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CASE STUDY

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ABSTRACT

This case tells the true story of a university employee who suffered from color blindness and who, although he had been an exceptional employee, was terminated when he could not read the color screens displayed by the newly installed PeopleSoft system. Moral outrage on the campus initiated a process that ultimately resulted in Hal Richards being offered another position in which his talents could be used effectively.

Keywords: technological change, PeopleSoft, enterprise systems, Americans with Disability Act, human relations

I. A PERSONAL AND INSTITUTIONAL CHALLENGE[1]

On Thursday March 29, 2001 Hal Richards accepted a new position within The U. as Assistant Director, Community Involvement.

Earlier, Thursday February 15, 2001, he was terminated from a position he had held for over 17 years as Academic Advisor, Liberal Arts for The U. The reason proffered was that he could not adequately see the screens generated by the

[1] This case was written for the purpose of stimulating discussion. It is not intended necessarily to reflect either exemplary or deficient administrative behavior. Rather it is to be used by students and administrators to heighten awareness of the human side of technological and organizational change. Hal Richards is a pseudonym for the real party involved, but the story is primarily his. All other parties are identified only by their organizational role and remain anonymous.

new PeopleSoft system. Hal was a popular figure on campus and many people expressed outrage at his termination.

At the outset it appeared that Hal Richards and his friends were on a collision course with administrative elements of The U.; but after seven weeks of anger, anguish, and anxiety the news that Hal accepted the new position finally restored calm on campus. During this period of rather significant personal and institutional peril – one person called it a "mine field" -- many latent moral resources from various parts of the university were mobilized. Their collective efforts culminated in an acceptable solution to a daunting problem.

THE U.

The U. is a private university with about 7000 students and 2000 faculty and staff. Its undergraduate program heavily emphasizes the liberal and fine arts; although, some undergraduate students and a majority of the graduate students are enrolled in four professional schools. In 2001, following a successful $450 million capital campaign, The U was experiencing budget constrictions due to a variety of factors: deficits in the athletic program, new building construction, debt payment on construction costs that were incurred before fulfillment of campaign promises, cost overruns attributed to the installation of PeopleSoft, and actions taken to keep The U. competitive with its benchmark universities. (Appendix I is an abbreviated organizational chart for The U.)

HAL RICHARDS

Born on July 2, 1950 Hal learned about human rights early in life. While in high school he spent a summer in Santiago Chile where as an exchange student he witnessed oppression first hand. Subsequently, Augusto Pinochet's security forces killed three members of his host family. Hal enrolled in 1967 at A University in Washington D.C. to study history, focusing on the Southern United States. He spent his second collegiate year at the Sorbonne in Paris. During a

trip to Prague in January 1969, he was an eyewitness to the self-immolation martyrdom of Jan Palach.

Personal adversity struck him on May 8, 1970 during a period of anti-war protest. A demonstration broke out on his university's campus in response to the slaying of four students at Kent State University in Ohio. Hal was in his dormitory. Hearing the commotion he walked out to see what was going on. Upon arriving at the door he was greeted by an anxious police officer. Seeking to establish order, the officer fired a canister of acid gas just two inches away from Hal's left eye. He was immediately blinded. Due to the turmoil it took over 45 minutes to get him to the hospital for treatment. Consequently, his recovery was only partial. Hal was left with a permanent eye injury that resulted in a substantial deterioration and alteration of his vision: he was profoundly colorblind. His condition, which is severe, is known as achromatopsia and is considered a disability. "I was at the wrong place at the wrong time and literally doing nothing," Hal reflects. "I just turned around and the officer fired." (See Appendix II, Colorblindness and Achromatopisa and Appendix III, Notes on the American's with Disabilities Act)

Hal recounts that when he first sustained his eye injury he was angry and bitter and moody. But a nurse confronted him one day and said "You have no right to lay there and ask why this happened to *me*, if you don't ask the same question when something good happens to you." This jolted him out of his funk. In fact he later saw some advantages in what had happen to him. "I got away lucky . . .I still see. I see the world; life is good," he said. With this positive attitude he began to reconstruct his life.

Hal came to The U. to pursue a graduate degree in 1971. At first he attempted studying law. But, soon his long term interest in the history of the Southern United States was rekindled and he enrolled in master's program in history.

There several senior members of the history department faculty recognized Hal's promise as a scholar. Importantly, they also understood the constraints imposed on him by his visual limitations and were willing to accommodate them. Working at his own pace under their tutelage Hal earned a M.A. in history and with their support and blessings he left for Alpha University to pursue a Ph. D. [2]

After earning a doctorate in southern U.S. history at Alpha University in 1978, Hal accepted a faculty position at Tau University . From there it was on to Mu University where he also wrote scripts for Public Television and, then, back to Alpha. In December 1984 he had laser surgery that successfully stabilized his vision although it did not improve it. While he was recovering, Hal visited several former teachers and friends at The U. It was then that he learned of a possible faculty opening at The U. Memories of kindness and academic challenge were lodged indelibly in his mind. As he said later, he "loved" The U. So, Hal was offered and accepted two articulated positions: Adjunct Professor of History and Academic Advisor for Liberal Arts. Due to his visual problems Hal found that he was unable to do the kind of intensive reading that scholarly publishing required. Consequently he did not seek a tenure track position. In his role as an adjunct professor Hal taught courses in U.S. history. In 1992, Hal developed his signature course in human rights. Each subsequent semester he taught "America's Dilemma: The Struggle for Human Rights," a demanding course laden with readings that also required each student to participate in a community service project. Hundreds of students – about 50 a semester -- were influenced by Hal's scholarly insights and moral enthusiasm during the eight years that he offered this and other humans rights courses. Several former students have assumed leadership positions in organizations such as Amnesty International. A popular teacher, Hal earned The U.'s coveted Outstanding Faculty Teacher Award in 1989 and in 2001.

[2] A, T, and M universities are substitute names for the real university involved.

Concern for human rights consumed most of Hal's personal time as well. He was active in a variety of organizations and causes that promoted human rights. (See Appendix IV for a list of organizations Hal was involved in.) His most far-reaching work, however, was in conjunction with Amnesty International. (AI) (See Appendix V for a brief background of AI)

Active in Amnesty since 1981, Hal joined AI's Board of Directors in 1989 and was elected Chair of the Board for 1992-1993. In this and related capacities he was heavily involved in human rights monitoring. (See Appendix VI for a summary of Hal Richard's AI activities.) In 1993 he addressed the Australian Parliament on human rights issues and violations. His work on behalf of Amnesty led to several prestigious awards. In 1996 the The U's home city's Peace and Justice Community made him "Peacemaker of the Year." This was followed in 1997 with the "Grassroots Activism Award" given by the National Coalition to Abolish the Death Penalty Community. And, in 2000 Amnesty International honored Hal bestowing on him the Frederick Douglas Abolitionist Award. The U. added to Hal's list of awards in 1988 with a named award for Outstanding Faculty Contributions for service to the student body and in 1995 he received The U.'s top award for outstanding contributions named after the school's mascot. One colleague reflecting on Hal's role observed, "Hal is the University's conscience."

Drawing on all of these varied experiences Hal was able to make his classes lively and relevant. His background also increased his sensitivity when counseling students. As an academic advisor Hal carried a heavy load. He assisted over 350 advisees a year, helping liberal arts students select and schedule their courses. About 170 of his advisees were first year students to The U.. According to his colleagues, Hal was highly sought after by students for advising.

ACADEMIC ADVISING AT THE U.

Since The U. had been so comforting for him both as a student and as an employee, Hal developed enormous loyalty to it and its people. Academic advising became a cornerstone of his personal identity and he addressed it with enthusiasm as well as with considerable skill.

According to The U.'s organizational structure, an academic advisor in liberal arts reported to the Associate Dean, Student Academic Affairs who reported to the Dean of Liberal Arts who reported to the Provost. The Provost reported to the President who was held accountable by the Board of Trustees. This was the normal chain of command although with respect to special issues the Office of General Counsel, Human Resources, Information Technology Services, and other staff functions might get involved. (See Appendix I, Abbreviated Organizational Chart)

The job description for an academic advisor was rather comprehensive. To help students develop and maintain their academic programs, an advisor was required to perform several tasks:

- keep abreast with changes in academic programs, regulations and procedures;
- maintain accurate and complete documentation on all advisees;
- monitor and evaluate each advisee's academic progress;
- assist students experiencing scholastic and personal difficulties;
- provide special counseling for advisees on probation;
- act as a liaison with teachers, parents and others concerning the advisees' status;
- make referrals when appropriate to other professional support services on campus; and
- coordinate activities with other units on campus such as Office of Resident Life, Admissions, Registrar's Office, Financial Aid, Athletic

Department, Academic Departments, and Deans' offices.

To carry out these tasks, an advisor relies on a variety of student and university records. In the late 1980's, prior to automation, Hal was able to read these records and council students without any problems. Indeed, he carried a rather heavy load with ease. In 1995 he encountered his first problems when an internally developed system – the "Legacy System" – came on line. Due to his vision difficulties Hal could not see the screens well nor could he distinguish figures. The campus' Information Technology Services was informed of the problem and after some exploration was able to change the display screens by applying a new font and providing more contrast. In brief, the solution entailed using a dark background with lighter text and figures. With this solution Hal was able to continue in his work as successfully as before.

In late 1998 The U. was in the process of converting to a PeopleSoft[3] system that included a student administration module. Upon seeing some early screens Hal realized that he would have difficulty reading them. He talked this problem over with the Assistant Director, Academic Advising and she gave him the phone number of the PeopleSoft representative handling The U.'s account. Rick called and left a voice mail message to the effect he was concerned that he would have a serious problem viewing the screens on the impending system. He did not hear back directly from the vendor. Yet, because his earlier issue had been resolved, he was confident that a solution would be found. During the fall of 2000 a training session was held to familiarize employees with the new PeopleSoft advising application. About 5 minutes into the session it became clear to Hal that he would be unable to use this new system. "Stuff just flashed by," he said. "I couldn't even see the icons." This event – recognition of a disability -- set in motion a set of activities – to be described later — during which no adequate solution was found and resulted in Hal's termination.

THE U.'S RESPONSE TO THE AMERICANS WITH DISABILITIES ACT

In February 1992 an Associate University Counsel prepared a briefing document for the President on the Americans with Disabilities Act (ADA). This document was updated a year later. The Associate Counsel's brief argued that The U. with its multi-national student population of over 7,000, its more than 2,000 employees, and its prominence in America's educational system, was subject to Title I of the ADA and, therefore, subject to its provisions. Subsequently this document served as a backdrop for all administrative decisions that were made affecting people and facilities at The U. (See Appendix III, Notes on the Americans with Disabilities Act.)

A year or so after the passage of ADA, The U. established the President's Advisory Committee on the Needs of Persons with Disabilities. This committee provided advice and recommendations to the President on matters affecting The U.'s facilities, programs, and personnel, including students and faculty. In 1994 Hal was asked to join the Committee. He served as its Chair from 1996 to 2001. Among the projects he spearheaded was the publishing of campus maps and signage that addressed the needs of those who were color blind. He saw his role as reminding members that "All people don't see the world the same way. Some see differently." Hal's last meeting with the Committee occurred the day after he was terminated.

THE U'S ADVENTURE WITH PEOPLESOFT

The U. purchased PeopleSoft at an estimated $1 million discount in 1996 and began operating Version 6.0 in the fall of 1997. (Appendix VII, An Overview of PeopleSoft, provides background about the company, its philosophy and industry and its approach to the university market.) An Associate Provost said at the time

[3] PeopleSoft is the real name of the vendor and software system used. See Appendix G: An

that the legacy mainframe operations were out of date and furthermore were not Year 2000 (Y2K) compliant. PeopleSoft was heralded as the solution to these problems. Three separate applications were originally purchased: Financial Records, Human Resources, and Student Administration. In fact, The U. became a "beta test site" along with five other universities. This status meant that The U. would be debugging somewhat untested software and experimenting with changes in work processes and procedures until a satisfactory system – software and organizational policies and procedures – could be co-developed.

In the September 24, 1999 *The Chronicle of Higher Education* reporter Florence Olsen explained the philosophy:

"The magnitude of the problems that institutions face in installing systems on so large a scale is matched, if not exceeded, by the task of developing them.

"That effort requires an unusual degree of collaboration between the developer of the application and experienced employees at the universities where it will be put into use. Through several kinds of advisory boards, PeopleSoft gets valuable advice from provosts, financial officers, and other university administrators.

"University representatives also channel suggestions to PeopleSoft through the collaborative-development or "charter" programs, which bring together prospective users to develop products."

In accordance with this philosophy some members of The U.'s staff became consultants to PeopleSoft, including the Associate Dean of Student Academic Affairs to whom Hal reported.

The U.'s student run Campus Newspaper reported on October 22, 1997 that it was anticipated that the entire PeopleSoft system would be operational and Y2K compliant by April, 1999. As it turned out that due date was not met. Indeed, the

next several years would prove to be quite rocky for The U.'s administrators and for its students, staff, and faculty.

Initial development was focused on the admissions and financial aid modules. Experience with these modules would prove to be a harbinger of the events that affected the student advising application and Hal Richards.

During the fall of 1998 The U.'s student government identified three priority issues: parking, tenure, and PeopleSoft. Several "town meetings" were held at which student's voiced their concerns. Encouragement returned in January, 1999. An editorial in the Campus Newspaper touted the success of the town meetings. "The PeopleSoft system was explained, and the mystery behind the problems [The U.] experienced with it were clarified."

In the spring of 1999 The U.'s Cashier announced that the Student Financial Services module would be implemented around the end of October, 1999. This system was crucial system because students were required to complete their financial aid arrangements and tuition payments before they could enroll in classes or matriculate into the university. At the time, about 75% of the students received some type of financial aid. The new system would replace an antiquated one called FAMS that required constant upgrading. For example, if a student qualified for several sources of aid – say, a university scholarship, a loan, a university grant, work study, a state grant, or a federal grant – under FAMS each of these awards had to be entered and processed individually. The PeopleSoft system promised to automatically package all of these sources and integrate them with fees and tuition billing, collections, and refunds.

To make effective use of the PeopleSoft system – i.e. fill the gaps between what The U's operations required and what the PeopleSoft system provided – The U. ultimately had to re-engineer its operations. As a result, the registrar's office, financial aid, admissions, and the cashier's office were merged to form a new

entity called Enrollment Services Department. This move was deemed necessary to insure that the people side of the process dovetailed with the technological. Nevertheless, significant delays were experienced in getting financial aid information to students.

In the fall of 1999 a town meeting was held on campus to air PeopleSoft issues. A student commentator in the Campus Newspaper stated that he had experienced problems with his own financial aid package – he turned his form in early in February and did not receive his award letter until a month later than a friend at another university nearby who submitted his in April. He observed: "PeopleSoft does not work as it should at the moment. This is not a controversial statement." He went on to exclaim that it was "ludicrous" to put people in "new jobs with new chains of command and at the same time making them learn new software."

A parent was not so sanguine. On hearing that PeopleSoft was blamed for the financial aid problems that "plagued students" he wrote to the Campus Newspaper: "Sorry to pop your bubble, but people still make a first-class institution, not software. The difficulties and frustrations my matriculating senior faced with registration had absolutely nothing to do with PeopleSoft, but rather with the callous and arrogant attitude that prevails in your new office of Customer Relations (read Enrollment Services)."

The difficulties experienced with the financial aid package made The U.'s administrators cautious about moving ahead too quickly with further implementations of PeopleSoft. The impeding Y2K problem was a factor. On October 20, 1999 the university announced that student registration that was originally scheduled to begin on October 25 would not begin until November 1. "Due to unexpected delays in the implementation process of PeopleSoft's Student Administration Software, " the release said, The U. "had to re-code the old administrative system to be ready for registration and the year 2000." A

Campus Newspaper editorial lamented, “Yes, that nasty program is rearing its ugly head once again. The same program that created problems in financial aid. The same program that caused problems with billing. The same program that confused students throughout the summer about whether they were registered. Like some monster from a bad horror film sequel, its back, and this time it wants revenge." The editorial also raised serious questions about the cost overruns for PeopleSoft effort – now in the millions – and its lack of tangible results.

The U. was not alone in experiencing problems with PeopleSoft. In August 1999 PeopleSoft’s founder and chief executive officer, David A. Duffield, formally apologized to a crowd of 14,000 at a user’s conference held in New Orleans. Representatives from over 400 universities were in attendance. According to *The Chronicle of Higher Education* (September 24, 1999) Duffield informed his audience that “measures were being taken ‘to restore your confidence in PeopleSoft.” Acknowledging that he did not have the skills to manage the day-to-day activities of a billion-dollar company, he introduced PeopleSoft’s new president and chief operating officer, Graig Conway.

Program shortfalls and cost overruns dominated discussion at the conference. Users from Cleveland State reported that financial aid was delayed and incorrect bills went out. The University of Wisconsin at Madison couldn’t print out its grades the previous spring semester. Officials from Ohio State University admitted that they had underestimated the size and difficulty of installing PeopleSoft’s human resources and payroll systems. Consequently, OSU would be spending $30 million more than it originally intended. This would bring OSU’s entire five-year cost in excess of $84 million. Independent auditors had been called in at Boise State to investigate cost overruns. Cleveland State estimated that it would spend $7 million more than originally planned. Robert B. Kvavik, provost chief of staff at the University of Minnesota echoed OSU’s experience. His institution’s initial costs for PeopleSoft were likely to exceed $53 million, $10.3 more than provided for in the original budget.

The PeopleSoft implementation was taking the same toll on The U. In the spring of 2001, after all costs were taken into account, the PeopleSoft implementation had cost The U. three times as much as expexted.

To accommodate the approximately 60 people (about 30 The U employees, 30 consultants) working on the project, The U. reallocated three meeting rooms in the former Student Union to be used as makeshift offices and testing sites. From this location any difficulties The U. experienced with PeopleSoft software were communicated to the company's home office. Then, the fix or "patch" was created and posted on the Internet from which it could be downloaded. Periodically, programmers at PeopleSoft would collect together the errors and bugs identified by The U. and other universities and release a new version. Version 6.0 was replaced by Version 7.0, 7.5 and so on. Each time a new version was received on campus additional "in-course" corrections needed to be made.

In the fall of 1999 The U.'s stated goal was to conduct spring 2000 student registration on the completed Student Administration System. Thus, implementation would be 18 months later than originally planned.

During the fall semester 1999, however, things did not improve materially. At semester end, a board comprised of student leaders gave PeopleSoft an "F." "First, it was problems with people's records disappearing," the Campus Newspaper reported. "Then, it was problems with billing people on time. Then, it was problems with getting student's financial aid together. What's next, losing people's registration?"

At their February 29, 2000 meeting the Board of Trustees raised tuition by 6%. Traditionally tuition increases had not exceeded 5%. The U.'s president pointed to new construction on campus, Y2K compatibility, and PeopleSoft as

explanatory factors. Yet, he was optimistic. PeopleSoft is “the only system fully developed for a university’s needs,” he said. It “brings together a number of databases we use.”

All of these issues increased The U.’s resolve to achieve its goal of a spring 2000 full implementation of the Student Administration System. Later a university administrator speculated that in the maelstrom that engulfed PeopleSoft, it was likely that Hal Richards’s individual problem didn’t initially get the imaginative attention it might have otherwise received.

At the outset of the fall 2000 semester, t was announced that as of Wednesday October 4 all old Legacy systems would be shut down and the Information Technology Services (ITS) would begin running the Student Administration System on PeopleSoft. Within two weeks of this cut-over date faculty would be able to use the system to report mid-term grades and students would be able to view their registration appointment times via Internet access. The U.’s Registrar expressed “excitement” over this accomplishment. The campus PeopleSoft project manager acknowledged that the changeover would require more training and would initially be slower as people learned to use the system. And, he sounded a mild note of caution. “Right now, its difficult to tell how this will all play out.” “Until now, it has been smooth sailing,” he said. “But Monday [October 16, 2000] will be a tell-tale day.”

The new system was used to register students for spring 2001 courses. From a student perspective, the registration process was nearly the same as in previous semesters. Although a new add/drop form was introduced, it was expected that the problems created by its use would be minor. A new Course Request form, however, was also instituted. One academic advisor for liberal arts anticipated that students would have more difficulty with this Course Request form, “due to the randomly assigned PeopleSoft number for the course.” Heretofore class numbers had not been used. The Registrar explained: “The new system is built

around the class number. Every section that is set up has a unique class number: it helps manage data better, and helps us tie things together better." With respect to add/drop he continued, "we are on the Honors system, and students will still need to be advised before dropping a course. We will let them do their own transactions [on the Internet], understanding that they have been advised [to do so.] We will take action when we find out a student has [added or dropped a class] without advising.

Due to these changes, in the short run, at least, the new Student Administration System would put increased pressure on the academic advising staff. They could expect to deal with more confused students. This situation meant that it was even more important to find a solution to the problems posed by Hal Richards's inability to read the screens.

PRIOR TO FEBRUARY 15, 2001: SEARCH FOR TECHNOLOGICAL ALTERNATIVES

During the summer of 2000, preparations were made to bring more PeopleSoft and related systems on line, including the student administration suite of modules. In June Information Technology Services (ITS) worked with Hal to move his email service from the campus' old system PINE to Microsoft's Outlook Exchange. Hal experienced considerable difficulty reading the GUI (Graphical User Interface) interfaces used by Outlook. ITS worked with Hal to try to configure his computer with a color scheme and font that would enable him to use Outlook. They were unable to. Consequently, he reverted to PINE, a text based system that does not rely on icons. But this was a significant event. It alerted one of the trainers preparing people for the PeopleSoft system and she informed ITS that Hal would very likely experience difficulty reading the screens he would need for advising.

She was right. In September 2000 Hal attended the aforementioned PeopleSoft training session. About five minutes into it, he announced that he could not read the screens. Hal was dismissed since his participation was seemingly futile. As he recounted, this event was the beginning of what he termed an "exclusionary process." The U.'s plan called for retiring the Legacy System in November. After that PeopleSoft would be the only system that could be used to enroll students for the spring semester of 2001 This impending deadline unleashed a flurry of efforts to find solutions to Hal's problem, some of which he participated in eagerly and cooperatively, many of which he was unaware.

A former academic advisor who at the time was working with students with disabilities sent the following request out on a listserve dealing with disabilities and higher education:

"A staff person here asked me if I had any suggestions on how to adjust the contrast on his computer when he uses PeopleSoft. He has a rare, visual condition called achromatopsia, and agnosia, and it makes it hard for him to read a computer screen unless there's high contrast. He sees only white, black, and brown. (White on royal blue seems to work really well.) Do any of you have any suggestions on how he can adjust the color contrast on his computer screen for use with PeopleSoft?"

She received three responses. None, however, proved to contain information that would solve the problem.

The Dean of Liberal Arts contacted ITS to find out if they were making progress on Hal's problem. In addition to continuing to try numerous Microsoft Windows Accessibility features, members of ITS sought other technological alternatives, including monochrome monitors and special software applications. They even tried to reverse engineer a video monitor to determine whether its structure would provide any clues. Still no solution emerged.

An ITS staff member was given the task of searching for Web sites that might provide useful information. About ten sites were found that had information on making MS Windows more usable for achromats. All of these suggestions had previously been tried. Inquiries were made to the Lighthouse for the Blind. One member even consulted his own ophthalmologist. Members of User Services developed a Macro search for alternatives on the Web. All of these avenues proved to be dead ends.

On September 21, 2000 ITS contacted an organization called The Center for Computer Assistance to the Disabled. For a modest fee, about $75 per application, the CCAD would conduct a trial and error process taking anywhere from one to three hours to determine which applications Hal could read. The CCAD would not guarantee that it would be able to find a solution. But Hal was now heavily engrossed in advising students and he was unable to attend.

About this time the Assistant Director of Academic Advising attended a PeopleSoft conference in Orlando, Florida. In casual conversation she explained the problem The U. was experiencing with Hal and was told that it shouldn't be a problem. In fact, she understood the PeopleSoft representive to say that the solution was likely straightforward. Upon her return to The U., however, no solution was forthcoming. Overall she felt that everybody was discounting the severity of the problem.

Perhaps in an unconnected event, about this time PeopleSoft assigned a developer to work with The U. on the screen display problem as part of their overall usability project. This developer's work took place behind the scenes. His work was reported to the person in charge of PeopleSoft Implementation, who provided it to ITS, who, in turn, when they deemed it appropriate, interacted

with Hal. Apparently this developer surfaced a few possibilities; but none provided to be an acceptable solution. PeopleSoft also had formed a usability team to study human-computer interfaces which had an ADA compliance component.

On September 25, an Associate Dean of Liberal Arts met with Hal to discuss the status on finding a solution. The next day members of ITS met with Hal to refine their knowledge of what exactly what he could see and not see on the PeopleSoft screens. On the following day, an Associate Dean and members of ITS scheduled a demonstration for Hal of a software package called "Zoom Technology." This package had the ability to magnify a screen's contents up to 300 times its normal size. During this demonstration a variety of PeopleSoft screens were Zoomed. Even with the text magnification, Hal could not see the text unless it was bold or very dark. This experiment also uncovered another problem. When the screen was magnified the amount of text it contained was reduced. This meant that Hal would not be able to grasp all of the relevant information in one glance and would be forced to scroll back and forth to complete an advising transaction. In all Hal may have to access 20 screens to obtain the same information other users received on one. This, of course, resulted in reduced efficiency, something Hal, personally, would not tolerate. "They may think that is a reasonable attempt to help me," Hal remonstrated, "but that is a normal-sighted committee trying to tell me that is reasonable."

A 21-inch monitor was purchased for Hal and more experimentation was conducted on contrast. These efforts, too, were in vain.

A member of ITS discovered two programs – Window Blinds and Desktop Themes – that created a software "skin" around Microsoft Windows. The skin was applied to the Graphical User Interface and could be filtered down through

all of the windows within a GUI. In trying these applications, Hal was able to see the screens for Microsoft Outlook and other Windows Applications but he still could not see the PeopleSoft screens. Many of the PeopleSoft screens displayed text that was grayed out, not bold and too close together for Hal to distinguish. Moreover, he was unable to see the icons.

On October 4, members of ITS requested the campus PeopleSoft representative to help find someone to "re-write" the code for the screens that Hal could not see. They believed that if the font could be made bolder and the type style changed to have straighter lines that, together with the adjustments they already knew how to do, Hal could see the screens. This request apparently did not generate results. PeopleSoft did not rewrite the code.

One of Hal's colleagues was told about this time that the kernel of the PeopleSoft system – its central programming core -- was "hard-coded." Adjustments could be made rather easily to routines located outside the kernel but to invade the kernel would be a major undertaking. The color coding solutions Hal needed apparently lie within the kernel. It might take $100,000 or more to accommodate Hal's needs.

A meeting was held with members of ITS, Academic Advising, and the campus PeopleSoft project leader on October 18, 2000. At this meeting, a definitive list of the data items Hal had to be able to see in order to advise and register each student was presented along with requirements for improving the visibility of each item. The items included: Class Search, Enrollment Request, Enrollment Listing, Enrollment Appointment, Term Statistics, Cumulative Statistics, and Student Grade. Overall, it was concluded that the type fonts for each of these items needed to be 14 pt or larger and bold.

The same day the Registrar submitted requests to a broad set of listservs seeking suggestions. Two promising leads were secured -- JAWS (Job Access with Speech) and Supernova. These combined magnification, speech and Braille technologies. They used an integrated voice synthesizer activated by a sound card in the PC. Accessing these programs, however, required that a "description tag" or "dtag" be placed in the text fields. PeopleSoft did not provide for these tags in the version installed at The U.

The November 1 advising date was approaching and no solution had been found for Hal. A stop gap solution was devised by Academic Advising. Hal would still do the interpersonal part of the advising using an alternative system to retrieve each student's data. Unfortunately, because he could not submit their class schedules directly to PeopleSoft, Hal's advisees had to walk across campus to the Administration Building to finalize their enrollment. This solution not only inconvenienced his students, forcing them to stand in "yet another line;" but, it sometimes resulted in a delay that kept them from getting into popular classes before they were closed. For the first time in 17 years some of Hal's advisees complained.

A case manager in The U's Human Resources Department became aware of Hal's situation. He met with members of ITS and Academic Advising on October 23 to review the case and to make recommendations to the PeopleSoft Steering Committee. The Steering Committee approved assigning a programmer to what was now unofficially dubbed "Project Hal." This was a difficult decision. The programming team had several other pressing commitments. One high priority was to complete the fourth quarter reporting program. Nevertheless, the programmer spent between 60 and 70 hours working on the PeopleSoft panels and trying to implement the findings of the previous testing sessions. The results were demonstrated to Hal on January 29, 2001. He could see better than on the

previous trials – it was estimated that 85% to 90% of the problem was solved, but he still could not see some vital information.

This was ITS's last official meeting with Hal. Two days latter it was decided that ITS, although it would continue to seek technological solutions, would no longer work with Hal directly. From here on out Human Resources, Academic Advising, and the office of the Dean of Liberal Arts would develop the next steps. During the next two months ITS did indeed explore several promising options. One, a newly released product called "Magic, with speech," read data headings and field names and converted them to audible expressions. On March 13, 2001 a demonstration was arranged for him. This solution was promising but the vocal parts and the sequence of delivery resulted in a flow of information that was strange and unusual for Hal. It was clear that he would have to undergo substantial, special training if he was to use PeopleSoft with "Magic" successfully.

In early February a final meeting was held. Present were the case manager from Human Resources, the Associate Dean of Student Academic Affairs and one of his associates, an Associate Dean of Liberal Arts and the Director of ITS and one of his associates. At this meeting, it was agreed that all possibilities had been exhausted.

On February 15 Hal was summonsed to the Associate Dean of Student Academic Affairs office and was told that due to his visual disability he wasn't able "to do full functionality that was absolutely essential in the advising role." His advisees should not be disadvantaged again. Hal recalls, he was "terminated" and left with the impression that he would have to find another assignment within the university. However, he never received a formal letter of termination.

SEVEN WEEKS OF INSTITUTIONAL TRIBULATION

Week One

Hal was dumbfounded. A person everybody experienced as gentle, kind and happy was, by his own admission, very angry. Later one colleague described him as “paralyzed;” another as being “an outcast.” But, he kept his anger inside himself, letting it fester. He did not seek help; nor did he lash out. No recriminations. No protests. No political outcry. No shouting “foul;” although, he felt he had been fouled.

He knew that he had participated in several unsuccessful demonstrations using various technologies; but, he had tacitly assumed that everything would be O.K. He had been loyal to The U. for over 17 years. He “loved” it. And, The U. had heretofore reciprocated. Things had always worked out in the past. So, how could this happen now? He felt betrayed.

Hal appeared to be in a state of Freudian denial. He had received warning signs yet he did not think it could ever turn out this badly for him. In his recollections, during the weeks leading up to his termination he had never had a meaningful discussion with his superiors regarding the consequences of his inability to read the PeopleSoft screens. Moreover, in his opinion, he had been totally excluded from the administrative decision processes that had so fundamentally affected his career and altered his life. Hal had read Kafka; subliminally recalling how a person could be rendered lonely and frustrated and even feel oppressive guilt when he was threatened by anonymous forces acting beyond his comprehension or control. Now he was living it. Human dignity, something he had spent most of his life securing for others, daily was being wrung from him..

Hal recalled that he was told that his annual contract that was to end on May 31, 2001 would be honored. But it would not be renewed. After that he would be out. He was 51 years old and had devoted the majority of his adult life to The U.

Now he would have to start over again. And, he didn't have a clue as to where to turn.

During the first week of tribulations Hal was haunted by these thoughts. He slipped into a vortex of nothingness. He did not talk to anyone on campus. The administration did not officially inform people who knew or worked with Hal about the decision that had been made. Consequently, his colleagues were slow to learn about it; although a few other academic advisors told friends. Hal, meanwhile, detached himself from his department and stopped going to staff meetings. Nothing about his plight was communicated to his student advisees.

Academic institutions, however, are cosmopolitan places. People on various campuses talk to others for a variety of reasons. The one telephone call Hal made the day he was terminated was to a former colleague who was at another university. She provided some solace and shared in his outrage. Latter in the day she phoned the Associate Provost for Faculty and Administrative Affairs–a friend -- and shared her concern. The Associate Provost acknowledged that this was the first she too had heard of the situation. The former colleague commented that the administrative system in student advising, that historically had been so carefully monitored and efficient, was just "too" efficient this time. Hal was "alone" she observed sadly; and, he didn't know where to go.

The next day the Associate Provost place several calls and learned that the Dean of Liberal Arts and the Associate Dean were already trying to work something out. Some funds had been found in a few budget crannies and calls had been placed to people on campus who might know of available positions. Already the Dean had scraped together enough funds to keep Hal employed until December 2001.

The Associate Provost kept in contact with the Dean, the Vice President for Student Affairs, and the Vice President of Finance during the week and became

hopeful that a solution could found. On February 23 she told the Vice President of Finance that it was important that a position be found. The Associate Provost continued to track and guide the progress on Hal's case until it was completed.

Academic institutions are also awash with scuttlebutt. Another Vice President of The U. learned of Hal's situation from a colleague at another university. He mentioned the situation at the President's Executive Council meeting. The issue was not discussed in detail but it was decided that The U.'s regular problem-solving process would resolve it satisfactorily. Toward the end of the week a few of Hal's friends and others on campus were hearing rumors and asking around to confirm them.

Week Two

At the outset of the second week Hal met with the case manager from Human Resources. He would meet with this person at least once a week until he accepted the new position on March 29, 2001

The case manager's initial approach with Hal was candid. He told him to get his resume in order and to start making contacts with other units on campus to try to find another position. (Hal was not psychologically ready to hear this.) They discussed the characteristics he should look for in a new job: low tech, student oriented, a focus on learning and teaching. When asked what he was looking for in a new job Hal retorted "I don't want to be abused by technology." The issue of severance was raised but no conclusions were reached. Although not fully discussed at this meeting, pay and benefits would continue to be an issue for Hal. His very modest income level resulted from salaries cobbled together from his advising and adjunct teaching. This made him a full time employee and qualified him for full benefits from The U. He lived a rather frugal life, spending most of his personal time on human rights causes. So, he had been able to live

a life that was satisfactory and fulfilling for him. A major loss in income, however, would plunge him below the poverty level.

The HR case manager also told Hal that he would begin in earnest to find a solution. And he did. Indeed, many people on campus believed that the case manager was a primary moving force for reaching an organizational solution to Hal's problem.

Later the case manager explained the approach used by Human Resources at The U. for situations like this: "The primary role of HR is to gather information, synthesize trends, and communicate relevant information to all affected parties." "We facilitate solutions," he continued, "and operate with a system of checks and balances." Concerns from HR, legal affairs, affirmative action are melded together with demands emerging from other parts of campus. The long-term viability of the institution had to be balanced with the rights and needs of the individual. This is what justice required. Justice also required due diligence in finding a solution. He believed that with respect to finding a technological solution this requirement had been met by the U. Other avenues had to be explored. His role now was to provide counseling and facilitate processes throughout the campus that were pointed to a solution. This role would require coping with issues around which there were different beliefs, emotions and values and drawing on the expertise and resources from a variety of sources.

The Associate University Counsel, who handled ADA issues, was informed of the situation for the first time. She met with Hal. Some legal ramifications were discussed and she sympathetically explored options with him. She also began on inquiry to find out whether ADA requirements had been met.

The Vice President of Student Affairs offered Hal a position working with students in residence halls and also running a segment of the service learning program.

This job necessitated Hal's moving into student housing. He turned it down because it involved a major life style change, his income would be lower and he would lose the ability to teach his signature course unless he taught at night. The Director of Continuing Education offered to increase his teaching hours but could offer no full-time position since he did not have a line. This solution, too, did not satisfy Hal's needs. Furthermore, it necessitated a drop in income.

Week Three

Word of Hal's predicament ricocheted around campus. Several long-standing colleagues in the History Department learned about it and reacted with disbelief and dismay. Affronted, they began to activate their social networks and press for a resolution. One wrote a rather long letter to the Dean of Liberal Arts recounting the considerable value Hal brought to The U.

A student reporter for the Campus Newspaper sniffed out the story. Her instincts told her that this might be a really "big" story. She, too, began calling people.

Week Four

One of the parties the reporter called early in her investigation was the campus Chaplain who, about the same time, learned of Hal's plight from the History colleague who had written to the Dean. The Chaplain too was incredulous. Viewing the case in the context of his professional calling, he said he worried for Hal and was concerned for The U.

The Chaplain sensed immediately the profound grief, the shock, the sense of alienation that beset Hal. His first impulse, he recalls, was to get Hal through his personal crisis and restore his confidence. He also viewed this situation as a

moral challenge for The U. and worked his social network to push towards an ethical solution. If Hal's trust in the institution was shattered, the Chaplain opined, so too would others'. The whole institution was at risk. He phoned Hal and walked over to his office to talk with him.

For the next several weeks, Hal's case was the primary focus of The Chaplain's work. He met with Hal on a daily basis for from 30 minutes to an hour until the ordeal was finished. Each session began with a review of Hal's progress. In the Amnesty International model, the victim is generally powerless. The Chaplain surmised that this subconsciously might be the way Hal was viewing his predicament. So, he reminded Hal that as a human being he, too, had power. Importantly, he reminded Hal of the breadth of support he had on campus. Hal, was encouraged to "re-envision" himself, and construct a new, satisfying identify.

The Chaplain operated in pastoral mode. In addition to his ceremonial role on campus the Chaplain was a resource for those afflicted by tragedy, uncertainty, or grief. He envisioned his role as an ombudsman, a message carrier, and a broker who brought a spiritual tone to campus. In the end, Hal credited the Chaplain with helping him through his personal trauma and being proactive on his behalf.

The Chaplain and several others were concerned that the reporter for the Campus Newspaper would break the story and, hence, would burst the very fragile solution space that was beginning to take shape. The Director of Public Relations was consulted. She arranged for a staff member to meet with the reporter in an effort to buy time and to insure her that a solution was in the making. Others followed suit. The PR Director was concerned that "one person in an isolated position" might take actions that could "cause a result that reflected negatively on the entire institution." The reporter finally agreed to sit on the story

for awhile. On April 3, 2001, five days after Hal accepted the new position, her version of the events – somewhat in exposé style -- was run with a banner headline on page one of the Campus Newspaper: "Campus sees red over professor's dismissal."

Week Five

Week five has been called the "week of discovery." It was a time during which people, primarily at the HR case manager's behest, came together in attempts to forge a solution. It became clear that given The U.'s organizational structure – a division of labor that fragmented responsibilities -- a joint, cooperative solution was necessary. (See Appendix I.)

Week Six

On March 19 the Director of Human Resources and the case manager conducted a problem solving and information sharing meeting attended by the Associate Provost for Faculty and Administrative Affairs, Associate Dean of Liberal Arts, the Chaplain, and a colleague from the History Department. It was agreed that adequate funding must be found for a new position for Hal and that several incipient possibilities would be explored actively until a satisfactory solution was found.

The next day the University Counsel hosted a meeting attended by his Associate Counsel, the Associate Provost, the HR case manager, and the Director of Affirmative Action. Results of the ITS tests were reviewed as well as other actions that had been taken by members of the campus community.[4] It was

[4] It is not known whether or not this information was presented at this crucial meeting; but about this time PeopoleSoft announced that it would be releasing Version 8.0 in the fourth quarter of 2001. The usability team contended that the new version would accommodate color blindness,

concluded that The U. had complied with its own policies, the laws of the State and U.S. laws. A reasonable accommodation had been made.

Later a colleague referred to the first meeting as a "solutions" meeting and the second as an "institutional protection" meeting.

Week Seven

The Coordinator of Volunteer Services on campus had had a position approved sometime earlier but she had been unable to fill it due to budget limitations. She was among those who had taken up Hal's cause a few weeks earlier. After broad consultation, it was determined that Hal was perfectly suited for the job. With the help of the Vice President of Finance, the necessary funds were pooled together from various sources so the position could be sustained, and it was offered Hal.

On March 29, 2001 Hal accepted his new job as Assistant Director for Community Involvement and Service learning. He began on July 1 without having to take any decrease in pay. Hal reported that he was very happy that his ordeal was over and that he was especially excited to undertake his new responsibilities, although he still harbored reservations about the prolonged process he had just experienced.

EPILOGUE

A sense of relief and pride permeated the campus. "I am thrilled. I am honored," exclaimed the Coordinator of Volunteer Services, who served as Hal's new boss.

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presumably including the rare type that afflicted Hal. This capability, however, had not been demonstrated.

"I am very optimistic about what this program will be able to achieve with Hal Richards." People throughout the campus echoed her sentiment.

The Chaplain cited a blossoming of teamwork and "moral imagination" on campus as the underlying source of the solution. He observed that several deep-seated human tendencies -- to respect and care for others, to have sympathy for their plight, and to reach beyond the constraints of the Weberian "iron cage" in which organizationally they function on a day-to-day basis – bubbled up. Frozen silos of bureaucratic responsibility thawed long enough to enlarge the solution space so that a creative solution could be found.

The Human Resources case manager, too, complimented the various parties on campus who had come together – overcoming bureaucratic limitations – to create an institutional solution. He, the Associate Provost for Faculty and Administrative Affairs, the Chaplain, and a couple of colleagues in the History Department are generally credited for spearheading the solution process; but, during these crucial seven weeks many people on campus also contributed.

The Chaplain opined, "I think this is a very important moment in the lives of a lot of people in this campus community. Because of Hal's contributions, because of his impact as a teacher, as one who professes in the fullest meaning of that term that the academy has developed historically, and in terms of what we say with pride, Hal Richards is one that this university can't do without. What the university has done is recognize that."

A colleague in the History Department summed it up succinctly but with a critical eye," The beginning [of the ordeal] showed our university in its worst light. In the end we did something for which we *all* can be justifiably proud."

Pride prevailed but a gnawing question remained. What lessons can be learned from the case of Hal Richards?

ACKNOWLEDGEMENTS

The author thanks Lorren Timberman for her help in research and to the many friends of “Hal” who were generous yet anonymous in sharing their experiences and insights.

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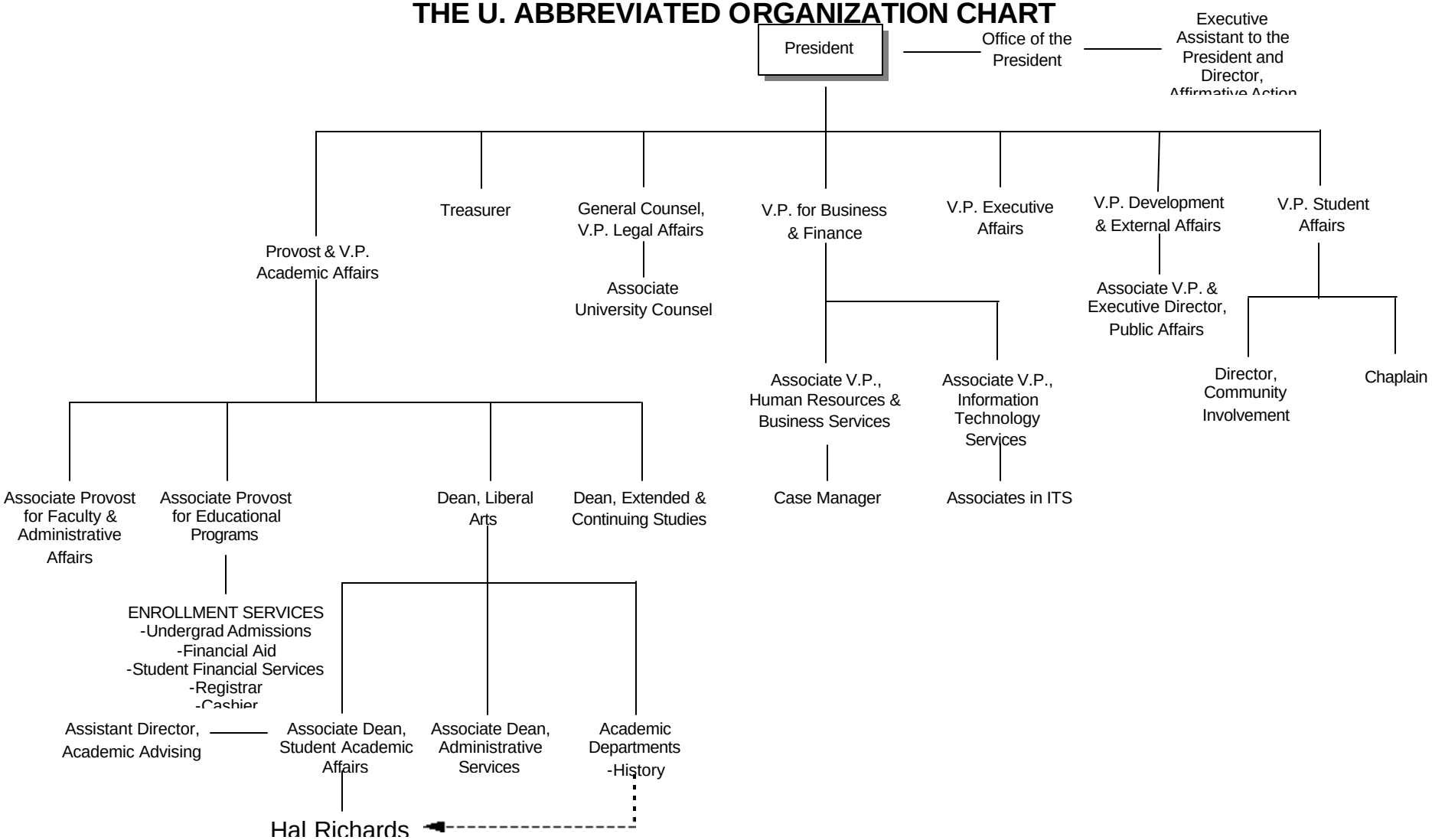
APPENDIX I
THE U. ABBREVIATED ORGANIZATION CHART



APPENDIX II

COLORBLINDNESS AND ACHROMATOPSIA

Color blindness is defined as a defect of vision affecting one's ability to distinguish colors. It is usually caused by a malfunction of the retina, which converts light energy into electrical energy that is, in turn, transmitted to the brain. Light conversion is accomplished by two types of photoreceptor cells in the retina – rods and cones. A rod is a rod-shaped cell in the retina that responds to dim light. A cone is a short sensory organ in the retina that enables color vision. Most color blindness is inherited. Hal's, however, was induced by the acid gas that penetrated into his eyeballs and damaged the underlying cones. Apparently, some parts of his central nervous system that control vision were also affected. Consequently, his impairment was more severe than normal. In the population as a whole, about 8 in 100 men and 1 in 200 women experience some difficulty with color perception. Achromatopsia is a rare disorder that afflicts only about 1 in 33,000 people.

Achromatopsia results in the afflicted party's seeing life in monochrome or shades of gray, the clearness of which depends on the intensity of the color and the brightness of the light conditions at the time. This disorder blocks one's ability to see any colors except some blacks and whites and grays. In *Coping with Color Blindness* authors Odeda Rosenthal and Robert H. Phillips explain:

"In this condition, the photoreceptors involved in night vision remain intact, but those for day vision are almost completely absent. [Due to this Hal wears dark glasses to protect his eyes.] People who have achromatopsia, therefore, have dark-adapted vision. The rods, dealing not with colors but with tones of dark and light, become the main source of vision for these people. The number of cones in these peoples' eyes may vary, but they are either not functioning or else are so few in number so that they can hardly be

effective. Why this happens is still not known, but for some it seems that the body is inhibited from generating cone cells."

The authors report further that some afflicted parties are unwilling to accept the fact that they see in only black and white. These people contend that they see colors in their "own way," although it is not clear to others exactly what they mean. Most people with achromatopsia are reluctant to admit it or tell others about it. "They have felt so intimidated for so long that they would rather not hear another negative word." Nevertheless people with this condition can function adequately in many circumstances. Dr. Mary Collins, author of a classic treatise in 1925, believes that these people developed and come to rely on their own unique, though inherently limited, system of color sensation.

APPENDIX III

NOTES ON AMERICANS WITH DISABILITIES ACT

Achromatopsia is a disability. People with physical, sensory or cognitive impairments are classified as disabled according to the Americans with Disabilities Act of 1990 (ADA). In general ADA requires that an institution make a *reasonable accommodation* in the work environment so that a *qualified individual with a disability* can be meaningfully employed unless making the accommodation would place an *undue hardship* on the institution. The key terms in this requirement are defined in the Act:

Disability

"The term *disability* means, with respect to an individual –

(A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; [major life activities include such things as seeing, hearing, speaking, breathing, caring for one's self, performing manual tasks, walking, , learning, and working.]

(B) a record of such an impairment; or

(C) being regarded as having such an impairment."

The goal of the ADA was to protect the employment and accessibility rights of disabled people. The disabled were to be provided with "integrated settings appropriate to their needs" in places where they worked or partook of goods, services, and other benefits of a place of public accommodation. These settings were to be integrated with the usual settings of other, nondisabled persons, allowing the disabled individuals to work and have the same advantages as nondisabled individuals.

Qualified Individual with a Disability

The Act further defined a *qualified individual with a disability* as an individual with a disability "who, with or without reasonable accommodation, can perform the essential functions of the employment position that such individual holds or desires. For the purposes of this title, consideration shall be given to the employer's judgment [in Hal's case The U's officials' judgment] as to what functions of a job are essential, and if an employer has prepared a written description before advertising or interviewing applicants for the job, this description shall be considered evidence of the essential functions of the job."

Reasonable Accommodation

The pivotal term *reasonable accommodation* includes:

(A) "making existing facilities used by employees readily accessible to and usable by individuals with disabilities; and

(B) job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of examinations, training materials or policies, the provision of qualified readers or

interpreters, and other similar accommodations for individuals with disabilities."

[One aspect of the application of reasonable accommodation that was not fully resolved at the time of Hal's case was how much time as well as how much effort an organization had to be made to satisfy the requirement of a reasonable accommodation.]

Undue Hardship

The counterpoise to reasonable accommodation is *undue hardship*. Whereas, employers were required to make efforts to meet a qualified employees' workplace needs, they were not required to do so at all costs. The ADA reads:

(A) "The term "undue hardship" means an action requiring significant difficulty or expense, when considered in light of the factors set forth (in (B) below).

(B) Factors to be considered.—In determining whether an accommodation would impose undue hardship on a covered entity . . . include:

(i) the nature and cost of the accommodation needed under this Act;

(ii) the overall financial resources of the facility or facilities involved in the provision of the reasonable accommodation; the number of persons employed at such facility; the effect on expense and resources, or the impact otherwise of such accommodation upon the operation of the facility;

(iii) the overall financial resources of the covered entity; the overall size of the business of a covered entity with respect to the number of its employees; the number, type, and location of its facilities; and

(iv) the type of operation or operations of the covered entity, including the composition, structure, and functions of the workforce of such entity; the geographic separateness,

administrative, or fiscal relationship of the facility or facilities in question to the covered entity. "

Failure to make reasonable accommodation when undue hardship cannot be proved may constitute *discrimination*. "No covered entity shall discriminate against a qualified individual with a disability," the ADA reads, "because of the disability of such individual in regard to job application procedures, the hiring, advancement, discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment."

An example of the application of the principle of reasonable accommodation is as follows. Suppose an individual owned a one person firm and was seeking one clerk to do filing. A disabled person who required a wheel chair applied for the clerk position. This applicant was unable to reach the top drawer of filing cabinets. In this case it was generally assumed that to force the firm to totally modify the office to conform to this applicant's needs would constitute an undue hardship. Other candidates, consequently, could be considered. If, however, the office employed, say, 3 clerks then it was argued that the jobs should be re-aligned so that the two other nondisabled clerks would do the top drawer filing while the clerk in the wheelchair did the lower drawer or other tasks. This arrangement would be considered a reasonable accommodation and would not place an undue hardship on the firm.

APPENDIX IV

HUMAN RIGHTS ORGANIZATIONS IN WHICH HAL RICHARDS WAS ACTIVE

Among the organizations Hal was active in were:

- National Coalition to Abolish the Death Penalty,
- A state organization Against State Killing,

- Murder Victims Families for Reconciliation,
- Abolitionist Action Committee,
- A state Coalition to Abolish the Death Penalty,
- Citizens United for Alternatives to the Death Penalty, and
- Capital Punishment Investigation and Education Services.

APPENDIX V

AMNESTY INTERNATIONAL (AI)

Founded in 1961 by the London lawyer Peter Benenson, Amnesty International (AI) is a human rights organization whose campaigns led to the release of thousands of "prisoners of conscience." Benenson's key idea was to deluge governments with letters asking for the prisoner's release. In 2001 Amnesty had more than a million members in 150 countries. Nigeria's Olusegun Obasanjo, South Korea's Kim Dae-jung, and Vaclav Havel of the Czech Republic, who all subsequently became democratically elected presidents, once were political detainees adopted by Amnesty. In 1977, the AI was awarded the Nobel Peace Prize.

APPENDIX VI

SUMMARY OF HAL RICHARD'S ACTIVITIES WITH AI

Among Hal's many monitoring activities were visits to

- San El Salvador to inspect two morgues and view remains of victims of death squads;
- Palestine to visit refugee camps in the Gaza Strip and meet with members of Palestinian and Israeli Rights committees;
- McAlester, Oklahoma to inspect the H-unit death row facility;

- Huntsville, Texas on a similar mission; and,
- Dublin, Ireland and Belfast, Northern Ireland to inspect prison conditions.

Hal's monitoring activities were augmented by addresses and presentations in Norway, Sweden, Finland, England, Germany, the Netherlands, Switzerland, Israel, Belgium, Ireland, Austria, and Italy.

APPENDIX VII

AN OVERVIEW OF PEOPLESOFT

PeopleSoft is a software and services company headquartered in Pleasanton, California. In 2000 the company generated revenues of about $1.7 billion with about 8,000 employees and 4,600 customers. The company's primary products are comprehensive software systems that contain application modules that support most of the major functions of an organization. In the industry these systems are called "enterprise systems." Enterprise systems integrated many different business functions into a single system, requiring the organization to purchase just one software system rather than many. All of the business function processing was "pre-programmed," presumably eliminating the need for a large programming staff. A key advantage is an enterprise system's ability to link transactions automatically. That is, an event occurring in one business process would be communicated to all other relevant business processes. This integration obviated the need to enter transactions multiple times, thereby improving efficiency and accuracy.

In the 1990's enterprise systems also were implemented on the more current client-server technology and were capable of using the World Wide Web as an interface. During the late 1970's and early 1980's many organizations, like The U., used large sized computers with a central processing system – referred to as a "mainframe" – which the end users accessed using 'dumb' terminals. Enterprise systems, in contrast, ran on a network of personal computers

supported by a common server. These networks allowed end users to work independently and to share files from various organizational databases. Most worked on a variety of platforms making it possible to use different hardware and software products as well. Consequently, deciding to install an enterprise system also became a means for an organization to move to state-of-the-art technology.

Enterprise systems purportedly had been designed to have various built-in options available for performing each business process. This feature was intended to eliminate the need for organizations to change their structures or work processes. But this was seldom the case. Many of the built-in options were actualized by setting switches on program "panels" – digital tables in which software adjustments could be made. Frequently, an organization's precise requirements could not be met by merely fiddling with the panels. In this case, either special programming was required or the organization had to change its work processes. In any case, it was not unusual for organizations to be forced to change their work processes in order to make effective use of the systems. Virtually every organization that adopted an enterprise system found that it had to hire well-paid consultants to implement the system. Moreover, adopters generally had to devote more internal technical and administrative resources than anticipated to get programs to run satisfactorily. Most organizations also found that they could not convert from the old to the new either quickly or gracefully. Hence, they had to run two systems, side-by-side, much longer than they planned.

The recommended method for PeopleSoft implementation was called "a fit and gap" analysis. An organization's work processes and administrative practices were identified and described and matched with those pre-programmed in the PeopleSoft software. Those that fit could be implemented as is. Where gaps were found, however, sometimes a major effort was required to bridge them. This approach rested on two crucial assumptions:

(1) the organization fully understood the software and what it would do and (2) the organization fully understood its own practices.

Both assumptions frequently proved to be false. Frederick A. Rogers, a senior vice-president and chief financial officer at Cornell University, observed, "the reality is, we don't really understand." For example, after applying a fit and gap analysis Cornell was required to make 30 modifications to its PeopleSoft human resources and payroll software.

In 1994, when PeopleSoft entered the higher education market, the company was corporate America's dominant supplier of human resource systems software. Prominent companies in financial services, consumer products, retail, technology, industrial products, communications and service as well as government agencies were using its products. PeopleSoft tried to replicate its success in the corporate market by turning its attention to the growing industry of higher education. The company began by offering financial management systems. Then it developed a suite of integrated applications for managing human resources, student administration, fund raising and development, and grants.

Due to their need to contain costs, improve service levels, and compete more effectively in an increasingly competitive environment, institutions of higher education were eager to explore these new systems. By mid year 1999, about 420 universities –public and private, large and small – were using some type of PeopleSoft software. Other companies that also addressed the educational market at the time were Oracle, SAP AG, SCT Educational Systems, Datatel Corporation, Baan Company, Kronos, and TimeKeeper.

The PeopleSoft approach was to provide support for all phases of the student lifecycle through a suite of seven articulated applications:

1. *Recruitment* which collected data as recruiters interacted with high school students at events such as college fairs.
2. *Admissions* which collected application, biographic, demographic and address data from students who decided to enroll and made this data available to the appropriate university departments.
3. *Financial Aid* that automatically matched the various sources of financial aid for each student who might qualify with their records and determined eligibility based on pre-established criteria.
4. *Program of Study* which informed academic advisors so that they could set up a plan of study for their students. Features included: customizing academic programs to meet students' needs; identifying and evaluating substitute courses; applying waivers as appropriate; and creating custom plans and requirement overrides. The course catalog feature allowed advisors to define enrollment restrictions and prerequisites, to enroll students automatically from wait lists, and to handle students who pursued multiple academic (i.e., dual) degrees.
5. *Progress* which ran "what if" analyses for academic advisors to determine a student's progress toward earning a degree. This module could be used to set up a degree system to match an individual student's needs, analyze an individual's completed coursework, identify outstanding requirements, and track degree requirements and changes for all students.
6. *Graduation* which allowed advisors or students to perform online comparisons of their current academic records with the requirements for their degrees and to ensure successful and timely course completion.
7. *Alumni Support* which provided tracking and management tools to promote an alumus's life long connection with the institution.

APPENDIX H

TIMELINE OF SOME SIGNIFICANT EVENTS

DATE		EVENT
1950	July 2	Hal Richards is born
1970	May 8	Hal is blinded by acid gas resulting in a disability -- a severe form of colorblindness called achromatopsia.
1971	Spring	Hal receives B.A. from Alpha University
1974	Spring	Hal receives M.A. from The U.
1978	Spring	Hal receives Ph. D. from Beta University.
1985	Fall	Hal becomes an Academic Advisor for Liberal Arts and Adjunct Professor of History at The U.
1990		The Americans with Disabilities Act (ADA) is passed by the U.S. Congress.
1992	Feb.	Associate University Counsel at The U. prepares a briefing on ADA.
1994		PeopleSoft enters the higher education market
1994		Hal joins The U.'s President's Advisory Committee on the Needs of Persons with Disabilities. Serves as chair from 1996 to 2001.
1995		Hal encounters first difficulties reading screens on the Legacy System but the problem is solved.
1996		The U. purchases PeopleSoft
1998	Fall	Hal notifies PeopleSoft that he cannot read screens.
1999	Aug.	The U's Board of Trustees is informed that PeopleSoft installation is well over budget. This condition continues at least through 2000.
1999	Oct	Student registration postponed due to delays in PeopleSoft conversion.
2000	June	The U.'s Information Technology Services (ITS) works with Hal to move his email from PINE to Microsoft Outlook Exchange. The move is unsuccessful and he reverts to PINE. This failure initiates ITS's "Search for Technological Alternatives." (See case)
2000	Sept.	About 5 minutes into a training session on the PeopleSoft advising and registration system Hal announces he can not see the screens and is dismissed from the training session.
2000	Oct 4	Legacy registration system shut down and converted to PeopleSoft.
2001	Feb 15	Hal terminated due to his inability to read PeopleSoft screens.
2001`	Feb 16 to March 28	Seven Weeks of Institutional Tribulation (see case)
2001	March 29	Hal accepts new position as Assistant Director, Community Involvement..

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