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Older Displaced Workers and Work-Retirement Options: A Case Study

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In 1998 and 1999, more than 200 male workers at the United Defense plant in Fridley, Minnesota, were displaced from their jobs due to reduced demand for military hardware and to the company reallocating production work to corporate sites in other parts of the United States. This article summarizes a longitudinal case study of the displaced United Defense workers, focusing on their desire and options for new work and the factors influencing their decisions to work or retire. At the time of the downsizing announcement, workers anticipating job loss ranged in age from 42 to 68, although most workers were 50 to 60 years of age. Accordingly, this case study offers an opportunity to examine how older workers who have been made redundant are impacted by job loss in their retirement versus work decisions.

This research was funded in part through a New Initiatives grant from CURA that provided money for interviews, data collection, and data analysis. Three data collection periods spanning the years 2000–2002 provided background and employment adjustment information about more than 85% of the terminated United Defense production workers. This article will discuss the context for the termination of workers at United Defense, describe the methodology for the three data collection periods, present findings from the research, and discuss the policy implications of these findings with respect to older displaced workers.



Photo courtesy of United Defense L.P.

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United Defense: The Corporate-Union Background

United Defense L.P. was created by the 1994 merger of the defense divisions of FMC Corporation and Harsco Incorporated, two long-term defense contractors each with more than 50 years of defense production. United Defense designs, manufactures, and supports weapons delivery system products and services for the U.S. military and allied nations. The company employs more than 5,000 personnel, with production facilities at 10 sites in the United States as well as joint venture or coproduction activities in five other countries. United Defense and its forerunners have produced most of the available U.S. military ground combat vehicles, and most U.S. Navy surface vessels carry a United Defense gun or missile launching system, primary products at the company's Fridley facility.

In June 1998, United Auto Workers (UAW) Local 683 was informed that 25 workers at the United Defense Fridley facility would be laid off by the end of the month. Then, during the 1998 contract negotiations, the bargaining unit and management teams were informed that new production work would be shifted from the Fridley facility to a newly available site in Louisville, Kentucky. According to union leaders, this transfer was to occur even though management had assured the local union at the time of site and work acquisition that the new plant would only do refurbishing work and not compete with the Fridley plant for manufacturing production. Given that machinery would be shipped out and positions lost at the Fridley facility, corporate and union contract negotiators shifted their attention to creating a separation program as part of the new contract.

The Separation Program. In July 1998, a contract that included a Special Separation Program was ratified by bargaining unit personnel. The contract made provisions for the reduction of nearly 350 of the 450 hourly positions at the United Defense facility in Fridley. In early August, the company provided hourly employees with written information about the separation program and an opportunity to attend an information session. All UAW-represented hourly employees at the Fridley plant were eligible to elect the separation

Cover photo: The United Defense plant in Fridley, Minnesota.

option during the signup period, which ran from August 3 to September 19, 1998. Workers were informed that (1) all employees would have the option to volunteer for the separation program, with acceptance based on seniority; (2) employees would have to exercise their option during the election period, sign a release, and be laid off or retire based on business needs; and (3) the actual date of separation would be determined by the company based on business requirements but would be no later than December 31, 1999.

To encourage workers to volunteer for separation, the company offered three incentives that were otherwise unavailable if a worker were terminated without volunteering for separation during the signup period. First, retirement benefits would be calculated on a base of \$42 per year, compared to the contractual agreement of \$36 for workers terminated outside of the signup period. Second, a single lump-sum payment of \$15,000 would be made available to each individual as cash, an annuity, or a roll-over. Third, all pension benefits would become portable. The 1998 contract also collapsed several job titles, thus eliminating some positions and creating further incentive for affected workers to "volunteer" for separation.

Minnesota Department of Economic Security Rapid Response survey data documented that the expected 350 soon-to-be-redundant workers averaged 52 years of age, with more than 29 years of seniority. Many were skilled workers—welders, machinists, or electricians—but one-third were general clerks without specific skills.

The Termination Process. By December 31, 1999, 224 United Defense workers had been terminated, leaving a workforce of less than 150 production workers. Because of improved business conditions, not all United Defense workers who signed up for the Special Separation Program were actually terminated. A total of 145 hourly workers were retained by the company, and according to union leaders, virtually all of these workers had signed for the separation. Compared to the bargaining-unit workforce of 2,500 at the Fridley facility in 1980, only 6% of the workforce remained after the 1998–1999 terminations.

Workers were terminated in staggered increments, so any "congestion effect"—caused by many displaced workers simultaneously entering the job market at the

same time—was minimized. The congestion effect has been offered as one explanation for the long periods of joblessness experienced by some displaced workers; rarely are there sufficient available positions to absorb all displaced workers when large numbers enter the job market at the same time. Staggering the release of workers helps those who obtain new jobs quickly "speak for" others at their new place of employment and, through this informal process, helps other newly displaced workers find employment.

Study Methodology

Data for this study were collected during three separate data collection periods spanning three years. Of the 224 workers ultimately terminated by United Defense during the 1998–1999 downsizing, 9 had been on medical leave and were retired for medical reasons, leaving a net population for this study of 215 men. In addition, 8 hourly workers were offered salaried positions, reducing the study population further to 207. Although a transfer was not an option, 2 hourly workers opted to be laid off rather than accept the special separation, knowing that if work increased at United Defense, they could expect to be called back with all rights. These two laid-off workers were not included in the study population.



Photo by Steve Schneider

Although many of those terminated from United Defense were skilled workers—such as welders, machinists, or electricians—approximately one-third were general clerks without specific skills.

Participants in this study were asked at each data collection period what their employment status was, with the following options provided: retired, unemployed, working full time, working part time, and unable to work. At the T2 panel, 12 workers wrote in an additional category, describing themselves as “working retired.” Operationally, those 12 workers were considered employed, as were all who claimed simultaneous work and retirement in any data collection period.

The First Collection Period (T1). Initial data in the three-year panel study were collected in February 2000 via a questionnaire. A total of 85 men completed the mailed questionnaire, 17 participated by responding to the questions over the telephone, 6 participated in personal interviews, and another 10 were involved in small-group discussions with other terminated United Defense workers and completed the questionnaire at that time.

With the exception of the mailed questionnaire, each of the other data gathering procedures during the first data collection period provided both additional knowledge and interaction opportunities with terminated workers. For example, a participant in one of the small-group discussions said he was uncomfortable looking for work in small engine repair because he had completed only one year of a two-year program. One might assume he left the program to seek other work or that he found the program of little interest. The reality was that he enjoyed the training, but the technical school he attended terminated the program. Thus, his failure to complete the program was not of his doing. Qualitative data collection provides an opportunity to understand the rich and varied postdisplacement life of the men we worked with.

Of the 207 displaced workers in the study population, 117 completed the first questionnaire at the first data collection period (without any monetary compensation), for a completion rate of 56%.

The Second Collection Period (T2). The second panel period started in March 2001. Although it is typical to ask only initial respondents to continue to participate in a longitudinal study, we thought that some displaced workers who thus far had not been involved in the research might now participate. Many displaced workers are angry, confused, or negative close to the time of job loss, and we were hopeful that

many men had now worked through those feelings. In addition, a large percentage of the terminated workers were involved in the research project and we thought that some nonparticipants would be familiar with our research through informal contact with those participants.

With two exceptions, all participants in the first wave were involved in the second panel, which was a mailed questionnaire. Questionnaire data were supplemented with select personal and telephone interviews. In addition to the 117 participants from the first panel, 30 new respondents joined the research project at the second panel, retroactively completing the first questionnaire as well. Of the 207 men in the study population terminated by United Defense from 1998 to 1999, 147 workers were now involved, for a completion rate of 71%. Respondents in the second panel were paid \$10 for completing the second questionnaire. New participants were not paid for completing the first questionnaire.

The Third Collection Period (T3). The third questionnaire was initially mailed out in April 2002 to the 147 panel participants. In addition, a letter requesting involvement was mailed to the 60 individuals who were thus far not participating in the study. Another 30 respondents joined for the third panel, completing retrospectively the first two panels as well. All third panel participants were paid \$15. New third panel participants were also paid \$10 for completing the second questionnaire. We informed new participants that they were being compensated equally with those who were already participating in the project, but like those already involved, they would have to complete the first questionnaire without any compensation. New participant-respondents were instructed to answer each questionnaire for a given time period, and those time periods were provided in a cover memo and on each questionnaire. Ultimately, 177 participants were involved in the panel study for a completion rate of 86%.

In the invitation to participate in the third panel, all displaced workers in the 1998–1999 downsizing were asked to check a response page whether they were (1) physically unable to work; (2) self-employed, either part time or full time; (3) working (but not self-employed), either part time or full time; (4) unemployed; or (5) retired (i.e., not working for wages at all).

The “self-employed” category was inserted for the first time at this third panel.

Findings

Table 1 shows the employment-retirement status of workers at each of the three data collection periods. Of the 84 men who were employed at the initial data collection period, 26 respondents indicated that they started to look for work prior to their termination, with 15 of these men successful in their job search. At the time of termination, Minnesota had the lowest unemployment rate in the nation.

By the third data collection period, at least 15 workers in the sample had lost their position in post-9/11 reductions and the state unemployment rate was 4.3%, Minnesota’s highest rate in eight years. Dave Senf, writing in the April 2002 issue of *Minnesota Employment Review*, described the change in the Minnesota labor market:

In little more than a year, the job market has switched from a job-seeker’s paradise to a nightmare. Employers who were lucky to receive one or two responses to a help-wanted ad two years ago are now flooded with several hundred resumes when a job opening is advertised. (p. 2)

Although 30 (17%) of the displaced workers retired immediately after job loss, 11 of these respondents stated that they had planned to retire about the time they were terminated from United Defense. Given the additional perks at the time of their dismissal, their displacement was probably not viewed negatively but rather as a plus. Those who retired comprised 17%, 25%, and 23% of the total respondents at each of the three data collection periods, respectively. A total of 4 men who were retired by the second or third panel had found work—either full time or part time—since they left United Defense, but 11 others retired from unemployment positions or because they had become unable to work.

Although work or retirement were plausible postdisplacement options at the first data collection period, some men found themselves unable to work, and this also was the case at each of the following panels. At the first data collection period, 17 men (10%) were in a training or education program, but none of the workers were in a training

Table 1. Employment-Retirement Status of United Defense Displaced Workers at the Three Data Collection Periods (T1, T2, T3)

Status	T1 (February 2000)	T2* (March 2001)	T3† (April 2002)
Employed	84‡ (47%)	109 (62%)	100 (62%)
Retired	30 (17%)	44 (25%)	37 (23%)
Training	17 (10%)	0 (0%)	0 (0%)
Unemployed	37§ (21%)	18# (10%)	17 (10%)
Unable to work	9 (5%)	4 (2%)	8 (5%)
Total	177 (100%)	175 (99%)	162 (100%)

* Of the original 177 participants, one individual who participated in the initial questionnaire declined further participation; another failed to return the second and third questionnaires.

† At the third data collection period, several participants from previous collection periods were not included because of death (2), because they could not be located (8), or because of their failure to return the completed questionnaire (3).

‡ If the 17 participants who were in training at T1 are added to those who were employed, then a total of 57% of respondents were employed at T1. This is a reasonable comparison to the percentage who were employed (62% and 61%) at the T2 and T3 data collection periods.

§ Includes 30 men who were seeking work and 7 who were unemployed but not seeking work at that time.

Of the 18 men who were unemployed at T2, 13 indicated they had given up looking for work.

program at either the second or third data collection periods.

Terminated United Defense workers were able to access their retirement account to roll over their investment, take a cash payment, or remain invested in their retirement account. Because the stock market had done well over the years, workers' retirement accounts at the time of termination were important components of their retirement income. By the time of the third data collection period, just two years later, those retirement accounts still invested in stocks were reduced significantly by the national economic downturn, as some workers told us. A 51-year-old worker who had been at the plant more than 30 years replied to a question on the T3 survey concerning whether there was ever a time when he regretted taking the Special Separation Program by stating, "I don't know; I lost most of my pension in the market." A 56-year-old worker with 32 years at the plant responded that he was retired, just watching his investments go down the tube. Another worker wrote:

The cash "buyout" payment in trade for [my] pension means that after 30 years with this company I have

no pension coming to me and the \$75,000 I received as a buyout is now worth about \$45,000 in an investment account. Hopefully the stock market will recover to the point that this investment will return to at least what the original amount was, but the fact that hundreds of other employees, like myself, will never receive any pension money from [United Defense], I believe has had a profound effect on our future financial situation.

The number of working retirees—workers who receive pensions and continue to work either on a part-time or full-time basis—has increased dramatically during the past decade. Diane Herz, writing in the April 1995 *Monthly Labor Review*, offers some suggestions why that is the case, including declines in pension values and increased healthcare costs, as well as improved job opportunities and the fact that some work is simply more attractive than it once was. According to Christopher Ruhm, in an article that appeared in the October 1990 *Journal of Labor Economics*, one-quarter of household heads return to the labor force

after a self-reported retirement, a phenomenon called reverse retirement. In addition, he notes that workers often use some combination of "bridge" employment or partial retirement in the "job-stopping" process. Given the above-average earnings of the long-term employees displaced by the United Defense downsizing, as well as the significant decline in the stock market and their retirement portfolios, we anticipated a significant number of instances of *reverse retirement* among those who had already retired. However, this was not borne out by our findings.

So, were displaced workers who wanted to find employment able to find work? Most workers terminated in this downsizing were older workers, and although not all workers identified their age as a negative employment attribute, 39 of 44 workers (89%) who stated on the initial questionnaire that they were treated differently by prospective employers than were other applicants indicated that being an older worker was a problem or that, in combination with other factors, it was an explanation for why they believed they were treated differently. Table 2 shows that 28% of the respondents at T1 did think they were treated differently than other applicants, whereas 33% said they were not treated differently, 19% were unsure, and 21% didn't know because they were not applying for work. At T2, age continued to be perceived as a problem; 15 of the 18 unemployed respondents (83%) cited their age as a factor in why they had not found work.

Transferable Skills. Although there were many displaced United Defense workers who were skilled machinists, electricians, platers, welders, grinders, or experienced foundry workers, one-third of the workers were without transferable skills. Some of the workers without skills were knowledgeable about assembly and production processes or tool crib inventory procedures, but their above-average pay was related to their familiarity with United Defense operations and their longevity in a union shop. At the onset of this downsizing (September 1998), the seasonally adjusted Minneapolis metropolitan area unemployment rate was 2.4%. By the time of the third questionnaire (April 2002), when nearly 40 men had retired and 17 men were without work, the metro area seasonally adjusted unemployment rate had risen to 3.9%. At the most recent data collection period, 11 of the 17 men who were unemployed (65%) believed that work

Table 2. Respondent Views about Whether They Were Treated Differently than Other Job Applicants at T1 (February 2000)

Response	n	%
Yes, I believe I was treated differently	44	28
No, I don't believe I was treated differently	52	33
I'm unsure if I was treated differently	30	19
I don't know because I am not applying for work	33	21
Total	159	101*

* Percentage total is greater than 100% due to rounding.

became increasingly more difficult to obtain after September 11, 2001. As noted earlier, 15 of the displaced workers found they were out of work again as a result of 9/11 and another 5 workers found their workload increased because of other terminations at their place of work after that date.

Reasons for Unemployment. Some of the men who were unemployed at T1 were not looking for work—they were either treating their work release as a vacation, planning for their future, or working on household projects. Others, as noted earlier, were unable to work, and still others seemed to be simply “stressed out.” For those who were unable to work, injuries were certainly possible while employed at United Defense. The Fridley facility, a 132-acre government-owned site with more than 40 acres enclosed, had more than 440,000 square feet devoted to machining, foundry, metallurgical, assembly, testing, and quality control services. With the massive equipment used to create large defense products, work could be dangerous. At various times some respondents were injured. Some departments—like the foundry, plating, and machine repair departments—exposed workers to greater dangers. Hazards in these departments included the heat and possible mishaps during the casting process, a variety of chemicals and solvents used in plating production and machinery cleaning, and working with large parts moved by overhead cranes. In addition, long-term workers were exposed to trichloroethylene (TCE), a component of industrial solvents. The substance was found in the United Defense water supply wells, which were shut down in 1981. In addition, the northern area of the plant grounds is an EPA Superfund site due to drummed waste found in 1983.

Contaminants found include a number of volatile organic compounds that many of the displaced workers would have been exposed to as airborne gases.

Dealing with Stress. Stress was also a factor in taking “a breather” from seeking immediate employment after displacement from United Defense. For many workers, the past 10 years was a period of stress because workers were worried about whether they would continue to have a job or be terminated. At the T3 data collection, the following question was asked: “Some former United Defense workers have commented that they felt the continual threat of job loss at UD, and on a daily basis they didn’t know if that day would be their last day on the job for them. How about you, did you feel any threat to your position at United Defense over the years?” Respondents were asked to circle one of the following four options:

1. Yes, I was very aware, and worried about being “under the gun” at United Defense.
2. Yes, the threat of job loss was there, but it didn’t bother me.
3. There was only some company pressure at the time before contract talks, not any other time, and it surely didn’t bother me.
4. No, I don’t think that pressure existed at all, or if it did, I wasn’t aware of it.

There were 160 responses to this question, with 85 respondents (53%) indicating they were aware of the threat of job loss and being “under the gun.” Another 43 respondents (27%) said they were not bothered by the job loss threat. A total of 19 respondents (12%) checked the third response, which was limited company pressure at contract time and a threat that didn’t bother them.

Only 13 respondents (8%) checked the fourth option, which was a lack of any job loss pressure.

Making Do with Less Money. There were other reasons why these men did not look for or accept new work immediately after job loss. Many displaced workers expect their starting wage at a new job to be about what it was prior to job loss. The same was true at United Defense. Most of the displaced United Defense workers were earning more than \$20 per hour, about twice what most unskilled workers were earning in the Twin Cities metropolitan area. Thus, for the unskilled workers who were displaced, accepting almost any position would mean working for half of what they had earned at United Defense. New work would also mean a different work environment, which would be a difficult transition for men who had worked most of their adult life for one employer.

What about retirement as an option? Some workers had adequate resources to retire, in part because they had anticipated that they might be caught in a downsizing and had consciously been saving for years. For them, the \$15,000 buyout for terminated workers was only an addition to their already existing savings. Because the men in this study were the survivors of four other downsizings since 1985, during which they saw 1,200 of their coworkers laid off, some men had been anticipating job loss and had cut back on their expenses. For those who were serious in their efforts to reduce their spending, some were able to generate a substantial savings account.

Deciding to Retire. In a few instances (3 respondents), former United Defense workers indicated that they retired because they were needed at home, largely to care for a spouse or other family member. Retirement was a demand for other men (2 respondents) because their own health prevented them from having full-time work. During the three-year study period, retirement became more desirable for others when their spouses retired. For a small number of men who had started their own business but decided that those efforts were no longer attractive (2 respondents, or 10% of the self-employed), retirement also became preferable.

Data analysis for the displaced United Defense workers during the three-year data collection period (Table 3) shows that most of the terminated

Table 3. Employment-Retirement Status of Displaced United Defense Workers throughout the Three Data Collection Periods (T1, T2, T3)* by Age

Age	Employment-Retirement Status					N
	Continuous Retirement from T1 to T3	Consistently Employed from T1 to T3	Reverse Retirement from T1 to T3	Unemployed at T3	Unable to Work at T3	
61-68	14 (36%)	21 (54%)	1 (2%)	1 (2%)	2 (5%)	39 (24%)
55-60	17 (20%)	52 (61%)	3 (4%)	10 (12%)	3 (4%)	85 (52%)
42-54	6 (16%)	21 (55%)	2 (5%)	6 (16%)	3 (8%)	38 (23%)
N	37 (23%)	94 (58%)	6 (4%)	17 (10%)	8 (5%)	162

* T1 was February 2000, T2 was March 2001, and T3 was April 2002.

workers (95 respondents) were employed consistently throughout the entire data collection period. A total of 36 men were retired by the end of the three-year period, although 30 of these had retired immediately upon their work release from United Defense. A total of 17 men were unemployed at the end of our data collection, with 3 of the men unemployed throughout the entire period, the balance having lost employment since their downsizing from United Defense. At the time of the third data collection,

8 men were unable to work, including 2 who had been unable to work throughout the entire data collection period. Dependent upon their injury or health, it is possible that these men would formally retire. Only 6 men made a reverse retirement move during the three-year study period, but each age category had at least one reverse retirement worker.

As was noted earlier, age is a factor in selecting retirement. Table 3 shows a positive relationship between the age categories and retirement (cells of 14,

17, and 6 respectively, which are 36%, 20%, and 16% of their age categories). A larger number of retirements among the older workers may be due to any number of reasons, including their eligibility for Social Security retirement benefits, perceived discrimination, an unwillingness to work for lower wages, or a belief that they will have difficulty doing the work. Table 3 also supports the view that retirement prior to age 62 is becoming normative because 23 of the United Defense displaced workers were consistently retired at 60 years of age or younger.

Conclusions and Policy Implications

This article focuses on older displaced workers in the defense industry. Many of these men had worked at the same place of employment throughout their working career. Although older workers may face less pressure to become reemployed because of reduced family responsibilities, and thus less financial commitments, most of the men in this study wanted to continue to work. Although some men who had found work lost their position after 9/11, most men were able to find replacement work. Only three men were unemployed throughout the entire three-year data collection period.

Retirement might have come earlier than expected for some men, in part because of perceived age discrimination but also because wages at new work sites were below their prior United Defense wages. Work opportunities were also declining during the data collection period as the unemployment rate increased. Some workers found themselves unable to work; others were stressed from the conditions of work at United Defense or had worried about the threat of job loss over a period of years. For these older displaced workers, an overwhelming share were able to follow through with their plans. Most of the men who wanted to work found work and those who wanted to retire were also able to do so. Most of the men who retired remained retired and did not engage in reverse retirement, even though many workers had seen the value of their retirement portfolios decline significantly.

Mergers, acquisitions, global competition, new technology, and subcontracting are likely to produce continuing contractions in the defense industry manufacturing sector. In addition, defense program cancellations, the vagaries of defense budgets, and mixed



Photo by Steve Schneider

Roughly one-fourth of the former United Defense workers surveyed were continuously retired throughout the study period. Although retirement may have come earlier than expected for some of these men, most of the respondents who wanted to work found work and most who wanted to retire were able to do so.

success in obtaining new defense contracts may also lead to employee terminations. As displacement continues, older workers face the challenge of early retirement and longer gaps between termination and retirement eligibility. They may find new employment, but often at considerably reduced wages and benefits compared to their previous defense-related work. Separation agreements, such as the one negotiated by United Defense and UAW 683, may help workers transition into retirement, but workers need to be aware of their future options even when dislocation is not imminent. Defense contractors and workers might be more proactive if there are financial incentives for individual retirement planning once a worker reaches midcareer. Retraining options—including training in small business management—jointly financed by unions and employers could be part of early career planning as well.

In her book *Redundancy and the Railwaymen*, Dorothy Wedderburn identifies four crucial elements in minimizing hardships for displaced workers: long-term planning, “the longest and most honest possible displacement notice,” close cooperation with government units, and an adequate compensation

scheme. Although there was no long-term planning in the 1998–1999 United Defense downsizing, the other elements Wedderburn identifies were present, and workers were able to “prepare” for displacement based on their experience of observing previous labor force reductions at the plant. In addition, the company minimized reemployment problems for terminated employees by not terminating all workers at the same time, thereby avoiding a “congestion effect.”

Nonetheless, there are policies that could be implemented to assist workers who are scheduled to be terminated or have been recently terminated. For older workers (those age 45 and older), predisplacement sessions should be offered to help them consider and prepare for retirement. Preretirement counseling for older workers on the reality of being an older job seeker would also be beneficial. Additional assistance in the form of counseling or training for those who remain long-term unemployed should be provided. (Although in the United Defense downsizing there were only a few men who were long-term unemployed, the policy should still be practiced.) Finally, assistance should be provided to those who

are second-time job losers shortly after termination from their initial displacement because these displaced workers have the disadvantage of bringing only limited new work experience to a prospective employer.

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Support for the research upon which this article is based began in 2000, in part through a New Initiative grant from CURA. These grants support projects that are initiated by faculty, community organizations, government agencies, or students and that are not appropriate for consideration under another CURA program. In 1988, CURA funded a related study of the educational needs of dislocated workers through a Faculty Interactive Research Program grant (see Rosemarie J. Park, Rebecca L. Storlie, and Rene V. Dawis, *The Educational Needs of Dislocated Workers in Minnesota*, CURA 88-4).

2000 Population Change Maps Now Available

The state of Minnesota population change maps featured in the Summer 2003 issue of the *CURA Reporter* are now available from CURA as four-color wall maps. Based on 2000 U.S. Census data, the maps show percentage change and absolute change in population in the state from 1990 to 2000. The percentage change map shows data at the minor civil division level (which includes cities, townships, and unorganized territory), whereas the absolute change map shows growth and loss of population across the state.

The four-color poster-sized wall map versions (17 by 22 inches) of the population change maps were created through a joint effort of CURA, the Department of Administration (Minnesota State Demographic and Land Management Information Centers), and the Cartography Lab in the University of Minnesota’s Department of Geography. The maps are

printed back-to-back and include major water features and selected major roads and highways.

Population distribution maps for the state of Minnesota and Twin Cities area, which were originally featured in the May 2001 issue of the *CURA Reporter*, are also available from CURA. Based on 2000 U.S. Census data, these 17-by-22-inch four-color wall maps are printed back-to-back and show the distribution of population within the state and the seven-county Twin Cities metropolitan area, as well as county and city names, major water features, and selected major roads and highways.

CURA will ship up to two folded copies of each wall map free of charge, and will ship an unlimited number of flat (unfolded) copies of either map for the cost of shipping and handling. To order, call (612) 625-1551 or send e-mail to cura@umn.edu. Please specify which maps you would like (population

change or population distribution), whether you would like flat or folded copies, and the quantity you would like to order, and include your complete mailing address and phone number. Allow 3–6 weeks for delivery. To obtain free flat (unfolded) copies of either map, or for multiple folded copies, visit CURA during regular business hours (8–12 and 1–4:30, Monday through Friday) at the University of Minnesota, 330 HHH Center, 301—19th Avenue South, Minneapolis, MN 55455.

The population change and population distribution wall maps also can be ordered from Minnesota’s State Demographic Center at 651-296-2557 or Demography.Helpline@state.mn.us and from the Land Management Information Center at 651-296-1211 or LMIC.mail@state.mn.us.

Project Update: Dakota Immersion Preschool at Pezihuṭazizi

Languages represent unique ways of seeing the world and are intimately connected with the social and cultural identity of those who speak them. Of the roughly 6,000 languages currently spoken throughout the world, linguists estimate that more than half could be lost during the next century. Particularly at risk are languages spoken only in small indigenous communities. One such language in Minnesota is the Dakota language which, like almost all other Native American Indian languages in the United States, is in imminent danger of being supplanted by English. The Dakota constitute one of the major Native American Indian peoples of the Upper Midwest region. The Dakota language is closely related to that of the Lakhota of present-day North and South Dakota, and the Nakoda or Assiniboine of Montana. These three peoples make up the nation known as the Sioux.

At Pezihuṭazizi (Upper Sioux Community), a Dakota reservation situated in southwestern Minnesota near the small town of Granite Falls, the number of Dakota speakers had dwindled to no more than 20 by the late 1990s. Most of these speakers were over the age of 60 and rarely used the Dakota language on a day-to-day basis, speaking English even among themselves. Recognizing the threat posed to Dakota culture by the loss of its native language, some members of the Pezihuṭazizi community began work on a project that aimed to produce an accurate and culturally sensitive Dakota dictionary. One product of this work has been a standardized orthography that is used for Dakota words in this article.

Important though the dictionary work is, the community realized that it was not sufficient in itself to save the Dakota language from extinction. In 1997, the Pezihuṭazizi tribal council decided to establish an immersion education program on the reservation as another component of language preservation. Immersion programs are based on the principle that language is best acquired at an early age through naturalistic use—that is, interaction and use focused on meaning-making and not memorization—and without the

constant presence of a dominant cultural language such as English. After receiving a one-year grant from the federal Administration for Native Americans to establish the program, the council hired tribal member Angela Wilson, a doctoral candidate in oral history at the University of Minnesota, to direct the program. In fall 1999, CURA provided additional support for the project through a Faculty Interactive Research Program grant to support the work of Bill Johnston, an applied linguist at the University of Minnesota who was hired by the tribal council as an outside consultant and teacher trainer. In light of the difficulties the program encountered, CURA is presenting this brief update on the project rather than a feature-length article.

Officially named “Pezihuṭazizi Wahoḥpi Wohdaḳapi Unspe” or “Pezihuṭazizi Language Learning Nest,” the immersion program was based on the language revitalization programs of the Maori in New Zealand and the Hawaiians in Hawai’i, two of the most successful such programs in the world. The program was structured around the

“language nests” originally devised by the Maori, in which children are immersed in the indigenous language from a very early age. The school opened on October 4, 1999, with six elders from Pezihuṭazizi as teachers and two University of Minnesota graduate students working as a classroom aide and curriculum coordinator, respectively. Within the first month, between 10 and 15 children aged one to five were enrolled in the program. A year-long curriculum was developed, based primarily on the Dakota calendar and its related activities and celebrations, and a more detailed curriculum was created for each week, broken down into five *hahunṭa* or “threads” reflecting five crucial aspects of Dakota life, one for each day of the preschool week. Pre-service and in-service training were provided to the tribal elders who taught in the program, and a great deal of attention was paid to the physical environment of the classroom.

One of the greatest successes of the program was its observance of the “Dakota Only” rule in the classroom. For the four hours of the program each morning, none of the teachers or staff



Photo by Bill Johnston

spoke a word of English. The children were exposed to nothing but Dakota during this time. An important part of the curriculum was the use of repeated linguistic routines that provided predictable, contextualized language to make acquisition easier; such routines included handshakes and a round dance at the beginning of each day, a prayer to the four directions sung at mid-morning, and another dance to end the morning. Other activities included the use of songs and games with predictable and repetitive linguistic components.

One important measure of the program's success is whether the children were learning the language. Researchers involved with the project observed both increasing indications of comprehension among children, as well as gradually longer and more complex utterances either in Dakota or a mixture of Dakota and English. Although children still preferred to speak English with each other, they increasingly used Dakota when interacting with adults. In addition, several parents reported that their children were speaking Dakota at home; one little girl had a special corner in her home, akin to the special Dakota classroom she attended, where she spoke only Dakota. Although the children did not achieve fluency, they did make significant progress in learning Dakota, and the most important condition for language learning—a supportive, input-rich, Dakota-only environment—was firmly established.

Although there were many successful elements in the immersion program at Pezihuṭazizi, the program ultimately proved difficult to sustain. The immersion approach that was used at the school is based on providing rich linguistic input for children, supported

by visual and tactile experiences, and requires using an interactive style of teaching and communication. However, some of the Dakota elders who taught in the program found it difficult to engage children one-on-one in conversation or interaction, or to describe aloud to children the actions they were performing. Some of the teachers were also reluctant to invent new vocabulary words for modern objects or recent technological inventions, believing that creating neologisms for these objects transgressed the bounds of their language.

For whatever reasons, after several months of the program, four of the Dakota teachers left the immersion school and established a rival Dakota language program elsewhere on the reservation. Described as “language classes” rather than full immersion and open to community members of all ages, the program became an alternative to the immersion school. Although the two remaining Dakota teachers in the immersion program were joined by a third elder, it was difficult to maintain the same level of linguistic input and interaction with fewer teachers. By the end of the year, struggles over control of the immersion program led to its demise.

The ultimate failure of the immersion program to establish itself at Pezihuṭazizi might serve as a cautionary tale for others who attempt to establish such language programs. First, practitioners should recognize that what appear as sound administrative or pedagogical approaches may conflict with cultural values and practices of the community. In this instance, certain key elements of the program—using unfamiliar teaching methodologies and

creating neologisms for modern objects and technologies—ultimately created insurmountable difficulties for some Dakota elders. Although it may not always be possible to work through such differences, a sensitivity to cultural values and a conscious effort to acknowledge them at the beginning may avert problems such as those that derailed the program at Pezihuṭazizi.

Second, the experience at Pezihuṭazizi strongly suggests that a mix of community elders and younger people is essential for such a program to work. Community elders bring wisdom and cultural knowledge, whereas young people can bring both energy and a greater openness (for instance, to new teaching methodologies). The Hawaiian immersion experience has shown that effective teachers do not need to be native speakers of the language, especially if other native speakers are on hand as resources. Because the young people of a community offer the greatest hope for the future preservation of language, including young teachers and aides—even non-native speakers of the language—is an important component of a successful immersion program.

Finally, it is critical that immersion programs garner community support from the beginning. Although a few dedicated participants can create an immersion program, the community will that is necessary to successfully sustain such programs over the long run can come only from broad-based support.

—Bill Johnston (*Assistant Professor, Program in Teachers of English to Speakers of other Languages [TESOL] and Applied Linguistics, Indiana University*) and Mike Greco (*CURA*), contributing writers

Consequences of Minnesota Child Support Guidelines for Children of Divorced Parents

by Kathryn D. Rettig and Kerry Kriener-Althen

The federal Child Support Enforcement Amendments of 1984 required that all states adopt numerical formulas for child support guidelines by October 1989 to determine the amount of money that noncustodial (that is, nonresident) parents must pay to financially support their children. These amendments were intended to achieve several policy goals. The first goal was to achieve consistency and horizontal equity across all cases by placing consistent financial demands on parents with similar incomes who are obliged to provide child support. The second goal was to protect the financial well-being of children by ensuring that child support awards are sufficient to provide for the needs of children. The third goal was to ensure responsibility and equity by allocating to children proportional shares of parental incomes.

In addition to mandating adoption of numerical formulas for child support guidelines, the amendments stipulated that these guidelines be reviewed every four years and be revised at that time if appropriate. In Minnesota, the Child Support Enforcement Division of the Minnesota Department of Human Services (MDHS) assumed responsibility for completing the federally required evaluations. Two University of Minnesota research studies have served as sources of information for the MDHS evaluations. Conducted in 1986 and 1999, the studies examined court records for child support orders in Minnesota marital dissolution cases with children from representative counties in all 10 judicial districts in the state.

In this article we describe the study populations for these two University research projects and then examine a comparable subsample of the sole physical custody cases for these two years to see whether the financial well-being of children improved, stayed the same, or deteriorated during the intervening 13 years. We also consider how successfully the policy goals of the Child Support Enforcement Amendments of 1984 have



Photo by David Hansen, Minnesota Agricultural Experiment Station

been achieved in Minnesota. The research for this article was funded by a grant from the McKnight Foundation to the Child Support Enforcement Division of the Minnesota Department of Human Services. Additional support was provided through a grant from CURA's Faculty

Interactive Research Program, as well as a project grant from the Minnesota Agricultural Experiment Station.

The 1986 and 1999 Child Support Guideline Studies

Descriptive statistics for the two study

Table 1. Description of Study Populations for 1986 and 1999 Child Support Order Studies

	Data for 1986*	Data for 1999
Marital dissolutions in Minnesota	14,411	15,497
Marital dissolutions with minor children (DWC cases)	6,117	9,388
Number of court docket numbers received from Minnesota Supreme Court for 10 counties	2,792 (2,727 examined, 1,639 excluded)	3,405 (2,335 examined, 627 excluded)
Cases in the total sample	1,153 (19% of the 6,117 DWC cases)	1,708 (18% of the 9,388 DWC cases)
Sole physical custody orders with complete information	492 (43% of 1,153 total sample cases)	677 (40% of 1,708 total sample cases)
Parent who filed divorce petition:		
Mother	69%	66%
Father	27%	27%
Joint	4%	7%
Legal representation:		
Mother	45%	36%
Father	14%	7%
Both	39%	40%
Percentage of joint legal custody orders	50%	80%
Percentage of joint or split physical custody orders:		
Joint	6%	23%
Split (specific children)	2%	2%
Parent receiving sole physical custody:		
Mother	81%	64%
Father	10%	8%

* K. D. Rettig, L. Yellowthunder, and D. Hendrickson Christensen, "Economic Consequences of Divorce for Men, Women, and Children in Minnesota: A Preliminary Report." St. Paul: Department of Family Social Science, University of Minnesota, 1989.

populations in the 1986 and 1999 University of Minnesota research projects are presented in Table 1. There are many similarities between the two study populations, but the most obvious changes are the increases in the percentage of joint legal custody and joint physical custody cases. *Joint legal custody* means that both parents have rights to determine the child's upbringing, including making decisions about education, healthcare, and religious training. *Physical custody* includes such things as providing routine daily care, control, and a place of residence for children.

Summary of Results from the 1986 Study. Results of the 1986 study for sole physical custody cases indicated that the policy goals behind the numerical formula for child support in Minnesota were not realized as often as attorneys,

judges, and educators assumed. First, in most of the cases, the child support orders deviated from the child support guidelines. Parents at higher income levels who paid child support were more likely to have child support orders that were *below* the state guidelines, and parents at lower income levels who paid child support were more likely to have child support orders *above* the guidelines. Second, the median income for children provided by child support orders was only 56% of the poverty-level income guidelines for 1986, and only 45% of the average parental expenditures on children for 1986 estimated by the U.S. Department of Agriculture. The median income established by the 1986 child support guidelines, meanwhile, would have provided 64% of poverty-level income and 51% of average

parental expenditures on children. Third, the needs-adjusted incomes of parents after the transfer of child support indicated that custodial, compared to noncustodial, parents had the greatest decreases in income sufficiency based on the minimum subsistence level of living established by 1986 federal poverty-level income guidelines.

Contextual Changes in Child Support Guidelines from 1986 to 1999. The 1999 child support guidelines study was initiated to determine whether there had been a change since 1986 in the financial outcomes for children whose parents were divorcing. Three central questions, based on the three policy goals identified earlier, guided this research: (1) Do the court-ordered child support amounts for sole physical custody cases correspond closely to the amounts specified in the state child support guidelines? (2) Do the child support orders and guidelines protect the financial well-being of the children they were intended to benefit? (3) Do the child support guideline amounts allocate proportional shares of parental incomes to the children's two households?

Several changes to the child support guidelines occurred during the 13-year interval between these two studies. In 1999, the law allowed additional child support to be ordered for childcare and medical costs. This resulted in three different formulas, based on three different calculation procedures, to determine child support amounts: one for basic child support, one for childcare expenses, and one for medical expenses. The guidelines also changed over time with respect to the maximum monthly amount of net income for which the parent owing child support could be assessed for child support purposes. The amount of this income cap changed from a net monthly income of \$4,001 in 1986 (\$6,082 in 1999 dollars) to \$5,935 in 1999. This means that if the cap amount is adjusted for inflation, then higher income parents who owed child support were required to share with their children a lesser amount of their total net incomes in 1999 than they were in 1986, although the percentages of net monthly income that were used in the calculation formula remained the same.

The 1986 and 1999 Child Support Orders: A Comparative Analysis

It was our expectation that, compared to the 1986 child support orders, the 1999 orders would correspond more closely to the state child support guidelines

because of the federal attention given to child support guidelines, as well as the frequency and extent of continuing education for attorneys and judges. If that assumption were true, then the financial well-being of children also might be expected to have improved.

Sampling Procedures. We used the same sampling procedures for the 1986 and 1999 studies. The 1999 sample was obtained by beginning with a list of 3,405 case numbers from the Minnesota Supreme Court for dissolution cases with children in 1999. These case numbers were from the 10 representative counties included in the 1999 study, and a total of 2,335 cases were examined for our research project. All dissolution cases with children were examined in the seven counties with fewer than 100 divorce cases for the target year (Beltrami, Goodhue, Kandiyohi, Lyon, Ottertail, Pine, and Winona). A computer-generated random list was created to select for analysis cases in Hennepin, Ramsey, and St. Louis Counties, each of which had more than 400 dissolution cases with children in 1999.

We further screened the 2,335 examined cases and eliminated 627 for the following reasons: the marital dissolution was granted before 1999 but was listed in 1999 due to subsequent activity (345 cases); the divorce was still in progress in 1999 (149 cases); the case was dismissed and no dissolution was granted (66 cases); the case file was incomplete because the settlement portion of the case was not in the file (16 cases); there were no children listed in the case file (14 cases); the children were 18 years of age or older and had graduated from high school in 1999 (14 cases); or the case file was checked out and was not available after three attempts to find it (12 cases). An additional 11 cases were eliminated because the court docket number was invalid due to typing error, there was no stamp date on the final decree, the case was not in the Minnesota jurisdiction, or the case involved a separation and not a divorce.

Graduate and undergraduate students in the Department of Family Social Science were trained as research assistants, and they collected data by examining case records at the court record locations in each of the 10 counties. The research assistants recorded information on standardized forms that had been pilot tested in Washington County and revised several times. To protect the privacy of divorcing parties,

Table 2. Description of 1986 and 1999 Child Support Order Study Samples

	Data for 1986*	Data for 1999
Parents with sole physical custody:		
Mother	447 (91%)	636 (94%)
Father	45 (9%)	41 (6%)
Total	492 (100%)	677 (100%)
Mean length of marriage (years)	10.6	11.5
Mean age of mothers (years)	32	36
Mean age of fathers (years)	34	38
Mean age of children (years)	8.40	8.65
Median number of children†	2	2
Median annual net income for mothers at divorce	\$9,792 (\$14,884 in 1999 dollars‡)	\$16,800
Median annual net income for fathers at divorce	\$14,976 (\$22,764 in 1999 dollars‡)	\$22,392
Median annual amount of spousal maintenance	\$2,400 (\$3,648 in 1999 dollars‡)§	\$4,800#

* K. D. Rettig, D. Hendrickson Christensen, and C. M. Dahl, "Impact of Child Support Guidelines on the Economic Well-Being of Children," *Family Relations* 40 (1991): 167-175.

† The median is the middle value when a set of measures is ordered from high to low, so that half the values are above and half the values are below the median value.

‡ According to the U.S. Department of Labor, Bureau of Labor Statistics, the consumer price index (CPI) for all items in 1986 was 109.6 (compared to a base index of 100 for 1982 to 1984). The CPI for all items in 1999 was 166.6. Thus, 166.6 divided by 109.6 equals 1.52, or a 52% increase between 1986 and 1999.

§ For 68 women (14% of the 492 parents in the study sample with sole physical custody) for 36 months.

For 66 women (10% of the 677 parents in the study sample with sole physical custody) for 55 months.

the cases were given a research number (different from the case number) and names, addresses, and special identifying information were not recorded. Only the facts from the final divorce decrees are reported here, but the project also included information from petitions, temporary orders, and supplementary actions. The accuracy of information on the data collection forms was verified at court locations and during data coding, data entry, and data cleaning.

Description of the 1986 and 1999 Study Samples. The study samples for the two research studies included sole physical custody cases in which (1) child support was awarded, (2) the net income of the noncustodial parent was reported, (3) there were five or fewer children involved, and (4) complete financial information was provided for child support orders. Because the 1986 cases did not have guidelines for childcare or medical expenses, these support factors were excluded from the current analysis so the two samples would be comparable. It should be noted that childcare and medical support theoretically are

not supposed to affect the basic child support guideline decisions. However, in actual practice, these factors may have influenced child support discussions and negotiations. Descriptions of the two study samples are reported in Table 2.

In both studies, mothers most often had sole physical custody of children. On average, parents were dissolving marriages of 10.6 to 11.5 years that had produced two children. Mothers in the two studies averaged 32-36 years of age, fathers 34-38 years of age, and children 8.4-8.8 years of age. Mothers' median annual net income in 1986 of \$14,883.84 (in 1999 dollars) was slightly lower than the \$16,800 that was reported for mothers in 1999. Fathers' median annual net income in 1986 (in 1999 dollars) was \$22,763.52, slightly higher than the \$22,392 reported for fathers in 1999. A total of 78 men and 1 woman paid spousal maintenance to their former spouse in 1999. The woman paid \$7,116 annually. Men in 1986 paid a median annual amount of \$3,648 (in 1999 dollars), which was lower than the 1999 amount of \$4,800. A higher

percentage of women received spousal maintenance in 1986 (14%) compared to 1999 (10%), but on average the payments were for a shorter duration.

Results. Our comparative analysis of the 1986 and 1999 studies focused on three research questions. These questions related to the effectiveness of the Minnesota child support guidelines in achieving, with respect to sole physical custody cases, the three previously mentioned policy goals.

Correspondence of Child Support Orders to Minnesota Child Support Guidelines. The first research question we asked was, Do the 1999 child support orders, compared to the 1986 orders, correspond more closely to the state child support guidelines? The answer to this question is yes. There have been improvements in consistency due to closer correspondence of child support orders to the Minnesota child support guidelines. About half (49.6%) of the cases we examined from 1999 indicated court-ordered amounts of support that were within \$1.00 of the guideline amounts, as reported in Table 3. This is a considerable improvement over the 12.6% of cases we examined from 1986 that were at or near guideline levels. The cases in 1999 that deviated from the guidelines (50.4%) were more likely to deviate downward (-27.7%) rather than upward (+22.7%), as was true to a greater extent in 1986.

The average monthly deviation amount for all cases in all income ranges in 1999 was \$14.87 below the guidelines. That would be an annual income loss for children of \$178.44. If the 1986 amounts are converted to 1999 dollars, then the average deviation for all cases in 1986 would be -\$23.38, or an annual income loss of \$280.56, indicating in another way that the 1999 court orders more closely corresponded to the state child support guidelines than the 1986 orders. Only 6.4% of the cases in 1999 and 7% in 1986 provided the rationale for child support decisions that deviated from the state guidelines, a practice that occurred with the same frequency in each of the two studies.

Protecting the Financial Well-Being of Children. The second research question we posed was, Do the 1999 child support orders and guidelines, compared to 1986, protect the financial sufficiency of the children they were intended to benefit? Financial sufficiency was evaluated by examining whether the actual and hypothetical incomes provided for children by the child support orders and child support

Table 3. Correspondence of Child Support Orders to Child Support Guideline Amounts, 1986 and 1999

	Data for 1986*	Data for 1999
Sole physical custody cases	492	677
Pct. of child support orders at guideline levels	12.6%	49.6%
Cases deviating from guidelines by \$1.00 or more:		
Total pct. deviating	87.4%	50.4%
Pct. above guidelines	39.4%	22.7%
Pct. below guidelines	48%	27.7%
Mean deviation of child support order from guidelines:		
Monthly	-\$15.38 (-\$23.38 in 1999 dollars†)	-\$14.87
Annually	-\$184.56 (-\$280.56 in 1999 dollars†)	-\$178.44
Pct. cases with written rationale for deviations	7%	6%

* K. D. Rettig, D. Hendrickson Christensen, and C. M. Dahl, "Impact of Child Support Guidelines on the Economic Well-Being of Children." *Family Relations* 40 (1991): 167-175.

† According to the U.S. Department of Labor, Bureau of Labor Statistics, the consumer price index (CPI) for all items in 1986 was 109.6 (compared to a base index of 100 for 1982 to 1984). The CPI for all items in 1999 was 166.6. Thus, 166.6 divided by 109.6 equals 1.52, or a 52% increase between 1986 and 1999.

Table 4. Child Support Orders and Guidelines Expressed as a Percentage of Poverty-Level Incomes, 1986 and 1999

	Data for 1986	Data for 1999
Median annual child support order for sole physical custody cases	\$3,900 (\$5,928 in 1999 dollars*)	\$6,000
Ratio of median child support order to poverty-level guideline incomes for number of children supported	0.58 (58%)†	0.59 (59%)‡
Median annual child support guideline amount	\$4,211 (\$6,400 in 1999 dollars*)	\$6,300
Ratio of child support guideline amounts to poverty level for number of children supported	65%	62%

* According to the U.S. Department of Labor, Bureau of Labor Statistics, the consumer price index (CPI) for all items in 1986 was 109.6 (compared to a base index of 100 for 1982 to 1984). The CPI for all items in 1999 was 166.6. Thus, 166.6 divided by 109.6 equals 1.52, or a 52% increase between 1986 and 1999.

† Poverty-level income guidelines for 1986: for one person, \$5,360; for two people, \$7,240; for three people, \$9,120; for four people, \$11,000; for five people, \$12,880. Statistics from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, "Poverty-Level Income Guidelines: Annual Revision," *Federal Register* 51 (1986): 5105-5106.

‡ Poverty-level income guidelines for 1999: for one person, \$8,240; for two people, \$11,240; for three people, \$13,880; for four people, \$16,700; for five people, \$19,520. Statistics from the U.S. Department of Health and Human Services, "The 1999 Poverty-Level Income Guidelines," *Federal Register* 64 (March 18, 1999): 13428-13430.



Table 5. Allocating Proportional Shares of Parental Incomes to Children's Households

	Data for 1986	Data for 1999
Median pre-divorce per capita income	\$7,001 (\$10,641.52 in 1999 dollars*)	\$11,255
Median per capita income at divorce (and changes) for custodial household	\$5,521 (-\$1,480) (\$8,391.92 in 1999 dollars* or -\$2,250)	\$9,429 (-\$1,826)
Median per capita income at divorce (and changes) for noncustodial household	\$10,080 (+\$3,079) (\$15,321.60 in 1999 dollars* or +\$4,680.08)	\$15,504 (+ \$4,249)
Ratio of pre-divorce median annual net income to poverty-level income	2.50 [†]	2.58 [‡]
Ratio of median annual income plus child support guideline amount to the poverty level, for custodial households	1.77 [†] (-0.73)	1.89 [‡] (-0.69)
Ratio of median annual net income minus child support guideline amount to the poverty level, for noncustodial households	1.92 [†] (-0.58)	1.87 [‡] (-0.71)

* According to the U.S. Department of Labor, Bureau of Labor Statistics, the consumer price index (CPI) for all items in 1986 was 109.6 (compared to a base index of 100 for 1982 to 1984). The CPI for all items in 1999 was 166.6. Thus, 166.6 divided by 109.6 equals 1.52, or a 52% increase between 1986 and 1999.

† Poverty-level income guidelines for 1986: for one person, \$5,360; for two people, \$7,240; for three people, \$9,120; for four people, \$11,000; for five people, \$12,880. Statistics from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, "Poverty-Level Income Guidelines: Annual Revision," *Federal Register* 51 (1986): 5105-5106.

‡ Poverty-level income guidelines for 1999: for one person, \$8,240; for two people, \$11,240; for three people, \$13,880; for four people, \$16,700; for five people, \$19,520. Statistics from the U.S. Department of Health and Human Services, "The 1999 Poverty-Level Income Guidelines," *Federal Register* 64 (March 18, 1999): 13428-13430.

guidelines were sufficient for meeting their income needs. The answer to the research question is that things have stayed about the same with regard to the financial well-being of children from 1986 to 1999 (Table 4), with the caveat that additional support for child-care and medical expenses provided in 1999 was excluded from the analysis.

We determined that financial sufficiency would be achieved if children had at least a minimum subsistence level of living as defined by federal poverty-level income guidelines—in other words, the ratio of the child support income divided by the poverty-level income would equal 1.00. A ratio (percentage) of less than 1.00 (100%) would indicate that the income was too low to sufficiently meet the standard of need, whereas a ratio greater than 1.00 would indicate the child support income exceeded the standard of need. Two different indicators of income for children were used for the numerators of the ratios: (1) the annual amount of money provided for child support by actual court orders, and (2) the annual amount of money that would have been provided if Minnesota child support guidelines had been strictly followed in each case.

The federal poverty-level income guidelines for 1986 and 1999 were used as denominators when calculating the income-to-needs ratios for each year. The poverty-level income guideline for one person was used for one-child families, the poverty level for two people was used for two-child families, and so on. Federal poverty-level guideline incomes are extremely low. For example, an individual can qualify for food stamps with a net income of 100% of poverty level or a gross income of 130% of poverty level. Similarly, children can qualify for school breakfast or lunch programs in households with gross incomes of 130% of poverty-level income.

Some noncustodial parents have argued that the poverty-level income guidelines provide more money than is necessary for the support of children. However, others have criticized the guidelines as being unrealistically low, even for minimum subsistence living in the United States. Child support is intended to be income for the child, and not income to support adults. Divorcing parents, however, have a unique situation and substantially increased demands on income. They must provide a household for their children, provide a caretaker, and pay transition and duplication costs.

In addition, the *per person* costs for food, housing, furnishings, energy, and transportation increase with decreasing family size, and fewer of the costs of supplies, furnishings, transportation, and recreation can be shared by parents following divorce. Instead, these expenses must be paid by both parents, each of whom has less income to meet these demands. For these reasons, it was not realistic to treat the income needs of the child as a marginal added expense to an already existing household.

The 1999 child support orders provided an income-to-needs ratio of 0.59, or 59% of the income required for a minimum subsistence level of living as indicated by the poverty-level income guideline standards. By comparison, the 1986 support orders provided an income-to-needs ratio of 0.58, or 58% of the income required for a minimum subsistence level of living. The implicit assumption is that custodial parents would need to contribute the additional money necessary for children to live at poverty level—41% of the child's income in 1999 and 42% in 1986—as well as any additional amount that would provide a higher quality of life. The indirect costs of childcare for parents (i.e., time lost at work that results in lower income) are not included in these calculations.

Compared to the actual child support orders, Minnesota child support guidelines would have provided a median annual income of \$6,300, resulting in an income-to-needs ratio of 0.62 (62%) in 1999, which is slightly less favorable for children than the ratio of 0.65 (65%) for 1986. In 1999, the custodial parent would be assumed to provide 38% of the money needed for a minimum subsistence level of living, as well as any additional amounts necessary for a higher quality of life.

Because federal poverty-level income guidelines provide such a low standard for the income needs of children, these results raise concerns about whether the second policy goal of financial sufficiency for children has been met.

Allocating Shares of Parental Incomes to Children's Households. The third research question we asked was, Do the child support guidelines allocate proportional shares of parental incomes to children's households to realize the values of responsibility and equity? Depending on the measures that are used for "financial sufficiency," there are two answers to this question. The answer is no if the measure is per capita (per person) income before and after

divorce. The answer may be yes if we examine the household incomes in relation to federal poverty-level incomes for the corresponding household sizes. These results are reported in Table 5.

Per capita income is defined as total income divided by the number of people being supported by that income. The measure assumes that each individual family member is entitled to an income share that is equal to that of the other members, regardless of age, gender, or financial contributions. However, this standard of equality is seldom favored by divorcing parties. Results of both the 1986 and the 1999 study indicated that the custodial household still carried a greater burden of financial support for children. Family members in custodial households experienced decreasing per person incomes from 1986 to 1999 (-\$1,826), whereas noncustodial households had increased per person incomes between 1986 and 1999 (+\$4,249).

The results were somewhat different when we examined the ratio of the median annual income for households after the transfer of child support (assuming a median child support amount of \$6,300 annually, based on the child support guidelines) and compared them to federal poverty-level income guidelines for the household size. The custodial household size included the children and the custodial parent, whereas the non-custodial household was assumed to have one person. Both households had decreased financial sufficiency at divorce, but the difference in the income-to-needs ratios for the two households ($1.89 - 1.87 = 0.02$) was minimal. This result indicates the potential for similar levels of living (estimated by money income resources only) in the children's two households in 1999, and an improvement in achieving equity when compared to the 1986 results.

Conclusions

Comparison of the descriptive information from the 1986 and 1999 research studies suggests that child support orders have become more consistent with child support guidelines. However, there were no changes in the practices of recording in the final divorce decrees the reasons for deviations from the guidelines when they occurred. A total of 93% of the 1986 cases and 93.8% of the 1999 cases did not provide written justification for modifications.

The results of closer correspondence between child support orders and guidelines may mean the procedural fairness

principle of consistency has led to more horizontal equity across cases for those with similar resources and circumstances who owe child support. It may also mean that greater numbers of Minnesota children from divorced families are receiving through the court orders at least the amount of income required by state guidelines. This suggests that Minnesota Supreme Court efforts to encourage more consistent application of the child support guidelines in marital dissolution cases has been effective. The trend is positive; however, progress can still be made as indicated by the fact that more than one-fourth of child support orders deviated downward from the guidelines. These results also suggest that the policy change that added guidelines for childcare and medical expenses did not have a detrimental effect on child support orders. These ideas need to be examined more precisely in the future.

The second conclusion is that the incomes from child support orders continued to provide slightly more than half of poverty level of living for children (59%), indicating that things stayed about the same with respect to children's financial well-being during this 13-year time period. If the guidelines had been strictly followed in all cases, then there would have been a slight decrease in the financial well-being of children in 1999 (from 65% to 62% of poverty-level income).

The question remains, however, whether the Minnesota child support guidelines provide enough money for the income needs of the children they were intended to benefit. Deciding whether or not these incomes are sufficient for children is a value judgment that has caused public controversy. Parents who are obligated to pay child support sometimes argue that 62% of a minimum subsistence level of living is plenty of money for one parent to pay for the support of children, and they believe they are fulfilling their support responsibilities by doing so. Custodial parents often disagree, however, because they are faced with the daily out-of-pocket expenses for children, as well as the time costs of providing care. They believe they shoulder too many financial responsibilities. Many divorced parents also believe that no one would want to live at poverty level, and they further realize it is almost impossible to live in the United States on the amount of money provided for by the poverty-level income guidelines. We agree that this measure of income sufficiency is

not an adequate standard for determining the income needs of children. For that reason, we support the current effort to change the Minnesota child support guidelines formula so that the financial needs of children receive higher priority. Children are unable to lobby for policy changes that would protect their interests and therefore need strong advocates to present their arguments to legislators.

The third conclusion of the study is that if the Minnesota child support guidelines were consistently applied across cases, the parental incomes would be allocated in more equitable ways than the actual child support orders from the two study years indicate they have been allocated. It appears that the discrepancy in income-to-needs ratios between custodial and noncustodial households has diminished when comparing 1986 and 1999 data. However, this improvement may be due to increasing incomes among women during this 13-year period rather than to changes in child support orders or guidelines. This suggested “equity” probably means that parents are working many hours engaging in activities other than childcare, and if this is the case, then it would be a further cost for children. Women continue to be much more likely than men to receive sole custody of children. These results suggest that women’s employment may account for some of the gains in children’s well-being between the 1986 and 1999 studies.

Court records of marital dissolutions that do not go to trial typically do not

include information about ethnicity, or educational or vocational histories. It is not unusual to find missing financial information. Researchers have a need for uniform and complete data, and perhaps the current state court transition—which will involve the Minnesota Supreme Court coordinating record-keeping policies across judicial districts—will result in positive changes in these directions, particularly in regard to complete financial information. Further, it would be desirable for Minnesota courts to begin to collect information about ethnicity and educational histories so future studies could ascertain the extent to which equitable court decisions are made for divorcing parents across ethnic and educational categories.

The two studies reported here include only descriptive statistics and not multivariate analyses. The measures have further limitations, which means the results must be interpreted with caution. However, it is extremely rare to have statewide data, with large samples, from two time periods that can be compared to evaluate the same public policy. The studies are valuable because they provide factual data on the financial effects of child support policies on children and their parents. In addition, the studies include a large number of cases from a statewide sample. The information raises questions about how much custodial and noncustodial parents should be expected to financially invest in the human capital development of their own children, within the context of their available financial resources.

Kathryn D. Rettig is a professor in the Department of Family Social Science at the University of Minnesota and served as principal investigator for this research project. She studies family economics and resource management; value conflicts resulting from legal-economic and ethical challenges for families; and the economic consequences of divorce for men, women, and children.

Kerry Kriener-Althen was a graduate student in the doctoral program in family social science at the University of Minnesota at the time this study was completed. She was also the project manager for this research project. She has since earned her Ph.D. and is currently employed at SRI International in Menlo Park, California.

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Project Awards

To keep our readers up-to-date about CURA projects, each issue of the *CURA Reporter* features a few capsule descriptions of new projects under way. The projects highlighted in this issue are made possible through CURA’s Communiversity Personnel Grants program. The grants are awarded twice each year to grassroots organizations in the community. Each grant supports the extra personnel needed by local organizations, usually by providing an advanced graduate student who works directly with the organization receiving the award. The grants are competitive and organizations working with people of color are favored. The projects described here represent only a

portion of those that will receive support from CURA and its partners during the coming year.

■ **Identifying Trends in Hennepin County Home Foreclosures.** Minnesota Association of Community Organizations for Reform Now (ACORN) is a multiracial, multi-issue grassroots membership organization of approximately 7,000 families in the Twin Cities who have joined together to improve conditions for themselves and their community and to give low- and moderate-income people a greater voice in the decisions and policies that affect their lives. The organization set up a homebuyer education and counseling program in 1991. During the last few

years, the foreclosure rate throughout the country and in the Twin Cities has increased dramatically. At the same time, rising home prices have meant that large numbers of Twin Cities homeowners in foreclosure have a significant amount of equity left in their homes. This has encouraged foreclosure rescue scams that take advantage of such homeowners. A graduate student in the Department of Geography at the University of Minnesota will examine foreclosure data for Hennepin County for the years 1996, 1999, 2001, and 2003 to identify trends in foreclosures, as well as possible correlations between the number of foreclosures, neighborhood demographics, and lender type.

■ **Assessing Support Systems for Latino/Latina Students in South Hennepin County.** Hennepin South Services Collaborative (HSSC) brings together cities, schools, health and human service providers, businesses, families, and informal community supports in South Hennepin County to work in partnership. The organization unites the coordination function of a family services collaborative with the research and planning functions of a human services planning agency to fulfill its mission. A recent longitudinal study by the Minnesota Department of Children, Families, and Learning found that Latino/Latina students in Minnesota were significantly less likely than White students to graduate high school in 2001 (46.7% of Latino/Latina students graduated, compared to 82.5% of White students). A research project initiated by HSSC will build on existing research on Latino/Latina graduation rates and school success by analyzing the experiences of Latino/Latina high school students and parents in the South Hennepin region and identifying community and school support systems for Latino/Latina students. As part of the project, a graduate student in social work and public policy from the University of Minnesota will conduct focus groups with students and parents in Bloomington, Richfield, and Eden Prairie. The student will analyze focus group data, prepare a written report, and present findings and recommendations to the HSSC coordination team.

■ **Assessing Metropolitan Area Resources for Children Exposed to Violence.** The Tubman Family Alliance was created in 2002 through the consolidation of the Family Violence Network of Lake Elmo and the Harriet Tubman Center of Minneapolis. The new agency serves the entire Twin Cities metropolitan area and is the largest single umbrella provider of family violence services and prevention programming in the United States, serving more than 49,000 men, women, and children annually. The Minneapolis–St. Paul area has many resources available to support victims of family violence. Despite consistent findings that rapid intervention is critical for children who are exposed to violence, there are few resources in the metro area for children who are victims of or witnesses to violence. A graduate student from the Humphrey Institute of Public Affairs will assist with the Minnesota Child Response Initiative (MCRI), an ongoing

project administered by the Tubman Family Alliance that is aimed at identifying and intervening with children exposed to violence. Working under the supervision of Abi Gewirtz, an assistant professor in the Department of Psychology at the University of Minnesota, the student has helped to disseminate and analyze community needs assessment surveys conducted with over 200 individuals in three communities throughout Minneapolis. The student is currently assisting with a geomapping project aimed at understanding the resources and gaps in services for children exposed to violence in Minneapolis, and will help produce a report at the conclusion of the project.

■ **Evaluating a Twin Cities Work Skills Training Program.** Twin Cities RISE is a nonprofit skills development organization that recruits low-income adults—primarily men of color—and provides them with long-term, intensive work skills training, education, and supportive services. Once training is complete, the organization helps participants find jobs with companies that pay living wages and provide opportunities for upward mobility. In 2002, Twin Cities RISE launched a new program called the Advancement Institute that provides training opportunities in the community at local schools, nonprofits, and employers. Thus far, the Advancement Institute program has provided training to more than 100 individuals at Nath Companies, the Jeremiah Program, Catholic Charities, and Regions Hospital. A graduate student in educational psychology will help to evaluate the success of this new initiative by completing follow-up surveys with all trainees and collecting quantitative data on retention and other relevant program indicators.

■ **Documenting Working Conditions for Latino/Latina Workers in Minnesota.** The Resource Center of the Americas is a 20-year-old nonprofit organization based in Minneapolis whose mission is to advance the principles of human rights, democratic participation, economic justice, and cross-cultural understanding in the context of globalization in the Americas. The Centro de Derechos Laborales (Workers' Rights Center, or CDL) at the Resource Center of the Americas has been working with the Latino/Latina immigrant community since early 2000 to inform, educate, and organize around the issue of workers' rights. The Latino/Latina population in

Minnesota increased from 54,000 in 1990 to 143,000 in 2000. Many of these individuals are undocumented, unskilled, and do not speak English. As a result, Latino/Latina immigrant workers are often confronted with poor working conditions. The purpose of CDL is to improve the working conditions of local Latino/Latina immigrant workers by documenting the conditions and using this information as a basis for critical analysis and community organizing. A graduate student from the Humphrey Institute of Public Affairs will work with CDL staff to design research questions, and plan and conduct individual and small-group interviews with Latino/Latina workers.

■ **Evaluating and Integrating a Hunger Relief Organization's Operational Structure.** Second Harvest Heartland, Minnesota's largest hunger relief organization, solicits, receives, and distributes large volumes of food to hunger-relief agencies such as food shelves and on-site feeding programs such as soup kitchens, halfway houses, and shelters. In 2002, the organization distributed nearly 30 million pounds of food to more than 700 agencies in 61 counties in Minnesota and western Wisconsin. Second Harvest Heartland was created through the merger of the St. Paul Second Harvest and the Second Harvest Minneapolis food banks in fall of 2001. Neither food bank had formal processes for delegating responsibility, managing program or activity budgets, or documenting and evaluating performance. After the consolidation, staff from each organization continued to operate within segregated systems and did not share information. Operational and customer service problems are resolved on a one-time, ad-hoc basis with little formal documentation, process planning, explicit criteria for performance success, or a well-understood ethic of customer satisfaction. Consequently, the organization has many dissatisfied customers among its 700 client agencies because orders are inaccurate or are not filled on a timely basis. A graduate student from the Carlson School of Management will interview employees and work with the organization's vice president for operations, food bank director, and transportation manager to learn about and document existing organizational systems, and then consult with staff to develop decision points and measurable indicators of success.

Project Update: Consumer Support Grant Program

Policy makers and program administrators are trying a variety of approaches to meet the growing need for long-term care of persons with chronic conditions or disabilities. All but one state now funds consumer-directed in-home services as an alternative to some agency-provided homecare services. Consumer-directed in-home services differ from agency-provided services in that the eligible consumer (or his or her representative) receives a voucher or grant worth an amount comparable to the cost of publicly funded services otherwise provided by the homecare agency. The consumer or representative then purchases needed services or other supports to compensate for functional impairments. Generally the consumer-directed approach is used by persons whose needs are for assistance with daily living rather than for services related to acute or unstable medical conditions. The approach provides a greater degree of consumer control over selecting a paid helper, identifying needed services, and influencing how services are provided. Consumer-directed services may also be less expensive than agency-provided services because the consumer assumes administrative and oversight responsibilities.

Currently there are four consumer-directed homecare programs in Minnesota, and the option soon will become more widely available for persons now receiving Medicaid-funded home- and community-based services. In 1997, the Robert Wood Johnson Foundation and CURA's Faculty Interactive Research Program funded an early evaluation and provided information to consumers of one of these programs, the Consumer Support Grant (CSG) program. The project team included researchers and students at the University of Minnesota's Hubert H. Humphrey Institute of Public Affairs and staff of the CSG program at the Minnesota Department of Human Services. This brief report describes the CSG program and summarizes findings and accomplishments of the project.

To be eligible for the CSG program, a consumer must be currently enrolled

in the Alternative Care Program for seniors, the Family Support Program for families having a minor child with a developmental disability, or the Medicaid-funded home health program. Counties may choose whether or not they participate in the CSG program, and county case managers determine if a consumer is capable of managing his or her own care, or has a suitable authorized representative. A county representative and an eligible consumer arrive at a budget and service plan based on the consumer's service use in his or her program of origin. A consumer may use the grant to purchase services, supplies, or equipment, provided that the good or service (1) is directly attributable to the person's functional limitation, (2) is over and above the normal cost of caring for a person if he or she does not have functional limitations, (3) will delay or prevent out-of-home placement, and (4) is consistent with the service plan. The county and the consumer must renegotiate the budget and service plan annually, or sooner if the consumer's needs change. A consumer may return to the program of origin at any time.

Enrollment in the program began slowly and has remained small. There were 29 persons participating as of August 1, 1999, when research project staff interviewed 24 consumers and a representative of each of the 25 participating counties. At that time, 15 participants were children with developmental disabilities and their parents. The remainder were older adults. When follow-up data were collected in April 2002, all but 19 of the 164 participants were 18 years of age or younger.

Consumer information and support is an important component of consumer-directed homecare because consumers are on their own to obtain the services they need. The project team developed a handbook for consumers, as well as informational brochures, a newsletter, and a toll-free number to call with questions. The handbook included information on the CSG program and on useful resources; how to find and select a paid helper; information on

paying FICA taxes and workers' compensation; and a section to aid the consumer in making decisions about whether or not to participate. The Robert Wood Johnson Foundation grant also funded a full-time training coordinator on the CSG program staff in the Department of Human Services, who worked with county staff responsible for enrolling consumers and made presentations to consumers.

Project staff interviewed 24 of the 29 consumers or their representatives enrolled in the CSG program in late 1997 (at the end of this research project), as well as a representative from each of the 25 participating counties. All of the consumer respondents said they were "satisfied" or "very satisfied" with their experiences in the CSG program. They felt that they were more in control of their lives and their services, and that they or their family member had more appropriate or better quality services. (The majority of these respondents had enrolled in the CSG program because they were dissatisfied with services from their home health agency.)

At that time, the cash grants received ranged from \$231 to \$4,000 per month. About 25% of the parents paid themselves to provide care for their child as an alternative to previous paid employment. Several of the respondents hired the person who had previously worked for them through the home health agency. Others hired friends or relatives. Some consumers used grant money to pay someone to handle payroll taxes and workers' compensation.

In addition to personal assistance or home health services, participants made other purchases. Seniors most frequently purchased medications. Families of children with disabilities used part of their grants for therapies, adaptive clothing and equipment, or training for the parents.

Few respondents reported any problems with assuming the responsibilities associated with consumer direction, including employer functions such as hiring, training, and payroll deductions, and few felt the need for additional support. They appreciated receiving

help from a county case manager when they began the program. These respondents' suggestions for improving the program included providing consumers with a list of potential helpers, providing opportunities for networking with other CSG participants, and continuing the newsletter.

It must be remembered that these findings represent only a very small sample of consumers whose county case

managers judged that they were able to direct their own services. The finding of satisfied consumers is generally consistent with results from much larger studies, however.

As of the end of this research project, the CSG program also resulted in cost savings. By regulation, a consumer could receive only up to 80% of the amount that had been spent for services for that beneficiary in either the Family Support

or the Alternative Care programs. Those who had been in Medicaid-funded homecare could receive only the state portion (47%) of the cost of services due to Medicaid regulations that prohibit federal reimbursement of payments to individuals (unless the state is granted a waiver of these regulations).

—Nancy Eustis (Professor, Hubert H. Humphrey Institute of Public Affairs)

Project Update: Arsenic in Minnesota Groundwater

Small municipalities in Minnesota could save millions of dollars while reducing the levels of arsenic in their drinking water, thanks to research partly funded by a grant from CURA. Mindy Erickson, corecipient of the grant from CURA's Faculty Interactive Research Program, is a doctoral candidate in the Water Resources Science Program. She has been working under the supervision of Dr. Randal J. Barnes, a faculty member in the Department of Civil Engineering who is the project's principal investigator.

Erickson's research is timely because the federal government recently tightened the Maximum Containment Level (MCL) for arsenic to 10 micrograms per liter (ug/L). That came in response to research showing that long-term exposure to low levels of arsenic increases the risk of adverse health effects such as skin cancer and disorders of the circulatory, nervous, and digestive systems. Communities will need to comply with the new MCL by January 1, 2006, and many small communities throughout

Minnesota, Iowa, and the Dakotas have unique geology that contributes to concentrations of arsenic that exceed the new federal level.

Building a new treatment plant is one option for affected communities, but that can cost more than \$1 million and many towns cannot afford the expense. Erickson's research helps establish lower cost compliance options, such as drilling an alternate well, which costs only one-tenth that of building a treatment plant. Her work builds on research from the early 1990s that turned up high levels of arsenic in hundreds of communities throughout western and southern Minnesota. As a former employee of the Minnesota Department of Health she was also involved with the Minnesota Arsenic Study that was published in 2001.

One Minnesota community that has already benefited from Erickson's research is Neilsville, whose drinking well is higher in arsenic than the new limit allows. Erickson developed a site investigation protocol and then helped

conduct a site investigation. As a result of her work, the community will move forward confidently with drilling a new low-arsenic well next spring. Other communities Erickson has worked with include Cosmos, Climax, Frost, Ulen, and Elizabeth.

The core of Erickson's work resulted from a consortium of funding provided by CURA, the Minnesota Department of Health, the Water Resources Center, the Minnesota Geological Survey, the U.S. Geological Survey, and community partners around the state. Erickson presented her findings at the annual Minnesota Section conference of the American Water Works Association on October 2 in Moorhead, Minnesota. An abstract is available to interested parties via e-mail by contacting Erickson at eric0984@umn.edu. A full report on Erickson's project will appear in a future issue of the *CURA Reporter*.

—Mindy Erickson (Water Resources Science Program) and Melissa Metzler (CURA), contributing writers

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