

# Chapter Six Human Capital is Social Capital

Thursday, Oct. 1, 1987

Hillsboro (Ore.) Argus

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Submitted photo

Gov. Neil Goldschmidt and supervisor Wendy Taliaferro examine the work of Joel Arguelles, who's retarded but nonetheless does production work at the NEC America plant in

Hillsboro. Joel was trained under a new business-sponsored program designed to find more meaningful employment for the retarded and get them out of sheltered workshops.

The Bill of Rights Act created an innovative collaborative network of relations between Universities and new community-based service programs. I worked in this system, beginning at the UAF at the University of Idaho demonstration preschool and then moving to community-based services at the Idaho Child Development Center at Lewiston Idaho and from there to Bend Oregon where I opened Dynatron. Now I was leaving Dynatron for a research assistant job

at the University of Oregon's Specialized Training Program (STP). Using data from the demonstration sites, like Dynatron, STP's Director joined other UAF researchers to create new federal supported-employment policies for employing people with developmental disabilities using our evidence that proved people held in institutions could work. In the mid-1980s, federal legislation created a new service called supported employment that funded the support necessary for people with developmental disabilities to be successful at work in any community business instead of only being served in segregated shelter workshops like Dynatron. This recognized that the wellbeing of people with developmental disabilities was being created in a psychic-social network that was not contingent on buildings that housed segregated services.

Our employment team at STP wrote supported employment implementation grants, Federal and State systems-change grants, and grants funding positive-behavior-change research. My job was funded by two federal research grants that I was primarily responsible for. The first grant funded research studying the social impact of employing people with developmental disabilities in the workplace and the second research grant funded a study of the economic effects of supported employment. My boss, Larry and I became responsible for the management of the two research projects.

In order for the new supported employment system to end the segregated employment system, we needed to collaborate with businesses employing people with developmental disabilities. Our scientific practices were still inductive, guided by data and not theory as supported employment changed the research setting from University labs to community businesses.

## Portland Businesses Supporting Supported Employment

To help spawn our research-business collaboration I asked Jim Harper, a friend and Portland business executive, to help form a business council for supported employment. He invited several business leaders to begin meeting routinely to discuss supported employment and our two research projects. Here we were again, as UAF's had been since 1975, creating practices that had never been done before. The Bill of Rights Act was amended in 1984 and showed preference for UAFs that were established off university campuses and in community neighborhoods and added a purpose statement, "that programs assure that persons with developmental disabilities achieve their maximum potential through increased independence, productivity, and integration into the community" (Disabilities, 2017).

The amended Act also prioritized employment, requiring that states applying for new funding had to make employment services a top priority. The Specialized Training Program at the University of Oregon had a history of working with nonprofit, community-based service organizations and now, following the amended Bill of Rights Act, we were turning the keys over to the Portland business community, and there was no better person to hand the keys to than Jim. He invited his network of business colleagues into the liberation movement. Consider his proposition: participate in a liberation movement for people held in institutions, with no known proven practices in the most natural of community settings, and, be part of a unified spirit of determination in a network of social caring using evidence-based, person-centered services. There was the Act, calling for prioritizing employment and maximizing human potential and productivity. With funding from our two new grants, my colleagues and I supported the Portland business community by following its lead and conducting research on the social and

financial impacts of implementing supported employment which, by design, expanded the liberation movement further from eugenics and closer to living in communities.

We had an operational challenge at STP. Deinstitutionalization was by no means over. It was still going on in Oregon in the mid-1980s and is still going on today in many states. Folks still needed sophisticated evidence-based support. Our challenge was to show evidence of new social care practices proving that productivity was improving so adults held in institutions could live in communities while bringing that cost of social care down to the amount of funds publicly available. One of STP's first demonstration projects was with Physio Control in Seattle. The company hired a small number of people with severe developmental disabilities and with the public funding for six to nine supported employees, a job coach could spend forty hours a week in the company supporting them. This was the notion of an enclave and our recommendation to the business circle in Portland.

## NEC America

Jim Harper invited Tim Weyer, a personnel manager for NEC Corporation of America in Hillsboro, Oregon, to employ people with developmental disabilities using supported employment. Tim invited us to study NEC's manufacturing plant for three days. He summarized what we had accomplished during the visit in a letter to NEC's corporate office recommending the enclave.

1. Evaluated the availability of standard hours of work.
2. Identified enclave tasks.

- ~~3. Evaluate task performance requirements.~~
- ~~4. Design tasks for the enclave.~~
5. Evaluated task design requirements against criteria.
6. Developed enclave information management system.

Two of the tasks were struck out because we found they were unnecessary. Looking back now, it's obvious that in the report I wrote for NEC, I did not see the most important experience of the three-day job analysis—the people working at NEC. Tim recommended to his senior management that NEC proceed with the enclave and included letters of recommendation from Oregon's Governor Atiyeh and James Toews, the Assistant Administrator of Programs for Developmental Disabilities, along with our findings.

Governor Atiyeh

I understand N.E.C. America is considering the implementation of a Supported Employment program for persons with developmental disabilities.

One of the top priorities of my administration is economic development and the creation of job opportunities for all Oregonians. Included in this goal is the opportunity for Oregonians with severe disabilities to participate in integrated community supported employment.

I am truly impressed with the leadership exemplified by N.E.C. America in this area. (Atiyeh, 1989)

The Assistant Administrator of Programs for Developmental Disabilities.

Finally, I support the planful approach NEC America is taking considering the feasibility of establishing an enclave. In working with the University of Oregon's Specialized Training Program and the OESCO, an enclave at NEC will become a demonstration for many to follow. These organizations offer a combination of research, training, and support from other companies that greatly enhances the likelihood of success. (Toews, 1989)

This was the beginning of my invention of social action research. My work had become studying work! STP was still focused on supporting those with the most challenging support needs and thought that a professional job coach could support eight or so workers with developmental disabilities. Wendy Taliaferro worked for OESCO Inc., a nonprofit provider of supported-employment services in Portland Oregon. Her job was to support seven employees with developmental disabilities at NEC America. To say that Wendy was a professional job coach is an understatement. The liberation movement continued to attract young professionals with the perfect balance of love and intelligent action. Wendy's positivity was refreshing and uplifting. In a meeting with Jim's business circle, managers at NEC America, and Wendy, Larry and I proposed conducting both the social and economic impact research, as described by our two research grants at NEC America.

Systems change is always a dance, and this time we were dancing in someone else's dance hall. Just as before, we followed the data and our scientific approach to studying wellbeing. The Act was designed to follow data that led to systemic practices that continuously

expanded the autonomy of everyone in the system of care. Obviously, the design was meant to impact the daily living of people with developmental disabilities. Perhaps unintentional, the Act's data-based decision design created a space of autonomy for scientist-practitioners who were free to constantly innovate new practices as long as the data improved the wellbeing of those they cared for. New systems of practices could not be pre-determined so to study the emergence of the new system we continued to rely on open ended qualitative research like grounded theory (Olson & Ferguson, 1991). Wendy led our research efforts. She started working at NEC and was first to pick up on the health of the NEC manufacturing employees around her. As Wendy recalled:

When I eventually began working at NEC, having my own blue jacket made things easier, but I still had trouble finding my own group when we went to lunch. Thank heaven for Bridgit, who had hair down to her waist, I could always find her among the sea of blue in the cafeteria. Although everyone wore the same clothes and seemed robotic to me at first after my first introductions I felt comfortable. With each new introduction, I found a warm and friendly face welcoming me to the NEC family. Enthusiasm and sincerity seemed to abound in the people there. (Taliaferro & Oorthuys, 1991)

## **Human capital is productivity**

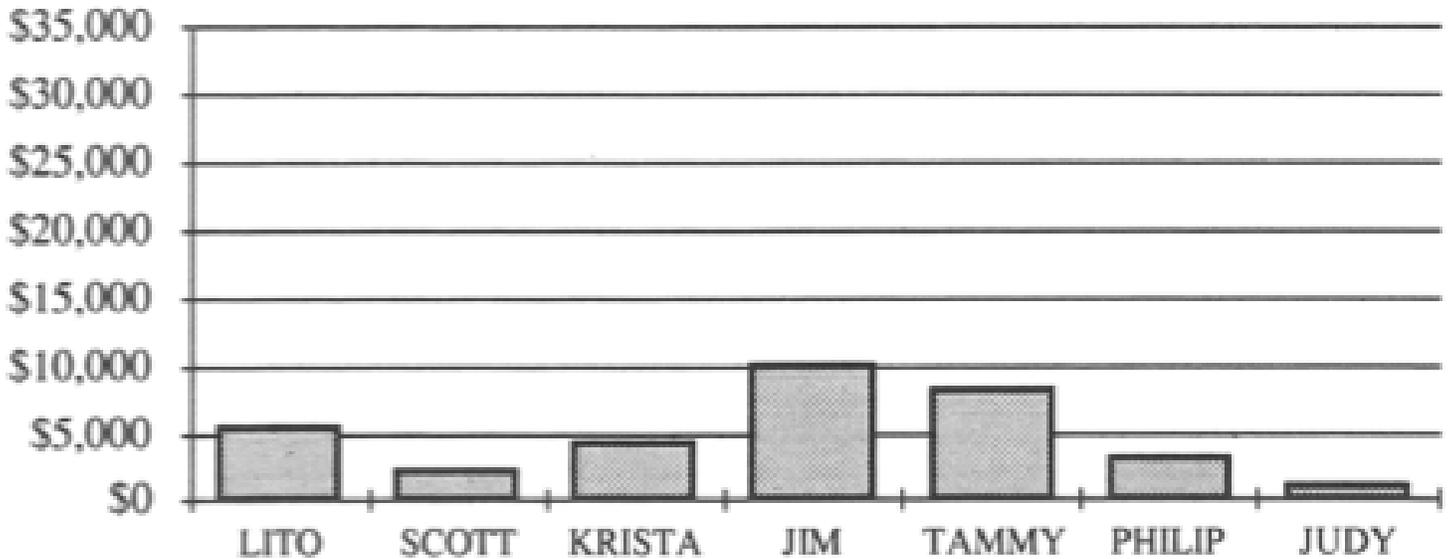
The Act and its amendment in 1984 were a paradigm shift from abuse and neglect in institutions to living free in communities created in a transformation from deductive theory to

inductive science. Today, the theory of human capital is a logical discourse guided by models, frameworks, guides and roadmaps describing the impact of training, education and health on a person's productivity. To understand productivity, we collected a continuous stream of motion time management data to guide our decisions just as I had at Dynatron. In our grant proposal, Larry and I planned to study the economic effects of supported employment using benefit cost analysis. This became difficult for us because NEC America did not see value in the approach, especially when it came to conceptual abstractions. Cost benefit analysis determines whether or not the costs of financial data collection outweigh its benefits and NEC America seemed to be making their own cost benefit statement: Our collection of financial research data did not provide sufficient benefit. This was a counter-intuitive lesson – complex data analysis was not for everyone – literally. The lesson had tremendous value when it came to productivity. The simpler the data being used to coordinate collective action, the greater the impact of the network of coordinated action.

We all agreed that productivity measures were the best indicators of the financial impact of supported employment, so we returned to baseline charting and measured each employee's productivity. Larry and I used the productivity data to study the value each individual, and the enclave as a whole, produced for NEC (Rhodes & Sandow, 1990). By combining productivity, attendance, and hours worked, we calculated the value received by NEC.

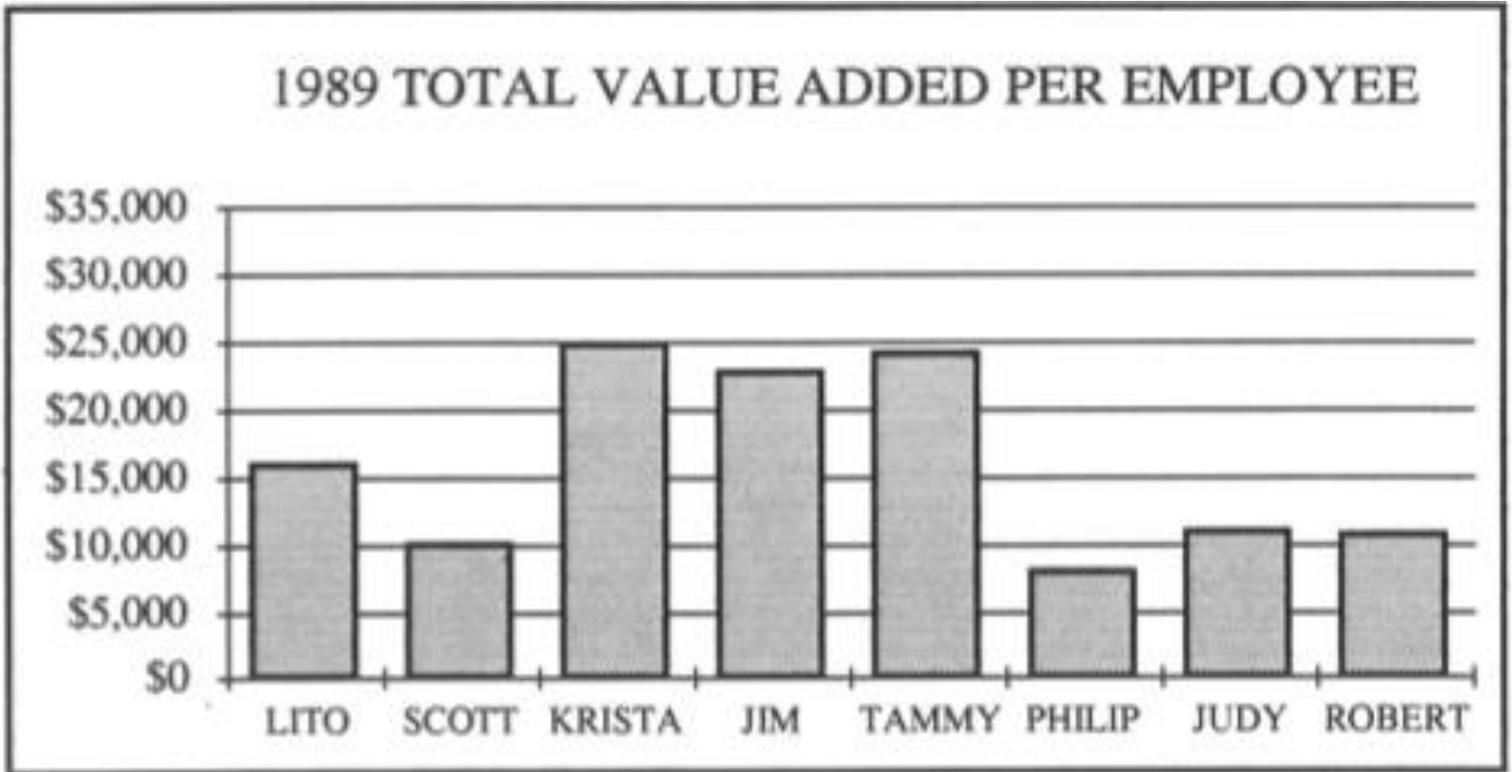
Wendy collected productivity data as I had at Dynatron and this became the foundation for our research. The data showed a significant increase in productivity as value added to NEC America.

## 1988 TOTAL VALUE ADDED PER EMPLOYEE



The American Electronics Association published the average value produced by employees in the same telecommunication technology sector NEC America belonged to. For instance if the average telecommunications worker generated \$50,000 and the productivity of a supported employee was 10% we calculated their individual value to be \$5,000.

After receiving 12 months of training and support from Wendy and NEC employees, the value created by supported employees grew between two and five-fold. This validated the new supported employment systems premise that professional support provided in business settings resulted in continuously improving business value.



As our relations with NEC developed, I became increasingly aware of how profound the shift in the setting was. I used to think of the setting social care took place in as a physical space—my preschool classroom or electronic assembly shop in Bend. As NEC contemplated employing people with severe developmental disabilities, the setting became a psychic space, a social network of conversations consensually coordinating ethical actions with currents of excitement, joy, love, and commitment running throughout the network. Social well-being expands in many ways. The number of people in the network of conversations that generate and conserve well-being expands and the relational intimacies of love, understanding, as mutual respect grows deeper and social well-being arises from social support as mutual caring grows. Much like my dress shop experience with Cecilia, I was fascinated by the dynamic social support network that was emerging.

Our social impact research involved multiple research methods (Sandow & Olson, 1991). It included natural observations made by Wendy and an NEC supervisor, John Oorthuys (Taliaferro & Oorthuys, 1991). In a deductive study of employee interactions, we used direct observation to study the differences between employees with and without developmental disabilities (Storey, Rhodes, Sandow, Loewinger, & Petherbridge, 1991). We also studied social network cohesion using clique analysis (Yan, 1988, 1991; Yan, Mank, Sandow, Olson, & Rhodes, 1991; Yan, Mank, Sandow, Rhodes, & Olson, 1993; Yan, Sandow, Rhodes, Olson, & Mank, 1993; Yan et al., 1990) and used grounded theory and naturalistic inquiry for qualitative studies at NEC (Olson & Ferguson, 1991).

### **Measuring Impact Using Multiple Research Methods**

While the many different research studies were being done, we shared our findings with the good folks at NEC. Social sciences conserve the quality of research through a process of peer-reviewed publications. It is the research community or peers that decide whether or not a paper is accepted, accepted with revisions, or rejected. This had me wondering, who are the peers of the NEC research? When I shared our research with others at NEC, I asked, “Is this describing what is happening here at NEC?” I was beginning to see the importance of validity in social research as a matter of all those involved in social research being seen, heard, felt, understood, and trusting the scientific explanation as it developed.

Our deductive study of social interactions at NEC compared the conversations of supported employees to their NEC coworkers. The differences showed supported employees

receiving much more instruction than their peers (10.9% to .24% of all interactions). The same was true for compliments consisting of 3.18% of all interactions of supported employees compared to .04% of all their coworkers' interactions. These results were coherent with our value-added data showing that Wendy's professional practices increased productivity in a rewarding setting rich with frequent compliments.

The data also showed us that co-workers had a lot more conversations about work (21.18% compared to 3.57% of supported employees total interactions) and also had a nascent network measure of the interactions between supported employees and their NEC co-workers. NEC coworker's interactions with their peer NEC co-workers consisted of 25.7% of their total interactions while the supported employee's interactions with others outside of the enclave was 1.63%.

In the spirit of discovery research, we didn't see this as a problem but as valid data triggering new research. Following this data took us from a focus on the parts of a system, (those in the network of conversations), to a focus on the social system, the network of reflective conversations where everyone in the network validates everyone else in the network as a collaborator in the study of social interactions.

### **Discovering Kim's Social Support Network**

One of the enclave workers was Kim. Here is how Wendy described her.

Kim is a very energetic woman who loves working at NEC America, Inc. and adds a lot of value to the company. Kim was very excitable and easily

distracted. She was a real training challenge and required intense one-to-one physical assistance over a long period of time to learn all her job responsibilities. She also required full physical assistance with caring for her menstrual cycle. When training on the job, her movements were quick and she could damage parts in seconds. You could not take your eyes and/or your hands off her for an instant. We worked on her quality constantly. Kim would scream often, especially during training. She would also yell out a few phrases, such as “Momma” and “go for a walk.” She signed frequently but would add her own variations to the signs, which I referred to as her New York accent. She used to run up and down the production floor without looking up and would often grab, hug, and goose strangers, especially men.

Once Kim learned a job, she could do it with great speed. Her production rate rose dramatically during her first year. She is very dexterous and can work rapidly on very small, detailed components. Kim is very sincere in regard to her co-workers as well as her work. Her energy level is infectious, and she has a lot of compassion for people. She can add to any area just in terms of the morale she can build up within people. (Taliaferro & Oorthuys, 1991).

Eugenics-era testing for measuring intelligence placed Kim’s IQ at 30. During the eugenics social movement, she would have been placed in the worst confines of Oregon’s institutions. In the liberation movement, she was assembling delicate electronic devices, earning money, and having fun.

The ripple of positive social change never ends. Kim's love and enthusiasm for others was reciprocal. NEC employees loved her and to my dismay proposed that she work with the rack assembly team, away from Wendy and the other enclave workers. I was still learning how love and support flowed in networks of collective action and could not see how NEC's proposal could work out. Moving Kim away from Wendy was certainly a step toward reaching her full potential socially, but what about her productivity and independence?

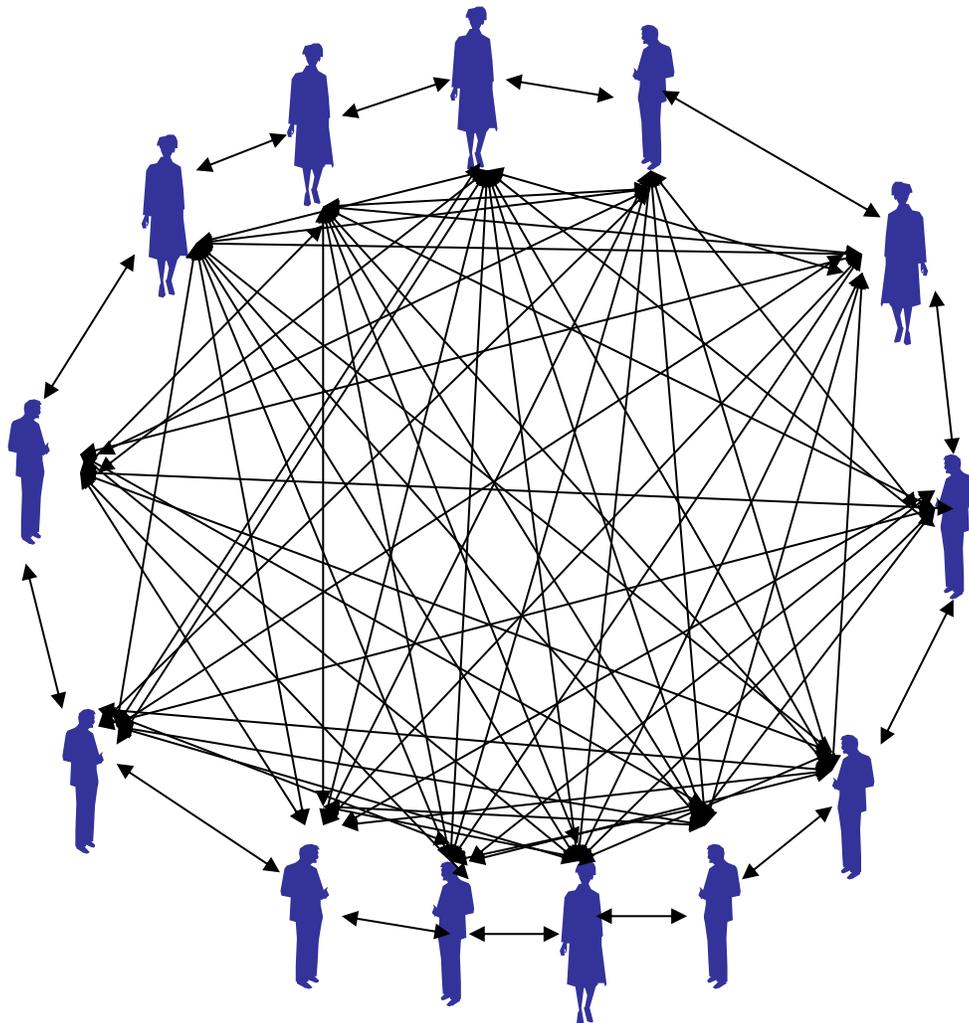
With regard to the possibility of Kim moving away from the enclave, we asked the same questions the Bill of Rights Act had asked: Who is being served? Who is providing service? How is the program being carried out?

I knew that Kim was being served and was curious to understand who was providing service and how the "program" was being carried out.

I had enough experience to know that Kim's co-workers had the skills to teach her new assembly skills. We had broadened the UAF training to include NEC workers and one research study showed that the NEC employees could train supported employees as well as a professional (Mank, Oorthuys, Rhodes, Sandow, & Weyer, 1992). This was a milestone. As a UAF our research studies were focused on the ultimate goal of the Bill of Rights Act – the daily living of people going to work at NEC and living well with their others.

When Kim moved away from the enclave, we could see that she was happy and productive when we visited her. We asked the question, who is providing service, using social network mapping to answer the question. We collected data by asking everyone the same question in the form of a survey: "With whom do you support Kim?" Each employee in the rack

assembly area was given the survey. It was simple and quick to complete since all they had to do was to list the names of those with whom they supported Kim. The results were my first glimpses of social support networks.



Who was providing service? Everyone. In Kim's support network saw everyone else in the social support network as a collaborator supporting Kim. This collaborative social network structure maximized collective action, resulting in a significant increase in Kim's productivity. How was the program being carried out? By conserving and expanding a collaborative network

of social caring where the aim of the network was to support Kim's full potential and productivity growth. The NEC supervisor, John, described this expansion.

Basically, the first person that we had move out was Kim and in terms of what we saw were differences. Productivity improved dramatically within two weeks. We really feel that a lot of that was due to the fact that her role models were among non-handicapped folks as opposed to handicapped folks. Two weeks after she started in rack assembly, she was doing the task the way everyone else was. So the thing we couldn't train was something that she could learn on her own by seeing other people demonstrate the method.

What we ended up doing is developing a daily part concept, so for all the jobs she needs to do for the day are set up ahead of time when she can get the material, perform the task, when she is done with that material put it back on the cart and take the next materials. This really reduced the amount of time that a support person had to be available. It helped her become more independent. (Taliaferro & Oorthuys, 1991)

Brilliant! Kim's social support network was achieving the goals of the 1984 amendment of the Bill of Rights Act. I learned that when we are in service to others and wish to improve their productivity and independence, the measures of their productivity are measures of our productivity. John, like Wendy, described Kim's impact on her new teammates.

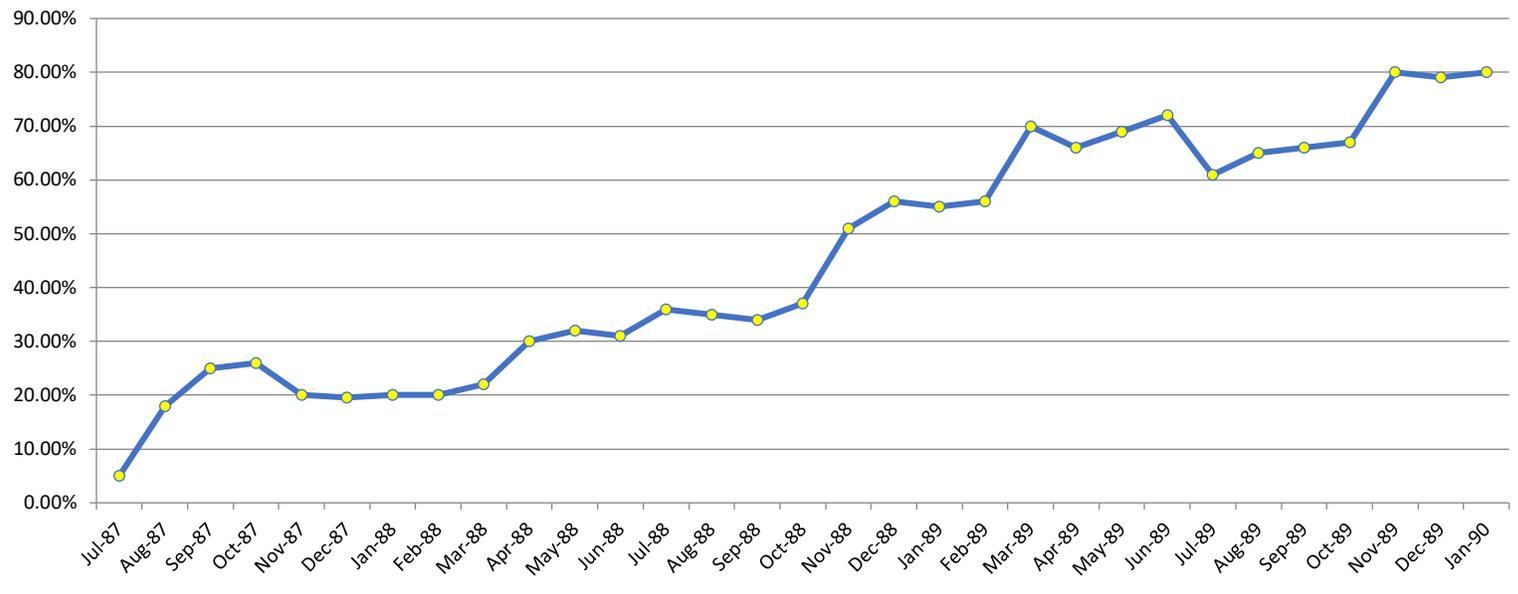
When she is not at work the whole attitude of the group changes. When she comes to work, the first thing she says is good morning to everybody and everyone says good morning to her.

She sings in the area, and she keeps a real positive happy mood in the area and people notice the difference when she is gone. She helps charge up the group. We've also seen her group of friends really expand and now she doesn't just know people in component prep, but she has the whole rack assembly group as part of her group...when she's leaving work she's blasting past different people and its, "bye!" (Taliaferro & Oorthuys, 1991)

### **A Network of Social and Financial Well-Being**

The NEC rack assemblers had created a support network that constantly improved upon Kim's well-being, while at the same time, Kim became part of the rack assemblers network that constantly improved upon the social well-being of the rack assembly workers. This was a dynamic social support network conserving and expanding social well-being.

**Kim's Percent Productivity**



### Human capital is social capital

Five years before political scientist Robert Putnam wrote of the theory of social capital (Putnam, 1995) our research data showed the impact the NEC social network had on individual productivity. The data unlocked another counter-intuitive finding that it would have been hard for Putnam to imagine – human capital is social capital. Like Putnam, our data showed how the quality of relations within a social network determined the productivity of the network. NEC employees support improved Kim’s productivity and wellbeing at the very same time Kim contributed to the wellbeing of NEC employees. Hence, human capital is social capital and whatever we do in the network of conversations we do to ourselves. Our science was so much richer than deductive theory.

The network of conversations generating social well-being constantly changed. All of this seemed metaphysical to me, not because it was surreal, but because it was the systems

knowledge of social caring that I had not been conscious of before. The management, supervisors, and workers at NEC, in a beautiful dance with Wendy, had completely redesigned our notions of supported employment. The enclave was gone after NEC moved all of the workers throughout the plant and the enclave was gone as a model we endorsed. News of the new liberation movement traveled around the world. From the Japan Times:

NEC in Oregon was the first Japanese company to introduce the enclave system developed by the University of Oregon's Specialized Training Program. "The enclave program exceeded all our expectations," said Tim Weyer the director of human resources and administration and a member of the NEC executive team which introduced the program. "Those traditionally thought to be unable to work surprised us by how much they can learn."

After improving their manual dexterity and communication skills, some of the trainees mastered more complicated tasks and have since moved out of the enclave to work alongside other NEC employees.

The productivity of some enclave employees now stands at 75 percent of the plant's average individual performance. Turnover and sick leave have been minimal. The combined economic contribution of the eight employees to NEC grew from \$48,000 in 1988 to \$170,000 in 1989, according to Dennis Sandow, a Specialized Training Program research assistant.

Before this opportunity, they rarely went outside their homes or boarding houses and now mix freely and chat with other employees in the cafeteria. Invitations to Christmas parties have made their holidays an occasion for conviviality and friendship rather than isolation. (Shimatsu, 1990)

Social well-being grew on its own as others wanting to live well together joined in the joy of social caring and productive work. I was feeling the presence of an amorphous social whole. What was it? Was it big, small, centralized, or dispersive? Were the relations that constituted the whole weakening, strengthening, shrinking, or expanding? It was alive and dynamic, constantly changing in the present moment so creating a list of its features or analyzing its attributes could only disguise its very nature.

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