategy in preparing for and immediately responding to a crisis event. It is apparent from this study that one area of improvement needed in crisis management response is in the pre-crisis and immediate post crisis event stage.

Effects on learning was another crisis concern that showed some commonalities. Organizations that experienced accidents and product safety & health crises showed higher levels of learning after the crisis occurred. This study is encouraging for decision makers in organizations that do try to learn from the events and apply measures that will mitigate future crisis events.

Implications for Management and Conclusion

In conclusion, three implications for management can be suggested on the basis of this research.

1. *Accommodative strategies are preferable to defensive strategies in the management of a crisis.* The crisis management literature has long maintained that accommodative strategies are preferable in managing a crisis. This study has presented empirical evidence that with the exception of business resumption, accommodative strategies yield more effective crisis management outcomes than their defensive counterparts.
2. *Organizations need to focus additional efforts on detecting potential signals of impending crisis events.* Many of the organizations investigated could have prevented escalating events had they heeded the warnings of potential their potential crisis. Instead, they let the crisis get out of control - and now, have become classic case studies for management scholars.

3. *Organizations need to focus additional efforts on crisis containment.* This implication logically follows the preceding one. Once a crisis is detected, appropriate efforts need to be placed on containing the crisis. Outside stakeholders such as the general public, stockholders, the government, and consumers can be adversely impacted by a crisis. Once the crisis reaches this magnitude, efforts to contain it will have to be expanded significantly.

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Table 1
A framework for examining crisis management success and failure

Crisis Concern	Failure Outcomes	Midground	Success Outcomes
Signal Detection	All signals of the crisis go ignored. Organization is caught completely unaware.	Signals of impending crisis send organization into a stage of alert.	Signals are detected early and appropriate responses follow.
Incident Containment	Crises escapes beyond the boundaries of the organization. External stakeholders are negatively affected.	Damage to those beyond organizational boundaries is slight.	Major impact is confined within the organization. No stakeholder injury or death.
Business Resumption	All organization operations are shut down. Down time is lost in bringing organization back into operation.	Areas of operation most affected are closed temporarily. Functional down time is minimal with little effect on product/service.	Business is maintained as usual during and after the crisis. There is no loss of product or service delivery.
Effects on Learning	No learning occurs. Organization makes same mistakes when similar incident occurs.	Learning occurs but its dissemination is spotty.	Organization changes policies/procedures as a result of the crisis. Lessons are applied to future incidents.
Effects on Reputation	Organization suffers long-lasting negative repercussions. Industry reputation suffers as a result of the crisis. Public perceives organization as a villain.	Negative effects of crisis are short lived. Public perceives errors in details of crisis management effort but continues to consume product/service as usual.	Organizational image is improved by effectiveness in managing crisis. Organization is perceived as heroic, concerned, caring and a victim.
Resource Availability	Organization scrambles but lacks essential resources to address crisis.	Organization scrambles and scrapes by on own and others' ad hoc assistance.	Organization or external stakeholders' resources are readily available for response.
Decision Making	Slow in coming because of internal conflicts. Fantasy driven.	Slow in coming because of extra organizational constraints.	Organization or external stakeholders' resources are readily available for response. Ample evidence of timely, accurate decisions. Grounded in facts.

Source: Pearson, C., & Clair, J. (1998). Reframing crisis management. *Academy of Management Review*, 23 (1), 59-76.

Table 2 - Cases used in this study

Crisis - Accidents	Reference Sources Used
Ashland Oil spill	Carroll, 1993; Wood, 1990
Bowater, Inc. - fog related accidents	Maggart, 1994; McLaren, 1994
Braer - Norwegian oil tanker spill	Douglas, 1994
Crystal Harmony cruise ship fire	Sklarewitz, 1991
Exxon - oil refinery explosion	Duhe & Zoch, 1994
Exxon Valdez oil spill	Carroll, 1993; Hartley, 1993
Film Recovery Services - employee death	Sethi & Steidlmeir, 1997
Luby's Cafeteria murders	Barton, 1993
Malden Mills fire	Teal, 1996
Union Carbide - Bhopal	Hartley, 1993; Sethi & Steidlmeir, 1997
ValuJet air disaster	Greenwald, 1996; Hedges, 1996; Jennings, 1996
Warner Lambert explosion	Sethi & Steidlmeir, 1997

Crisis - Product Safety & Health	Reference Sources Used
A.H. Robins - Dalkon Shield	Hartley, 1993
Dow Corning breast implants	Hartley, 1993
Food Lion	Barton, 1995; Gunther, 1996
General Motors - Corvair	Hartley, 1993
Gerber glass scare	Carroll, 1993
Hooker Chemical Company	Barton, 1993; Carroll, 1993
Jack in the Box E-coli incident	Allen, 1997; Krauss & Diaz, 1995
Johnson & Johnson Tylenol poisonings	Hartley, 1993
McDonalds packaging policies	Sethi & Steidlmeir, 1997
Nestle infant formula	Hartley, 1993
Odwalla juice contamination	Post, Lawrence, & Weber, 1999
Pepsi syringe crisis	Greenburg, 1993; Zinn & Regan, 1993
Perrier Benzene problem	The Economist, 1991
Union Carbide - Ohio Valley air pollution	Hartley, 1993

Table 2 - continued

Crisis - Scandals	Reference Sources Used
Alyeska environmental scandal	Sethi & Steidlmeir, 1997
Beech-Nut apple juice	Hartley, 1993
Brooklyn Bottling - KKK rumor	Barton, 1993; Harris, 1992
Burroughs Wellcome pharmaceutical scandal	Hartley, 1993
Campeau Corporation scandal	Hartley, 1993
Chrysler odometer	Carroll, 1993; Pepper, 1998
General Dynamics defense fraud	Hartley, 1993; Sethi & Steidlmeir, 1997
General Motors - Norwood plant closing	Sethi & Steidlmeir, 1997
IBP - unsafe working conditions	Sethi & Steidlmeir, 1997
Intel - Pentium chip flaw	Warner, 1994; Ziegler & Clark, 1994
ITT Chili scandal	Hartley, 1993
Lockheed bribery scandal	Hartley, 1993
NIKE - Operation Push scandal	Jackson & Schantz, 1993
Phar-Mor fraud case	Barton, 1995
Sears Auto scandal	Hartley, 1993
STP false claims advertising	Hartley, 1993
United Airlines age discrimination	Sethi & Steidlmeir, 1997
UNLV - animal kidnaping case	Taylor, 1994

Table 3: Comparison of Accommodative and Defensive Crisis Management Strategies (Test of Hypothesis 1)

Crisis Concern	Accommodative n=16	Defensive n=29	T-Statistic	Significance
Signal Detection	.6250	.4483	.735	ns
Incident Containment	.3750	.3448	.157	ns
Business Resumption	1.1250	1.6552	-2.952	.005
Effects on Learning	1.9375	1.2414	5.212	.000
Effects on Reputation	1.3750	.7586	3.529	.002
Resource Availability	1.6875	1.1034	3.272	.002
Decision Making	1.5625	.5517	4.632	.000

In the calculation of means, 0 = failure, 1 = mid-ground success, 2 = success.

Table 4: Comparison of Three Different Types of Crisis Events and their Crisis Management Effectiveness (Test of Hypothesis 2)

Crisis Concern	Accidents n=12	Product Safety & Health n=14	Scandals n=19	F-Statistic	Significance
Signal Detection	.4167	.5714	.5263	.179	ns
Incident Containment	.0833	.3571	.5263	2.039	ns
Business Resumption*	1.0000	1.5000	1.7368	6.396	.004
Effects on Learning	1.6667	1.5000	1.3684	.831	ns
Effects on Reputation	1.0833	1.0714	.8421	.886	ns
Resource Availability	1.3333	1.5000	1.1579	1.197	ns
Decision Making	1.0000	1.1429	.6842	1.285	ns

In the calculation of means, 0 = failure, 1 = mid-ground success, 2 = success.

* Follow up Scheffe test revealed a difference in means between Accidents and Scandals, significant to within the .05 level.

**A Conservative Confidence Interval for p in
Elementary Statistics Courses**

by Marsha L. Wilson

A Conservative Confidence Interval for p in Elementary Statistics Courses

by Marsha Wilson

To find a confidence interval for p , the probability of success for a binomial random variable, many elementary statistics text books use the normal distribution as an approximation to the binomial distribution and arrive at a confidence interval for p of the form

$$\hat{p} \pm Z_{\alpha/2} \sigma_{\hat{p}}$$

where

$$\sigma_{\hat{p}} = \sqrt{pq/n}.$$

Since p is unknown, it is replaced with \hat{p} , resulting in an estimate for $\sigma_{\hat{p}}$.

Unfortunately, if one constructs a confidence interval using this method, it is quite likely that the actual probability that p lies in the interval is less than the confidence level. Hence, the procedure is not conservative in the sense that it often does not produce intervals that contain p with probability *at least* as large as the confidence level. Consider the case $n=1047$, $p=0.5$. For a 90% confidence interval computed using this method, the actual probability that p falls within the confidence interval is only 89.20%. This is true for 35 cases where $p=0.5$ and n ranges from 1001 to 1050. In fact, for n between 101 and 1000, the actual probability is greater than or equal to the confidence level in less than 40% of the cases.

In this paper, we propose a relatively simple method for finding more conservative confidence intervals for p that can easily be taught in an elementary statistics class. First, consider the analogous situation of constructing a confidence interval for the population mean μ based on a random sample of size n from a normal distribution. When σ is known, the expression for the standard normal random variable

$$Z = \frac{\bar{X} - \mu}{\sigma_{\bar{X}}}$$

leads to the confidence interval formula

$$\bar{X} \pm Z \frac{\sigma}{\sqrt{n}}$$

But when σ is unknown, one uses a Student's t random variable

$$t = \frac{\bar{X} - \mu}{s_{\bar{X}}}$$

and the modified formula is

$$\bar{X} \pm t \frac{s}{\sqrt{n}}$$

where s^2 is an unbiased estimate of σ^2 with $n-1$ degrees of freedom.

Now consider the estimation of a proportion. If n is large enough, then X , the number of successes in n trials, is approximately normal and

$$Z = \frac{\hat{p} - p}{\sigma_{\hat{p}}}$$

where

$$\hat{p} = \frac{X}{n}$$

is approximately a standard normal random variable. This leads to the formula

$$\hat{p} \pm Z\sqrt{pq/n}$$

which is unusable since p is unknown. The standard procedure is to replace p and q with \hat{p} and \hat{q} and use

$$\hat{p} \pm Z\sqrt{\hat{p}\hat{q}/n}$$

instead. Following the example of the estimation of μ , since σ_p^2 is unknown, it is reasonable to use a "studentized" random variable of the form

$$t = \frac{\hat{p} - p}{s_{\hat{p}}}$$

where $s_{\hat{p}}^2$ is an unbiased estimate of σ_p^2 . If we let D_i be the dichotomous random variable defined by

$$D_i = \begin{cases} 1, & \text{success on } i^{\text{th}} \text{ trial} \\ 0, & \text{failure on } i^{\text{th}} \text{ trial} \end{cases}$$

then

$$X = \sum_{i=1}^n D_i \quad \text{and} \quad \bar{D} = \frac{X}{n} = \hat{p}$$

and

$$s_{\hat{p}}^2 = s_{\bar{D}}^2 = \frac{\sum D^2 - (\sum D)^2/n}{n(n-1)} = \frac{\hat{p}\hat{q}}{n-1}$$

with $n-1$ degrees of freedom. $s_{\hat{p}}^2$ is an unbiased estimate of σ_p^2 ; that is, $E\left(\frac{\hat{p}\hat{q}}{n-1}\right) = \frac{pq}{n}$.

The confidence interval for p is then given by

$$\hat{p} \pm t\sqrt{\frac{\hat{p}\hat{q}}{n-1}}.$$

Our final suggestion for correcting the formula is that a correction factor is needed because we are approximating a discrete distribution with a continuous distribution. We will

add a correction factor of $\pm \frac{1}{2}$ to X . Considering that

$$\hat{p} = \frac{X}{n},$$

we will use

$$\left(X \pm \frac{1}{2}\right) / n = \frac{X}{n} \pm \frac{1}{2n} = \hat{p} \pm \frac{1}{2n}.$$

Thus, the confidence interval formula that we suggest is

$$\hat{p} \pm \left(\frac{1}{2n} + t \sqrt{\frac{\hat{p}\hat{q}}{n-1}} \right).$$

In comparing the traditional method of constructing a confidence interval to the proposed method, several factors were considered. One concern was the following: if the actual probability that p lies in the confidence interval computed by the traditional method is greater than the confidence level, does the new method result in an unnecessarily large confidence interval? One would hope that if the traditional method worked, then our method would give the same confidence interval. Our results showed that for p fixed at 0.5 and n ranging from 101 to 1000, this unfavorable outcome occurs only three times for a confidence level of 90%, zero times for a confidence level of 95%, and zero times for a confidence level of 99%. These were the results we desired. However, when p changes from 0.5 to 0.4, the outcome is somewhat less than we desired; for p fixed at 0.4 and n ranging from 101 to 1000, our confidence interval exceeds the necessary interval 139 times for a 90% confidence level, 142 times for a 95% confidence level, and 85 times for a 99% confidence level. If this is the only criterion one considers, these results cause the new method to look somewhat undesirable. However, we do not believe that they should invalidate the new method. Our reasoning is based on the following question: how often

does our method work when the traditional method generates a confidence interval that is too small? These results are encouraging. Considering p fixed at 0.5 and n ranging from 101 to 1000, our method works 544 times when the traditional method fails for a 90% confidence level, 517 times for a 95% confidence level, and 533 times for a 99% confidence level. Considering p fixed at 0.4 and n ranging from 101 to 1000, we find that this favorable occurrence happens 626 times for a 90% confidence level, 595 times for a 95% confidence level, and 659 times for a 99% confidence level. These were the results we hoped to obtain. To show that our method is favorable over the traditional method, we needed to show that the side-effect of sometimes giving unnecessarily large confidence intervals does not outweigh the cases where our method works as intended while the traditional method fails. There are two points that support this argument. First, there are many more cases of n where our method works than cases where our method produces an unnecessarily large confidence interval. Second, as n becomes larger, even in the unfavorable cases, our method gives an actual probability only slightly above the desired confidence level. In summary, our method tends to be more conservative than the traditional method, as we had hoped, and is not overly conservative.

A L'hospital's Test for Convergence of Series

by Marsha L. Wilson
Mentor: Dan Krider, Ph.D.

A L'hospital's Test for Convergence of Series

by Marsha L. Wilson

mentor: Dan Krider, Ph.D.

The title of my project is A L'hospital's test for convergence of series. L'hospital's rule is a useful rule for finding limits of sequences; I tried to use it in a similar way to test for convergence of series.

Where the derivative of a function f is denoted by f' , I tried to prove that $\sum \frac{f}{g}$ converges if and only if $\sum \frac{f'}{g'}$ converges. I restricted my attention to the following conditions:

- (1) f', g' exist
- (2) $f \uparrow \infty$ (monotonic increasing)
- (3) $g \uparrow \infty$ (strictly monotonic increasing)

We can easily prove the case in which the limit of $\frac{f}{g}$ does not approach zero. By l'hospital's theorem, $\frac{f'}{g'}$ also does not approach zero. Therefore, both series are divergent and our theorem holds. Now we can make the assumption (4) that $\frac{f}{g} \rightarrow 0$. For the rest of this paper,

we will assume that these four conditions hold.

To see how this theorem would be useful, we will look at some examples. Consider

$\sum \frac{n}{e^n}$. To prove that this series converges by the ratio test, a commonly used test in calculus,

we would have the following:

$$\lim \left| \frac{a_{n+1}}{a_n} \right| = \lim \frac{\frac{n+1}{e^{n+1}}}{\frac{n}{e^n}} = \lim \frac{(n+1)e^n}{ne^{n+1}} = \lim \left(\frac{n+1}{n} \right) \left(\frac{e^n}{e^{n+1}} \right).$$

Since the limit of a product is the product of the limits,

$$\lim \left(\frac{n+1}{n} \right) \left(\frac{e^n}{e^{n+1}} \right) = \lim \left(\frac{n+1}{n} \right) \cdot \lim \left(\frac{e^n}{e^{n+1}} \right) = 1 \cdot \frac{1}{e} = \frac{1}{e} < 1.$$

The ratio test states that if $\lim \left| \frac{a_{n+1}}{a_n} \right| = L < 1$, then $\sum a_n$ converges. Therefore, $\sum \frac{n}{e^n}$

converges.

To prove that $\sum \frac{n}{e^n}$ converges by L'hospital's test, we would have:

$\sum \frac{n}{e^n}$ converges if and only if $\sum \frac{(n)'}{(e^n)'}$ converges. Since

$\sum \frac{(n)'}{(e^n)'} = \sum \frac{1}{e^n}$ is a convergent geometric series, $\sum \frac{n}{e^n}$ converges by L'hospital's test.

In this case, L'hospital's test, if proven true, would provide a much shorter proof that $\sum \frac{n}{e^n}$

converges.

As another example, consider $\sum \frac{\ln(n)}{n + \ln(n)}$. Using methods from calculus, it can be

shown that this series diverges. However, to show that it diverges using L'hospital's rule, we

could simply observe that $\sum \frac{f'}{g'} = \sum \frac{1}{n+1}$ which diverges. Therefore, $\sum \frac{\ln(n)}{n + \ln(n)}$ diverges

as well.

I went through several references and looked at many examples similar to this these. In all the examples, I found that L'hospital's test held true. The examples also suggested the following theorem which proved to be very useful.

Theorem 1: Let g be a strictly increasing function. Then $\frac{f}{g} \downarrow$ iff $\frac{f'}{g'} \leq \frac{f}{g}$.

Proof: $\frac{f}{g} \downarrow$ iff $\left(\frac{f}{g}\right)' \leq 0$

$$\text{iff } \frac{gf' - fg'}{g^2} \leq 0$$

$$\text{iff } gf' \leq fg'$$

$$\text{iff } \frac{f'}{g'} \leq \frac{f}{g} \text{ since } g' > 0.$$

Corollary: If $\frac{f}{g} \downarrow 0$ and $\sum \frac{f'}{g'}$ diverges, then $\sum \frac{f}{g}$ diverges by the comparison test.

Proof: Since $f' \geq 0$ and $g' > 0$, $0 \leq \frac{f'}{g'} \leq \frac{f}{g}$. The corollary follows from the comparison test.

Having established this corollary, half of the task of proving L'hospital's test

for series is complete. We can strengthen this result by weakening the requirement that $\frac{f}{g} \downarrow 0$.

5) Let $\frac{f'}{g'} \downarrow 0$.

Define $\frac{\Delta f}{\Delta g} = \frac{f(n) - f(1)}{g(n) - g(1)} = \frac{f_n - f_1}{g_n - g_1}$. By assumption (1), $\frac{\Delta f}{\Delta g} > 0$ for $n > 1$.

This leads to the next theorem.

Theorem 2: $\sum \frac{\Delta f}{\Delta g}$ converges iff $\sum \frac{f_n}{g_n}$ converges.

Proof: $\frac{f_n}{g_n} > 0$ by (2) and (3).

$$\frac{\frac{\Delta f}{\Delta g}}{\frac{f_n}{g_n}} = \frac{1 - \frac{f_1}{f_n}}{1 - \frac{g_1}{g_n}} \rightarrow 1 \text{ As } n \rightarrow \infty \text{ by (2) and (3).}$$

By limit comparison test, $\sum \frac{\Delta f}{\Delta g}$ converges iff $\sum \frac{f_n}{g_n}$ converges.

This result is now used to prove the following theorem:

Theorem 3: If $\frac{f'}{g'} \downarrow 0$, then $\sum \frac{f'_n}{g'_n}$ diverges implies $\sum \frac{f_n}{g_n}$ diverges.

Proof: By the general mean value theorem, $\frac{f(n) - f(1)}{g(n) - g(1)} = \frac{f'(c)}{g'(c)}$ for some $c \in (1, n)$.

$$1 < c < n \text{ implies } \frac{f'(c)}{g'(c)} \geq \frac{f'(n)}{g'(n)}.$$

Therefore, $\frac{\Delta f}{\Delta g} \geq \frac{f'(n)}{g'(n)}$, and, by (5) $\frac{f'(n)}{g'(n)} \geq 0$.

Therefore, $\sum \frac{f_n}{g_n}$ converges implies $\sum \frac{\Delta f}{\Delta g}$ converges implies $\sum \frac{f'_n}{g'_n}$ converges or, equivalently,

if $\sum \frac{f'_n}{g'_n}$ diverges, then $\sum \frac{f_n}{g_n}$ diverges.

Combining Theorems 1 and 3, we have Theorem 4:

Theorem 4: If $\frac{f}{g} \downarrow 0$ or $\frac{f'}{g'} \downarrow 0$, then $\sum \frac{f'_n}{g'_n}$ diverges implies $\sum \frac{f_n}{g_n}$ diverges.

Theorem 4 proves our theorem in only one direction; however, we want to prove both directions.

That is, we still need to prove that $\sum \frac{f'_n}{g'_n}$ converges implies $\sum \frac{f_n}{g_n}$ converges. While we were

not able to prove this, we did establish a partial "proof" which has a missing step:

Suppose $\frac{f'}{g'} \downarrow 0$.

Then we can prove that $\sum \frac{f'}{g'}$ converges if and only if $\sum \frac{f(n+1) - f(n)}{g(n+1) - g(n)}$ converges.

Proof: $\frac{f(n+1) - f(n)}{g(n+1) - g(n)} = \frac{f'(c)}{g'(c)}$ for some $c \in (n, n+1)$ by the general mean value theorem.

$n < c < n+1$ and $\frac{f'}{g'} \downarrow$ imply $\frac{f'(n+1)}{g'(n+1)} \leq \frac{f'(c)}{g'(c)} \leq \frac{f'(n)}{g'(n)}$.

Therefore, $0 \leq \frac{f'(n+1)}{g'(n+1)} \leq \frac{f(n+1) - f(n)}{g(n+1) - g(n)} \leq \frac{f'(n)}{g'(n)}$.

Since $\sum \frac{f'(n)}{g'(n)}$ converges if and only if $\sum \frac{f'(n+1)}{g'(n+1)}$ converges, the theorem follows from the

comparison test.

Since $\sum \frac{f'}{g'}$ converges if and only if $\sum \frac{f(n+1) - f(n)}{g(n+1) - g(n)}$ converges, the proof of L'hospital's test

would be complete if it could be proved that $\sum \frac{f(n+1) - f(n)}{g(n+1) - g(n)}$ converges

implies that $\sum \frac{f}{g}$ converges. Thus, a calculus problem involving the quotient of derivatives is reduced to a more algebraic problem involving the quotient of differences. We believe this last statement to be true; however we have not yet arrived at a proof for it.

