

***SOME  
REALITIES OF  
DISTANCE  
LEARNING***

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## Human Realities of Electronic Communication in Distance Education

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### INTRODUCTION

In retrospect, perhaps I should have known better: I should have known that using electronic communications in rural and northern Canada might pose a few problems. But back then — in the winter of 1994 — I still could not see this. Back then I had just begun to experience Internet; I had joined a few e-mail bulletin boards and begun enjoying its possibilities; I had just heard from my superiors — mostly the Deans and Vice-Presidents of my university — that electronic communications would become a priority in higher education in the coming years. Everything sounded supportive. It ought to work, I reasoned, to use e-mail, and possibly also FAXes, to assist the learning of students living at a distance.

So I volunteered to teach a course at a distance: 43.202, Psychology of Learning and Instruction, required of future teachers at my institution. Even then, in spite of my enthusiasm for e-mail technology, I hesitated strongly before volunteering: I had to cope with my preconceptions about distance education courses. For me, teaching-at-a-distance was philosophically connected with all the wrong things. It meant the “transmission mode” of teaching and learning: isolated students mailing in assignments, and in the fullness of time receiving them back from an unknown instructor. Teaching-at-a-distance also meant lecturing: watching a videotape of a “talking head”, the instructor, offering wisdom without opportunity for dialogue. These were experiences that I tried hard to avoid in my usual in-person university teaching, where I fancied myself philosophically a social constructivist: an educator who believes that learning happens best through dialogue, who expects multiple perspectives among students, and who strives to encourage the “construction” of knowledge through interchange.

Yet against these preconceptions of distance education stood my developing hope about e-mail technology. I wanted modern communications to make my stereotypes of distance education wrong. I wanted e-mail, FAX machines, and long-distance telephone calls to make dialogue and conversation “normal” even among students scattered widely in the rural communities and wilderness of northern Canada. I pictured myself leading an innovative educational experience, one in which far-flung students exchanged comments about readings and issues on the Internet, and where e-mail letters were supplemented by the exchange of numerous short FAXes and by an assortment of thoughtful telephone calls between and among myself and the students. It was a clear picture, one that in-

**THE FUNDING  
SEARCH:  
CONFUSION  
ABOUT  
SPONSORSHIP  
BEGINS**

spired me in the winter of 1994. I volunteered; yes, I said, I would teach a distance education section of 43.202 by distance education.

I believed that support for a constructivist-oriented version for 43.202 existed, because of how two crucial people responded to my plans. The first was the Director of the Distance Education Program, a person experienced with teleconferencing and other forms of distance education. She assured me repeatedly of her interest in my plans and indicated interest in arranging appropriate telecommunications — chiefly e-mail and FAXing — so that the equipment would be as easy for novices to use as possible. We both wanted students to experience the telecommunications as means to other pedagogical ends, not as challenging problems that might distract from the topics of the course.

The second source of support was the Dean of my faculty. More than once she had publicly expressed support for using telecommunications throughout the teacher education programs of the Faculty of Education. My ideas for using e-mail and FAXing in 43.202 seemed to fit squarely into her vision of enhanced use of telecommunications. In private conversations as well, she expressed interest and support for my plans, offered a number of specific ideas for making them work effectively, and encouraged me to apply for Faculty funding to support the project.

Thus encouraged, I applied for funding — for \$3000 to be exact — to cover the costs of three forms of telecommunications: a) an e-mail system for the exchange of students' responses to articles and to each other's comments; b) FAXing of responses between me and individual students for those with limited access to the e-mail system; and c) several hours of long-distance telephone time per student to allow classmates from distant communities to work collaboratively on major projects for the course. By using these methods, and by using an inviting style during weekly teleconferencing sessions, I hoped to overcome the "transmission mode" of teaching which I believed plagued distance education even more than conventional university courses. I reasoned as follows: first, that courses done in person normally have an advantage in allowing multi-way communications among students, limited only by instructors' willingness to take advantage of this opportunity. Second, I believed that my proposed enhancements to 43.202 would provide at least some of the multi-way communication possible for in-person courses. So I saw my proposal as creating conditions for a more constructivist version of 43.202 than had been possible with conventional methods of distance education. My Dean and her advisors, I felt sure, would therefore fund the project. I wrote a clear, cogent proposal for the funding committee based on these ideas. To show the strength of my commitment, furthermore, I even volunteered to teach the course as part of my regular teaching load — unlike most in-

structors for the Distance Education Program, who “moonlight” such courses independently of other work and family responsibilities. With 43.202 on load, the Faculty of Education would receive income from the course, and I hoped that this fact would give the administrators of my Faculty a stake in its success. I submitted my funding proposal feeling very hopeful.

My hopes were mistaken. In this particular year, priority for Faculty funding went to three other faculty initiatives, all based on campus and none with any distance education or telecommunications component. I was frustrated and annoyed, in view of the initial encouragement from the Dean. I tried to tell myself, though, that the funding rejection did not necessarily reflect on the merits of my plans for 43.202; perhaps they only reflected the current political dynamics of my faculty.

All hope for funding was not lost because my other ally — the director of Distance Education — was able to get funding from her own budget. This satisfied me at the time, since it looked like I would still be able to stage a constructivist version of 43.202 at a distance. The difference in funding sources made a difference in my role in the project: under the new funding arrangement the Director of Distance Education, not I, would administer the costs of the project, and I never did learn for sure how much money she was able and willing to spend on it. I was not sensitive at the time to the significance of this change in administration: in retrospect, it contributed to confusion of responsibility for the course. The confusion would come back to haunt me later in the summer and in the fall, when enrollments proved modest and computer equipment threatened to be scarce. But for the time being I was glad to see that the project was still viable.

**INACCESSIBLE  
E-MAIL:  
COMPUTERS  
ONLY FROM  
9 TO 4**

With assurance of funding in hand, I proceeded to plan the details of a collaborative, constructivist course about learning and instruction. I thought of questions about teaching and learning that perplexed me, and which I thought might interest and perplex the students. I found readings which were relevant, timely and easy-to-read, and assembled them for the course. I began looking for films related to teaching and learning, in hopes of offering common visual experiences as well as verbal ones. I devised assignments that would draw on students’ interests: an opportunity to explore the personal history of a classmate as it related to becoming a teacher, and weekly free-writing responses to readings. The latter would happen electronically, via e-mail and FAX. I wrote a fifty-page course manual explaining all of these features and resources, following specifications from the Distance Education Program.

Before long, however, a new compromise loomed on the horizon. It centered on the use of e-mail: would students actually be able to have access to computers and to the Internet? The Distance Education staff seemed to be working on the problem; they assured me that some sort of computer network would be made available for students' use, but they were less sure about accessibility. As a distance education course, students were by definition scattered over a wide area -- more than two hundred miles in all directions, in fact. In several remote communities we could only be sure of Internet capability at one place: at the "Learning Centre" where the teleconferencing sessions actually occurred for the local group of students. In most cases the Learning Centre was a room in a local school; it typically contained exactly one computer, wired (hopefully) for the Internet, which had to serve several students' e-mailing needs. Would one computer suffice, we wondered? In a course on campus, there would be no question that it would not; equipment that scarce would create traffic jams, with students waiting for each other to complete weekly contributions to the bulletin board.

For a distance education course, though, the answer was less clear: some centers had very few students enrolled in the course (only 2 or 3), so perhaps they could share times across the week more easily. Two larger Learning Centers, furthermore, were located in the metropolitan area of Winnipeg, where computers were relatively plentiful, and where students might in any case be able to do their e-mailing from student computer labs available on the campus of the University of Manitoba. With these ambiguities in mind, therefore, I cautiously went ahead with plans to require participation in an e-mail bulletin board as part of the course. My worries about having enough equipment dominated my thinking for some time, but I felt obliged to forge ahead with the original goal — an e-mail network among students — in order to realize the vision of constructivist learning at a distance.

In the end my worries about equipment proved misplaced — though for ironic reasons. Around July 1st, the coordinators managing the remote Learning Centers informed the Director of the Distance Education Program that the Learning Centers could not be expected to stay open much beyond the official hours of school and of the class sessions. The factor limiting access would therefore not be the equipment itself, but the schools that hosted the equipment and the Learning Centers. Students, it seemed, would have to come at rather precise times to write their e-mail contributions — immediately after school, for example, or on the same night as the teleconferencing sessions. Either the school authorities were not willing to take responsibility for making the buildings more available, or the site coordinators were not willing to urge the school authorities to do so; or perhaps both. In any case using e-mail with such restricted access obviously could not be required. Reluctantly, therefore I revised the course

outline to make participation in e-mail optional — knowing that this change would probably mean that only a few students would participate in it. All students now could either FAX written responses to me or send them by e-mail if they happened somehow to have access to the Internet.

This change was a serious retreat from my constructivist vision for the course. I was disappointed because of its implications for communication among students: all written ideas would now be funneled through me, the instructor, with little or none going directly from one student to another. All written ideas, furthermore, would occur mostly in private; formerly, with e-mailing and FAXing both in place, students had an option of private or public expression. With the new, FAX-only conditions, I could still forward individuals' responses to classmates, but this procedure would take time, cost money, and confine me to the center of the communicative universe — a role that I resisted on philosophical grounds. Could I counteract the technologically imposed role of information transmitter? I was no longer sure that I could, and my spirits about the course were correspondingly low.

**THE  
PERMISSIONS  
SEARCH: CAN  
IDEAS BE  
OWNED?**

But my compromises were still not over. Originally, to reduce the amount of lecturing-and-telling involved in each of the three-hour teleconferencing sessions, I decided to show one brief film or videotape at each class session; then students would discuss the film briefly at their individual Learning Centers; finally, all of us would go on-line for a discussion of the film among the entire class. This plan was more teacher-led than I preferred; what if some students did not want or need to see a certain film, or wanted to see it on a different night? But teacher-centredness about selecting and showing films made sense to me for my first experience with teleconferencing. I was not ready to let individuals living far away be free to pursue individual timetables and agendas fully, since I felt unable, given the distances, to support such individuality as well as I wanted.

Having made peace with a teacher-centered format for viewing and discussing films, I began searching for titles. I had taught in-person versions of the course for more than twenty years, so I had no trouble identifying ten films that were recent, topical, and available at little or no cost for sections of the course occurring on campus. I assumed that any film that met these conditions for on-campus use would be equally usable for a distance education version of the course. But here again I was wrong.

The problem had to do with the ownership of ideas — with copyrights. To use a film simultaneously in several Learning Centers, the Distance Education Program normally duplicated the film for each center: seven

copies in all, one for each, with each copy being viewed by only a handful of students. To avoid liability for infringement of copyrights, the Distance Education Program insisted on getting written permission to duplicate each film and on paying any duplication fees expected by the copyright holders. The combined effect of these policies and circumstances was easy for me to understand in retrospect: five of the ten titles that I requested could not be used because they were too expensive (e.g. \$250 per copy).

Even at the time, I noted a connection between the copyright problems and the transmission mode of teaching which I was trying to overcome. The notion that ideas can be owned implied that ideas are commodities; as such they could be transferred and transmitted from one person to another, like cans of beans or dollar bills. This notion was at odds with the one implied by a social constructivist philosophy of education: from that perspective, “ideas” evolved as common property, more like the air we breath or the water drunk from a common source. The copyright problem grated on my constructivist inclinations, but I realized that I would have to solve the problem in its own, property-oriented terms if I hoped to get beyond to constructivist inquiries and experiences for students.

News of copyright rejections came in mid-July, on my last few working days before my summer vacation. The timing presented me with a dilemma: should I try now, during my last few working days, to find replacement films, or should I simply accept the scarcity of audiovisual materials as inevitable? Doing the latter would leave the class more dependent on its abilities at verbal interchange; on many nights, all that could be done would be to talk. While this might prove quite successful, I worried that it also might prove difficult if the groups lacked the appropriate social chemistry for lively discussion. In my worst fears, I imagined a shy, deadpan class whom I could not even see because of the audio-only medium of teleconference instruction. I would be forced to fill silences with my own talking — and thus the course would revert to a transmission mode of teaching. Having lots of films would provide insurance against this possibility, by offering an alternate, visual way to learn in the inherently blind medium of audio teleconferencing.

With only three working days to go, I was not sure if I could actually find five more suitable films for the course, but my fear of a deadpan class was bad enough that I decided to try anyway. Fortunately I succeeded: with the investment of several hours and with help from the university librarians, the audiovisual office of the university, and the regional office of the National Film Board of Canada, I located and previewed five more suitable titles. I left for vacation hoping that permissions for the titles would in fact be obtained. Just to be sure, though, I began making mental

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SPONSIBILITY  
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plans for how to lead three-hour sessions that were visually blind but constructivist anyway.

Looking back, though, I should have been concentrating my attention at this time on a problem more fundamental than film titles: enrollments in the course. Toward the end of August it became apparent that very few students were enrolling in my course. By that time the ten on-campus sections of 43.202 had nearly all filled to their official limits — 35 students each — but the teleconferencing section stood at only six individuals. According to normal faculty policies, my course should therefore have been canceled due to low enrollment! Instead of being canceled, however, a decision about whether to hold the course was delayed. I was left wondering whether to proceed with final preparations for the course.

Confused jurisdiction probably had something to do with the delay. Was this course the responsibility of the Distance Education Program or of the Faculty of Education? The former branch of the university had provided major assistance to prepare the course, but the latter had donated the course itself (43.202), so to speak, as well as part of the teaching time of a senior professor (myself). While this division could have led to collaboration between the two faculties, in fact it created a kind of “mutual irresponsibility” about arrangements:

- No publicity for the teleconferencing section was made for the regular on-campus education students, even though local students would have been welcome to take the section since two “distant” teleconference centers were actually located in suburban areas just a few miles from the university.
- The published registration guide for the 1994-95 courses announced the wrong night for the course (Tuesday instead of Thursday) — a mistake that inevitably limits enrollment. Why was this mistake not caught before publication? Possible answer: the teleconferencing information is normally late in being entered in the guide. In this case most staff (including myself) who might have proof-read the information had left for several weeks of holidays after it went to print.
- Size limits for the ten on-campus sections were raised from 35 to 38 to accommodate additional students, instead of encouraging the extra students to register in the teleconferencing section. Why? Possible answer, in the words of the administrator in charge of the Faculty’s time tabling: “the Faculty of Education has nothing to do with Distance Education courses.”

The result of these events was limited teleconferencing enrollment, combined with confusion as to whether the course should be canceled or allowed to proceed. By August 24th, only six students had enrolled; by August 30th, only ten. Yet these numbers did not lead to the normally swift cancellation.

The course persisted as a registration option into September, while simultaneously being talked about by the dual authorities as a “possible” cancellation. The result was unfortunate for me as instructor: I was left up in the air until two weeks before the start date, wondering whether to continue my preparations for the first class sessions. I could only guess at the reasons for the indecision. Perhaps the relevant administrators in the Faculty of Education and in the Distance Education Program each thought that the other branch was responsible, and therefore should make the difficult decision to cancel. Or perhaps they each supported the course and wanted it to occur; maybe avoiding responsibility for cancellation was a way of saving the course for a little longer.

By the first week of September, a minimum number of students had registered (15), so the director of the Distance Education Program declared 43.202 a “go”. I began final session planning in earnest. Official enrollment as of the first night was twenty, and attendance was sixteen — enough for a class, but still less than half the number that other instructors of this course were teaching.

The first session quickly confirmed what I had expected regarding students’ use of technology. Only one out of sixteen students indicated a desire and ability to use e-mail, in spite of repeated promises, both “on air” and off, to support e-mail efforts by myself and by the director of Distance Education. I assured the remaining fifteen students that using a FAX to exchange weekly assignments would also work well enough, and that they should be able to get access to a FAX machine even in very small communities. We ended the first session with the understanding that they would look for a local FAX machine, and send their first week’s responses within the next week. I was confident that locating FAX machines could be done; most schools from metropolitan areas now owned and used FAX machines, and I expected that most would allow my students to use them.

I was partly right in this expectation, but only partly. By the end of the first week, about half of the group (eight students) had located FAX machines — six of them in schools and two of them at the workplaces of spouses. Four students — the ones who lived within an hour’s drive of the university campus — decided to deliver assignments to me by hand, and asked that I set up an “in-out” box for them to pick up previous assignments. The remaining three took longer to set up FAXing, and needed

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additional arrangements to assure reimbursement for the long-distance charges for FAXing. These three students therefore sent and received their initial assignments by regular “snail mail”, a circumstance that caused delays of two or three weeks in receiving my responses and feedback. All two-way communication was still not lost with these three individuals: I was able to compensate by telephoning them somewhat more than the other students.

In the end I used modern technology much less than I had originally intended. My plans evolved by stages: from expecting an e-mail network, to expecting universal FAX usage, to accepting a mixture of the old-fashioned (an in-out box, snail mail) and the modern (FAX and a little e-mail). For some students, it seemed, the best technology was the least technology. Joanell pointed this out in one of her weekly comments about the course: “My friend who drops off my responses in your office each week — she always gets anything that was in the box from you to me on the same day — so I think that works really well” (Joanell, Oct 18).

Using a mixture of technologies minimized hassles in communication, of course, but it also ironically made the impact of the technologies relatively invisible. By finding the method of communication best suited to herself, each student was freed to use a technique, rather than constrained to reflect on it. A few students did compliment the speed of feedback between instructor and student: “I appreciate the efficient and convenient FAX system for the immediate exchange of information, especially in regard to the weekly assignments in this course” (Lorna, Sept 20).

A few others criticized features of the communication arrangements. One of the two e-mail students noted the following: “Using the e-mail for the first assignment was frustrating as I need to access the computer at my husband’s place of work, and even though there are 7 lines to the computer I waited four hours before one came free” (Joan, Sept 23).

On balance, the fairest summary of comments about technologies of communications was this: that students praised any mode of communication when it was fast and easy, whether the mode was high tech or old fashioned, and they criticized any mode when it was difficult or obstructive. But mostly they did not comment on communication technologies at all.

Gradually I came to interpret their lack of comment as a sign of pedagogical, if not technological, success. Since the circumstances of communication differed for each student, it was important not to expect each student to use the same tools of communication. For some students, therefore, not using e-mail or FAX machines was as helpful as actually using them was for others. I had done right, I decided, not to rely on these tools to their fullest extent.

As the weeks went on, students continued to write to me with their assessments of the course, but the assessments said relatively little about the virtues and problems of e-mail, FAXing, snail mail, and telephoning. After initial, partial attention to issues of communication, most students focused on other matters: that the books did not come in on time, that they enjoyed a particular guest expert, that they liked (or else disliked) a videotape shown for class, that they liked (or else disliked) a role-playing activity that I tried in class, and so forth. Often they commented on the content of class sessions, rather than on instructional issues or course procedures, as I had intended them to do.

Some students, furthermore, seemed to have no concerns at all, like Bonnie: “While it is still early in the course, I must admit I have not experienced any difficulties as a result of teleconferencing and all that it entails. My reasons for choosing a course through community-based study was primarily for the sake of convenience. As an adult attempting to upgrade while still continuing to work, I found it was very difficult to take courses during the evenings and/or weekends” (Bonnie, Sept 26).

“I’m feeling positive again. I now use the teleconferencing equipment at home, and it’s going a lot smoother than I thought it would. My house is pretty crazy at nighttime as the children usually have had a long day at Grandmas’, but my husband and I have organized everything very well and I actually find the psychology class quite relaxing. Another bonus is that with the microphones we use [voice-activated], none of you can hear my kids screaming in the background unless I push down on the button. Just kidding” (Tracey, Oct 18).

Clearly some students, like Tracey above, were dealing with the important hassles of daily living, and I presumed that these were more important to them than my concerns about using technology appropriately in distance education. Nonetheless, I worried continually about insuring a good, effortless flow of communication between me and the students — if only because I wanted at least to prevent the course from adding to their non-academic problems. During the first two weeks of class I telephoned every student at least once, talking primarily about how to find a FAX machine that was cheap, reliable and convenient. I offered technical and emotional support to the two students using e-mail, as they suffered through the awkwardness of learning to use that medium. And I searched for ways to arrange FAXing for my three “snail-mail” students so that they did not spend excessive amounts of time or money on this feature of the course. These efforts paid off: by the end of the initial weeks everyone had worked out some method to exchange ideas with me rapidly, whether the method was old fashioned or new fangled. My worries subsided, though never disappeared: I worried again, for example, whenever our local FAX machine developed mechanical trouble.

**THE SESSIONS  
THEMSELVES**

The first thing that I noticed about class sessions was my inability to judge whether students were understanding me. I could not see them, could not note smiles and frowns, looks of boredom, or whispers to classmates. I felt like I was speaking down a dark cave, that the students existed only “in theory” and not in tangible reality. So I was pretty self-conscious during the first class session or two, in spite of my twenty years of experience in teaching the same course on campus.

Many students had similar reactions to the first sessions, though they also said that their self-consciousness subsided fairly quickly: “Last week was my first encounter with...teleconferencing. I felt that it was difficult to focus on the “lecture” sections of the evening because there was no particular visual focus in the classroom — except for the telephone, of course — while in a regular class at the university one may look at the professor while he is speaking” (Sharon, Sept 17).

“I felt nervous about speaking without any show of body language, for fear that I may interrupt someone or be interrupted. But by the end of the class I was very comfortable with speaking” (Tracey, Sept 21).

Because of articles which I had read about “how to teach by teleconferencing,” I carefully refused to talk longer than ten minutes at a time, and scattered discussion periods liberally through each class session. This practice led to my second main impression of the class sessions: that they moved more slowly than in-person classes. This quality was noted also by a few of the students: “I agree that the pace [of discussions] is definitely slower. This does give us more time to reflect. There will be fewer quiet gaps once we’re more comfortable with the format” (Marguerite, Oct 6).

Unlike Marguerite, though, I was not inclined to regard the students as responsible for the quiet gaps. It was not, I believed, a matter of us all becoming more comfortable with the teleconferencing format of class sessions. The problem was with the technology itself, since discussions with similar students on-campus were generally lively. The quietness would not go away, I decided, as long as the tools of communication remained the same — in this case, as long as the tools were almost exclusively audio.

The classes suffered from lack of a visual “back channel”, universal for on-campus classrooms, which allows each student to monitor the progress of classroom dialogue. As Sharon pointed out above, students on campus could literally see when a classmate finished a comment: they noted his or her changes in eye contact and posture. On campus, too, each student could see when a classmate wanted to speak. Jacquie put it nicely one week about half way through the course. “In taking a class this way you miss the interaction. There is verbal interaction, but there is no body

language to go with the comments. Sometimes you want to add just a little comment and you don't bother because it is too much bother, whereas in a class you can often just get the person's eye and you can add what you want" (Jacquie, Oct 13).

Because of the circumstances of face-to-face teaching, on-campus students showed little hesitation in beginning a comment, and on-campus discussions were laced with interruptions, restarts, and quiet side comments. None of these behaviors occurred during teleconference sessions. Instead, the class discussions had a more formal quality than I was used to: students seemed to be listening and making comments, but in a rather dignified way.

### SO, WHAT IS "CONSTRUCTIVIST" LEARNING?

All things considered, how much was I able to live up to my educational principles? In some ways I did: every student interpreted every reading, for example, in terms of her prior knowledge and beliefs. In this crucial way I encouraged constructivism in education. I built myself into students' emerging ideas, furthermore, by responding explicitly to their numerous interpretations in terms of my own ideas. By responding very promptly (usually within the same day by FAX), furthermore, I created conditions for more extended dialogue about educational issues — and a modest but significant number of students took advantage of this possibility by replying to my replies. A number of students praised this arrangement, and a few did so repeatedly.

But in my opinion, we never truly formed a community. The most important reason was that FAXing did not facilitate the sharing of written work; I was swamped with dozens of pages coming to and from my office as it was. Forwarding FAXes from one student to another seemed impractical, and asking individuals to FAX directly to each other would have raised costs for the course still further, beyond what the Distance Education Program was prepared to pay.

Signs of the "transmission mode" of teaching persisted throughout the course. Even at the last class, for example, many students still did not know the names of classmates from distant sites — a situation unheard of in my classes on campus. And I found that I felt compelled to plan sessions much more carefully than in face-to-face classes, primarily because I could not anticipate impromptu responses from students to help me in guiding and clarifying discussions. I learned much from having to plan the material carefully, of course, but I did not learn very much about students' thinking as they encountered ideas during class. Either I lectured, or students went "off line" to discuss issues at their learning centers, or students came back "on line" to share comments that were relatively



