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# LAYERING NETWORKED AND SYMPHONIC SELVES WITH ELECTRONIC PORTFOLIOS: A CRITICAL ROLE FOR EPORTFOLIOS IN EMPLOYABILITY THROUGH INTEGRATIVE LEARNING

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**Abstract:** The role of ePortfolio in promoting employability must be situated in a larger critical discussion about the relationship between citizens, employers and the state. While also helping individuals develop their employability, ePortfolios ought to contribute to creating agency, satisfaction, and meaning in their lives as a whole. The ability to develop and demonstrate transferable skills, flexibility, and self-direction, is necessary for obtaining and retaining gainful employment. However, as recent social theory suggests, these processes of self-development and self-representation help enact identities that contribute to the individualization of society in service of a neo-liberal globalization agenda. A key challenge for ePortfolio leaders is to both serve the immediate needs of individuals to secure employment while also challenging the sole equation of effective citizenship and meaningful identity with employability. In the United States, the discourse around integrative learning in higher education suggests a place to start. Integrative learning has two different styles, corresponding with two types of self, the network and symphonic. The network self suggests way for ePortfolios to promote employability, while representing the symphonic in ePortfolios creates space for a broader conception of what's important in a life. ePortfolio practices cultivating both kinds of selves need to be woven together.

**Keywords:** identity, discourse, integrative learning, lifelong learning, ethics

## **Introduction**

In early 2006, over one million French citizens took to the streets to protest their government's attempt to institute a new employment contract that would make it easier for organizations to fire workers under the age of 26 during their first three years of employment [Agence France Presse, 2006]. The new contract was promoted as an attempt to decrease unemployment for young people by reducing how significant a commitment employers had to make in hiring new workers. This change, it was argued, would lead to a wealth of new jobs for youth. Its opponents viewed it as a first step towards the "at will" model of employment prevalent in the United States, one of a growing series of measures intended to dismantle the welfare state in Europe. Regardless of what one thinks about the specifics of the proposed contract, its rejection by the public highlights the fact that maximizing the number of people who match up with jobs created according to the needs of mobile capital can not be the sole focus of employment policy and programs. Increased employability is valuable only if in service of more meaningful and secure lives for all citizens.

This article suggests that the role of ePortfolio in promoting employability must be likewise situated in a larger critical discussion about the relationship between citizens and employers and the responsibilities of the state. While also helping individuals develop their employability, ePortfolios ought to contribute to creating agency, satisfaction, and meaning in their lives as a whole. The ability to develop and demonstrate transferable skills, flexibility, evidence of meeting professional standards, self-direction, and the like is most assuredly a necessity for obtaining and retaining gainful employment. However, as recent social theory suggests, these processes of self-development and self-representation may help enact identities that contribute to the individualization of society in service of a neo-liberal globalization agenda. A key challenge for ePortfolio leaders is to both serve the immediate needs of individuals for ways to help them secure employment while also opening a space to challenge the sole equation of effective citizenship and meaningful identity with employability. We need to carve out a critical role for ePortfolios that both increases employability and shapes the conditions of citizens' relationships to employers and governments.

In the United States, the discourse around integrative learning in higher education, to which ePortfolio practice is strongly connected, suggests a place to start. Integrative learning has two faces, two different styles, which correspond with two different types of self, the network and symphonic. The network self may suggest ways for ePortfolios to promote employability, while representing the symphonic in ePortfolios may create a space for a broader conception of what's important in a life that pushes back against the idea that "life is to become a continuous economic capitalization of the self" [Rose 1999, p. 160]. ePortfolio projects have made exciting progress cultivating both kinds of selves. These works need to be woven together, layering the networked and symphonic, to create ePortfolios that promote employability while asserting the value of their authors as "whole human beings" irreducible to human capital. [Cambridge 2005a].

## **Discourse, Employment, and Learning**

Contemporary social theory points to the power of the way the state talks about people and the ways in which they are able to represent themselves have in creating the identity that determines how society functions. Michel Foucault has shown that power in the modern world is constitutive, not just oppressive. Through discourse, through the way society represents and classifies people, they are created as subjects. The language used to talk about people establishes the shape of identities they may assume. It follows, then, that discourse about learning and employability make possible certain types of selves.

While the bureaucratic mechanisms of the state played a central role in many of Foucault's historical examples, his concept of governmentality points to the increasing role the individual plays in analyzing and representing him or herself in accordance with the societal discourse through which they have been shaped [Foucault 1991; Rose 1999]. The role of the government in monitoring and disciplining the individual has increasingly been delegated to the individual. This insight is further developed in the work of Anthony Giddens and Ulrich Beck on reflexive individualism, in which they argue that the imperative to examine and work on the self is a key means by which the social world is constructed in contemporary Western society and a primary element of contemporary identity [Beck, Giddens, Lash 1994; Giddens 1991]. As Claus Elmholdt and Svend Brinkman put it, "in contemporary flexible capitalism, we are constantly encouraged to take a reflexive stance towards ourselves, which is not a natural capacity, but something historically new that we have been trained and disciplined into doing" [Elmholdt, Brinkman 2006, p. 174].

The discourses of employment and learning play a central role in the training and disciplining required by these larger structures of power in post-bureaucratic society. Through the development of employability and lifelong learning policy and programs, individuals are shaped into means to fulfill economic objectives. In his further development of the concept of governmentality, Nikolas Rose charts the individualization for economic prosperity, both individual and societal, in late modernity. Rather than as a problem to be solved through creating jobs:

*Unemployment [is] now conceptualized as a phenomenon to be governed ... through acting on the conduct of the unemployed person, obliging him or her to improve 'employability' by acquiring skills, both substantive skills and skills in acquiring work, and obliging the individual to engage in a constant and active search for employment. ... Each individual is solicited as a potential ally of economic success. Personal employment and macro-economic health is to be ensured by encouraging individuals to 'capitalize' themselves, to invest in the management, presentation, promotion and enhancement of their own economic capital as a capacity of their selves and as a lifelong project [Rose 1999, p. 162].*

The ability of a nation to hold its own economically in the global economy shifts from an objective of collective action to an individual responsibility of each of its citizens. Rather than ensuring employment, the state encourages employability. The "enterprising citizen" makes reasoned choices aimed at accumulating the competencies demanded by globalized capital, in a manner paralleling how she acquires goods as a consumer, his or her other key role in supporting economic growth [du Gay 1996].

The promotion of lifelong and reflective learning, of which much ePortfolio activity is a part, are primary means for enacting this self as human capital. To achieve success, we must now become a “learning society,” but the measure of that learning, like the measure economic competitiveness, becomes the dispositions and capabilities of individuals, for which they are primarily responsible. In their analysis of lifelong learning discourse, Webb and Warren demonstrate how the enterprising citizen is made a “responsible learner,” vigilantly engaging in ongoing development through a series of rational choices designed to maximize employability: “Policy narrative and the bureaucratic reforms that have sought to realize the discourse through regulatory frameworks, institutional arrangement, curriculum reform and funding streams work on the bases of privileging the process of choice, and ensuring learning are making the right kind of choices” [Warren, Webb 2007, p. 10]. Each individual has a responsibility to continue to learn throughout life and in accordance with principles maximizing his or her value.

The power of this argument is strengthened through framing lifelong learning as an innate desire for self-development and self-actualization that aligns seamlessly with the needs of one’s employer in the discourse of the learning organization [Contu, Willment 2003]. Being a responsible learner requires self-reflection and self-evaluation, but such activity is portrayed as the result of a natural impulse towards self-discovery, rather than being more accurately characterized as “participatory surveillance” on behalf of the organization, so that “a shared interest in learning between the individual and the organization is taken for granted” [Elmholdt, Brinkman 2006, p. 174]. Such conflation of organizational and individual interests threatens to extend the power of organizations beyond work into the whole of human personality, leaving little space for anything else. Through their learning, employees “are asked to be specific kinds of people, rather than mere professionals with skills independent of their private personalities” [Elmholdt, Brinkman 2006, p. 176].

Because of the “seemingly benign and apolitical character” of invocation of our born identities as learners, it is particularly difficult to challenge this discourse, particularly as professional educators dedicated to promoting learning [Contu, Grey, Ötenblad 2003, p. 945]. Given the penetration of these individualizing discourses, an uncritical embrace of “learning” risks capitulating to the neo-liberal agenda they enact. However, as Foucault and other post-structuralists argue, there is no space outside of discourse from which to resist. This does not mean that resistance is not possible. Rather, “new human capacities may come into existence as effects of forms of domination, only to then become bases of resistance to those same forms of domination” [Elmholdt., Brinkman 2006]. The lifelong and reflective learning discourse, and the practices through which it constitutes reflective and lifelong learners, may also provide the means to contest the equation of individual and organizational interests.

We may need to oppose the potentially oppressive role of these discourses in ePortfolio practice through finding way to use individualized learning against the grain of the employability discourse. In the United States, these means for resistance may be found in the discourse of integrative learning in higher education, which can be seen both as a response to the need to increase the employability of University students and as a call the critical analysis that calls an exclusive focus on that need into question.

## **Integrative Learning and ePortfolios**

In the United States, there is a growing consensus higher education policy circles that integrative learning should be a key educational focus. In a recent report, business and educational leaders gathered by the American Association of Colleges and Universities (AAC&U) write that cultivating a “high degree of integrative learning” may very well be the “key change” needed in higher education in the twenty-first century [American Association of Colleges and Universities 2007]. We live in a world where problems increasingly defy specialized solutions, where patterns of employment necessitate flexibility and independence, where knowledge and culture is constantly being remixed, where boundaries between the personal, professional, and civic are more difficult to draw. The capabilities that make up integrative learning, a growing chorus suggests, will help people succeed in this transformed environment. While the integrative has certainly been part learning from the beginning, it has received high profile attention in recent years.

The connection between electronic portfolios and integrative learning is inescapable. In gathering together different kinds of evidence from multiple contexts, making connections between them, and

trying to explain to what they add up to and what to do on the basis of that understanding, portfolios exemplify many integrative habits of thought. Electronic portfolios often also incorporate multiple media, are created and managed with multiple technologies, and link a variety of audiences. It's unsurprising then, that nearly one-third of the 139 institutions applying to participate in the Carnegie Foundation for the Advancement of Teaching / AAC&U Integrative Learning project in 2005 included portfolios as a central element of their projects [DeZure, Babb, Waldmann 2005].

Because most portfolios focus on their author, they place the self at the center of this constellation of connections. Through their electronic portfolios, students enact selves. While these selves are enabled and constrained by the larger cultural discourse about identity suggested in the previous section, how educators frame the processes of composing and using portfolios can also influence the selves students create [Yancey 2004]. Through the design of ePortfolio programs, we take part in the larger discourses about employment and identity, either reinforcing the equation of selfhood and human capital or complicating it. In order to judge the effects of our ePortfolio work to date and to uncover possible routes forward, the next question to consider is, what kind of selves does integrative learning through portfolios suggest?

### **The Networked Self**

To answer this question, a clearer picture of what is called integrative learning in the US higher education policy discourse is necessary. Carol Schneider, president of AAC&U, defines integrative learning this way: “[I]ntegrative learning is a shorthand term for teaching a set of capacities—capacities we might also call the arts of connection, reflective judgment, and considered action—that enable graduates to put their knowledge to effective use” [Schneider 2003]. As surveyed by Pat Hutchings and Mary Huber of the Carnegie Foundation for the Advancement of Teaching, the range of educational practices and philosophies aimed at these capabilities is vast. Connection and reflection are recurring themes. Students must be prepared to make connections that span traditional boundaries: between courses, across disciplines, between the classroom and the wider world, across the years of their undergraduate educations. Furthermore, through reflection, they need to learn why they should be making connections. They must become intentional learners, internalizing the imperative to make connections so that they continue to do so beyond graduation.

Much suggests that such intentional boundary-crossers are likely to be highly employable. Integrative learning proponents argue that the contemporary workplace requires considerable flexibility and continual learning. The rapid pace of change that accompanies advanced information and communication technology and a global, deregulated economy requires workers who are able to quickly learn new skills, collaborate with a rapidly changing cast of others, make independent decisions, and find creative solutions. Increasingly, professional employment is based on projects, not steady jobs, and the boundaries between home and work are less well-defined or respected. Increasingly, successful professionals must know how to build the networks needed to market their abilities, demonstrate that they can apply their skills in diverse settings, and must be ready to shape their time around the demands of emergent responsibilities [Reich 2000; Sennett 1998; Candy, Crebert 1991]. In addition, the processes by which culture and knowledge are created may be changing, involving large-scale collaboration without centralized control and the recombination and interweaving of existing media content [Sunstein 2006; Lessig 2005; Weber 2005]. The very nature of learning itself may be changing too, suggesting that the unit of analysis for measuring learning might need to shift from individual minds to networks of people, tools, and texts [Hutchins 1995; Seimens 2005].

Students adept at both making connections and making choices about which connections are important to make are likely to be effective in such an environment. The incoming generation of college and university students may have a head start through the technologies that permeate their daily lives [Prensky 2001; Brown 2000; Oblinger, D. J 2005]. An increasing number of students are adept at articulating their social networks through systems like Facebook and MySpace, collaborating and competing with others in massively multiplayer online games and other immersive environments, managing information about themselves distributed across the Internet, remixing and critiquing visual culture on YouTube, and writing about their lives, evaluating their connection-making activities and drawing new connections to the writing of others, through blogs [Boyd; Nardi, Schiano, Gumbrecht, Swartz 2004]. This generation of students have also been educated within a system of schooling permeated by the

discourses of learning and employability discussed earlier, further predisposing them to making connections that increase their personal and professional capital a primary objective.

These activities, in both their academic and recreational inflections, suggest a kind of self, one defined by connections and seeking them, focused on deciding where to go next. As in the discourses of employability and the learning organization, the network individual focuses on making rational choices that lead to the accumulation of links that make them more valuable. This is the first kind of self that is important to consider for integrative learning through portfolios, the Network Self, the self of making connections.

Electronic portfolios have a clear affinity with this way of expressing identity. From the beginning, portfolios have been about combining and recontextualizing diverse kinds of documents. The ability to create hyperlinks, both internal and external, is one of the most readily identifiable advantages of the digital medium. Many systems designed specifically to facilitate electronic portfolios include spaces for interaction that allow for collaborative connection-making, and social networking capabilities are increasingly finding a place in ePortfolio software and practice.

Capitalizing on these capabilities, ePortfolios can be used to promote employability and lifelong learning. However, they fall short of what distinguishes portfolio composition from other kinds of technologically-mediated self-representation. Portfolios distinguish themselves through another dimension of integration that produces another kind of self. It is in this second face of integrative learning and ePortfolios that we can see how portfolios might serve as more than a means to enhance employability that puts the ideology of individualized, reflexive identity into action. The portfolio is a highly individually-focused genre and is unlikely to be helpful in reversing the trend towards individualization. However, it can offer an alternative version of individualism that better accounts for the complexity of meaning and satisfaction in people's lives.

### **The Symphonic Self**

The network self is richly connected, highly flexible, able to adapt, collaborate, and learn throughout life without much in the way of external direction. As such, it is well-suited to the many of the challenges faced by individuals serving the role prescribed by discourses of learning and employability, seeking to obtain and retain gainful employment in the contemporary workplace. However, a networked life may leave something to be desired. In *The Corrosion of Character*, Richard Sennett shares the lives of a variety of people working in the new environments for which integrative learning is to prepare students [Sennett 1998]. What these bread makers, bar owners turned advertising agents, and recently laid-off computer programmers have in common is a profound sense of disorientation and lack of meaning.

Even the most outwardly successful among them, Rico, a wealthy, globe-trotting business consultant—a master of professional networking, self-directed learning, and rapid collaboration—cannot connect what makes him good at his work with the story he wants to tell himself and his children about living an ethical life. What's missing is narrative:

*Narratives are more than simple chronicles of events; they give shape to the forward movement of time, suggesting reasons why things happen, showing their consequences. Enrico [Rico's father, whom Sennett interviewed in the 70s] had a narrative for his life, linear and cumulative, a narrative which made sense in a highly bureaucratic world, Rico lives in a world marked instead by short-term flexibility and flux; this world does not offer much, either economically or socially, in the way of narrative [Sennett 1998, p. 30].*

While Rico wants to tell a story about his life that centers around long term commitments and deep connections that take a long time to take hold, he cannot make his professional life fit. While highly reflective and intentional in that sphere, he has neither the conceptual tools nor the time and space to make sense of the whole of his life. Superior at making strategic connections, he's unable to step out and examine the big picture. He is highly employable, and highly skilled at enhancing that employability, but the sources of satisfaction and meaning he seeks exceed the sum total of his professional competencies, and the ways of making relationships and commitments these competencies encourage conflict with other values he holds more deeply. He lacks the ability to explore

that conflict and to imagine ways to change himself and the organizations with which he works to resolve it. The multiple spheres of his life lack coherence, lack any unifying principle that gives them meaning. While he may be skilled at a certain variety of integration, his life lacks integrity.

This absence frames a second kind of self, a self focused on achieving integrity, the Symphonic Self. While deeply integrative, the Symphonic Self focuses squarely on the whole. The representative figure of this kind of self is the composer or conductor, whose jobs, Daniel Pink reminds us, “involve corralling a diverse group of notes, instruments, and performers and producing a unified and pleasing sound” [Pink 2005, p. 126]. While they must certainly be able to create and identify relationships between these elements, this “is not the ultimate goal of their efforts. What conductors and composers desire – what separates the long remembered from the quickly forgotten – is the ability to marshal these relationships into a whole whose magnificence exceeds the sum of its parts” through “the ability to grasp the relationships between relationships” [Pink 2005]. The Symphonic Self achieves integrity by forging meaningful and persuasive relationships between the relationships that constitute the Network Self.

The symphony is a powerful metaphor for self-representation – perhaps a better one than the story – because of its multi-vocal, episodic, multilinear structure. One limitation of a focus on life narratives is that most individuals develop their stories drawing on a relatively small number of models from the larger culture, most of which may be unsuitable to dealing with contemporary social realities in a critical fashion [Goodson 2005]. In light of the myriad changes in familial, social and economic relationships articulated by the proponents of the networked self, it may no longer be possible for many to satisfy the longing for a linear and straightforwardly cumulative life narrative that Sennett’s respondents expressed. Given these complexities, Mary Catherine Bateson suggests in *Composing a Life* that our best models may be lives rich with improvisation, interruption, and redirection, the lives of those who have mastered networked selfhood, but on their own terms, lives “where energies are not narrowly focused or permanently pointed toward a single ambition.” However, to see such lives as without coherence is evidence of a failure of our aesthetic sense, our narrative imagination. “These are not lives without commitment, but rather lives in which commitments are continually refocused and redefined” [Bateson 1989, p. 9]. In her interweaved profiles of five highly successful women living such lives, Bateson demonstrates how each has found her “own kind of integrity” [Bateson 1989, p. 13]. There is an integrity found in emergent continuities rather than continuous trajectories, of both multiplicity and connection.

These women’s stories, however, are harder won. They require periodic periods of sustained reflection and considerable creativity to achieve this integrity. While continuously revising their lives, they also step out from time-to-time to craft an account of the whole for themselves. This integrative reflection is particularly valuable at periods of transition, both professional and personal, and is often done in conversation with others. Seeing the relationships between the relationships they’ve skillfully cultivated helps them both discover the consistency necessary for a coherent sense of self and choose among the paths their network skills have opened for them. The sustainability of their network lives, and the satisfaction comes with it, is a product of their symphonic selves.

While each developed capacities that made them employable in creative and compelling ways, such development was not the primary focus of the paths they carved out for themselves. Their trajectories were guided by an emergent, iterative understanding of the whole of their lives, by intuition and desire as much as by strategic choices about marketability and status. Putting such stories of integrity, in which the ways in which the lives of individuals exceed their employability are foregrounded, in front of audiences accustomed to interpreting success the narrow lens of the dominant discourses of employment and learning through ePortfolios may be one way of using integrity to push back against imperative to work on the self solely on behalf of economic competitiveness.

Not just for these exceptional women, but also for many of University students, major transitions are more frequent and diverse in a networked world than they were in bureaucratic modernity that Sennett’s subjects mourn. In addition to having the flexibility, agility, and self-direction necessary to prosper where they go next, students need to be able to situate the new within an integrated overall narrative of their lives. While this narrative may have a more complex structure and require more effort and skill to achieve than for past generations, it is no less essential. We need to prepare students to answer the question Bateson poses to herself and her respondents: “If your opinions and commitments appear to change from year to year or decade to decade, what are the more abstract

underlying convictions that have held steady, that might never have become visible without the surface variation?" [Bateson 1989, p. 15].

Answering this question can be deeply meaningful to the individual. Through crafting a symphonic self, we can find patterns within our achievements and our intentions that help us feel at home and at peace. Beyond just that, however, integrity has a critical social component. It is through articulating enduring convictions and exploring their degree of alignment with the connections they make that students can develop a critical perspective on how their identity should serve social purposes and create self-representations that can shape their relationships to organizations, institutions, and communities. For these narratives to have an impact, and to avoid the stories contributing to individualization by obscuring collective circumstances that shape them, we need to create environments that allow for new narratives by understanding lives in context, in community with other learners [Goodson 2005].

Professional communities, which transcend the boundaries of organizations, might play a central role. One route to making the connection between individual self-actualization and collaborative excellence that is so seductive in the discourse of the learning organization without falling into the trap of equating individual and organizational interests may be through the idea of a profession. Higher education prepares many students to serve in professions. Integrity's ability to balance the personal and social is key to their health. Professions are granted considerable autonomy in governance in exchange for serving the collective good of the society. At their best, engagement in professional life enables both personal achievement and social responsibility:

*Professional occupations create recognized opportunities for individuals to make something of their talents and capacities. On the other hand, this is possible only through personal commitment to the disciplines of a community of practice. At its best, professional life enables individual freedom to find fulfillment as it advances the well-being of the larger society* [Sullivan 2005, p. 284].

Situating life narratives within a profession allows individuals to represent their vocational development as more than simply employability, to chart a social contribution that isn't simply economic. Here too, articulating the balance between individual and social requires not just intentional connections and adaptations, but also the articulation of patterns and boundaries in one's participation in multiple communities of practice – those organized around a profession, situated within organizations, and formed through private relationships. By making a connection to a moral imperative higher than organizational success can contribute to the development of "ethical communities of practice" both within and beyond organizations that acknowledge the integrity of workers lives and their collective interests are part of a shared society [Nyham 2006].

Like connection making and intentional learning, this concern for the whole is also present in the discourse about integrative learning. In an environment where students move in and out of formal education in increasingly less predictable patterns and where many students take courses from multiple institutions, helping students find coherence in their undergraduate experience is an important objective [Huber and Hutchings; American Association of Colleges and Universities 2002]. In addition to drawing connections between their learning in and beyond the classroom, students need to be supporting in understanding their "learning careers" as whole, synthesizing these diverse experiences to add up to something greater than the sum of the parts [Chen 2003]. Student need to be able to represent and point to the importance of the whole of their learning, not just that which is formally sanctioned or which serves the objectives of the educational institutions with which they have relationships. Research in the learning sciences, too, points to the ability to see holistic patterns as a key to expert knowledge [Bransford, Brown, Cocking 1999]. Leading scholars of interdisciplinary studies argue that integration of diverse disciplinary insights into a unified whole is what distinguishes truly interdisciplinary from merely multidisciplinary practice [Klein 1996; Repko 2005]. Because of these deal focus on the networked and symphonic styles, integrative learning may provide a fruitful frame for thinking about ePortfolios and employment.

Electronic portfolios have their roots in such symphonic integrative thinking. In the US pedagogical tradition, in disciplines such as rhetoric and composition and teacher education, portfolios have traditionally been used to show how evidence of learning collected over time adds up to a whole greater than the sum of its parts to show development. The best portfolios present a theory or story that

offers an integral representation of what an individual has learned, knows, and can do [Cambridge 2005b, 2006]. Helen Barrett's influential work has long argued for the centrality of narrative in ePortfolio practice [Barrett, Wilkerson 2004; Barrett 2006]. Research on the impact of ePortfolios on learner and organizational relationships in both US higher education and lifelong learning contexts points to integrity, the degree to which an ePortfolio maps the relationships between personal, academic and professional identities, as a key factor cited by portfolio authors as responsible for richer learning and more powerful relationships [Cambridge 2005a; Eynon in press].

### **Networked and Symphonic Selves in ePortfolio Practice**

While both representing styles of integrative learning, the networked and symphonic selves differ in the values they embody, the activities they suggest, the characteristics of the genres and technologies that support them, and the impact they have on individuals, organizations, and communities [Cambridge in press]. A full examination of these differences, which have implications for ePortfolios, is not possible here. Similarly, surveying the full range of existing ePortfolio practices that enact these two types of self is beyond the scope of this paper. However, a brief examination of two examples of ePortfolio programs designed to address needs for employability will begin to address how these differences play out and will point to what is left to be done for ePortfolios to help to develop both styles of integration, and, as a consequence, both increase employability and challenge the idea that increasing their employability is the primary social duty of individuals.

### **Nedcar and the Network Self**

A first example is the Nedcar project, which provides ePortfolio services to employees of an auto manufacturer in Holland. The cancellation of a major project by one of the Nedcar company's clients required the layoff of over one third of its workers. Management saw this as a symptom of a larger trend to which they needed to adapt to remain profitable: The industry is moving from an "employment economy" to "project economy," making firing and hiring a regular part of business [Vervenne, Mensen 2006]. In order for the company and the industry to compete in the globalized marketplace, there was perceived to be a need for a "flexible, mobile, transparent labor market" that enables the regional exchange of employees. The company needed to be able to quickly evaluate workers "in terms of competency aggregation," to inventory evidence of the desirable skills they have and match them to projects and to improve their adaptability by pointing them to lifelong learning opportunities that match gaps in their competencies.

The Belgian firm Synergetics developed for Nedcar what is likely the most sophisticated competency-centered ePortfolio implementation in the world, producing a system that allows evidence to be assembled from multiple sources, linked to competencies, and searched and shared in a format compliant with open e-learning and human resources technical standards. Workers losing their jobs could make their competency profiles available to other industry employers, likely increasing their employability and easing the increasingly frequent transitions between jobs that are likely to be required over time. While employed, workers would have the opportunity see what desired competencies they lack and to reskill themselves to meet the changing demands of auto manufacturing.

Such a competency based system clearly opens new connections to individuals, allowing the more rapid negotiation of relationships with firms, and linking to educational experiences that might expand expertise valued by current and potential employers. In increasing workers ability to make connections, it builds their network selves, establishing them as lifelong learners able to adapt to the changing workplace. Such work has clear potential value to individuals in this industry facing the prospect of immediate unemployment and degraded job security over the course of their careers. Ongoing research by Synergetics and others on this and similar projects will likely yield valuable insights into how well this approach helps workers deal with the instability they face. This a clearly a valuable application of ePortfolios.

However, this way of representing individual through ePortfolios and associated learning services has limitations. First, the approach is "labor-market-centered." Primarily the initiative of a profit-seeking corporation, it is focused on the needs of the organization and the industry of which it is a part. While the benefits to individuals are tangible, they are peripheral. The focus is not on the goals or aspiration

of individuals or the qualities of their working lives except to the extent that these align with the objectives of business. The role of the individual is to present and develop him or herself as a resource to the industry.

Second, this kind of portfolio presents a very narrow representation of self. An individual is represented as a collection of competencies, and as flows of competency information between institutions. Only those competencies deemed valuable by the industry are presumably included, and they are aggregated, not synthesized. The systems allows portfolios audiences to ignore aspects of individuals' lives not perceived as relevant to increasing the profitability of the firm and the competitiveness of the regional industry. There does not appear to be any explicit capacity to examine how the whole adds up to more than the sum of the parts and to consider tensions between organizationally desirable competencies and personal values and commitments. This kind of portfolio does not help answer the question, how does employment serve the larger whole of the meaningful life of a citizen? While the seeming objectivity of viewing individuals as aggregations of competencies might help to eliminate bias in hiring and firing, it also reinforces the reduction of the individual to human capital.

### **eFolio Minnesota and the Symphonic Self**

The eFolio Minnesota project, which provides the opportunity to create an ePortfolio to all residents of the US State of Minnesota, provides a second example. eFolio is run by the Minnesota State Colleges and Universities (MnSCU), a statewide system of higher education institutions, in collaboration with the State's Department of Labor, using software developed by Avenet. It shares with the Nedcar project the general goal of improving employability through providing ways to represent expertise and opportunities for lifelong learning. Over 60,000 individuals have created portfolios using the system and services provided by the project. Research indicates that, while these individuals have had more formal education than the State's population as a whole, they are representative in terms of age, race, and national origin [Cambridge 2005a]. Portfolio authors include not only those currently studying in schools, colleges, and universities, but also workers, teachers, and, in many cases, individuals inhabiting more than one of these roles, at once or over time.

While portfolios by default include categories that encourage the representation of competencies related to education and employment, the structure of an individual's portfolio is highly customizable, allowing him or her to include whatever material they like and to control the visual design and organization of the portfolio. Rather than impose a standardized format or process, MnSCU made the decision to leave it up to individuals how to structure and make use of their portfolios.

While many portfolio authors found eFolio helpful in presenting evidence of their achievements to employers in the process of obtaining a job, the portfolios had the most impact on their learning and relationship to others within their academic and professional organizations through situating employment with larger, integrated narratives of their lives. They saw their portfolios as "personalized documents for professional purposes" within which they chose to include "the pieces that [they] feel most accurately and positively reflect [their] whole human being," those which demonstrate their values and illustrate the challenges they face in balancing the different spheres of their lives and managing the relationship between their enduring commitments and evolving relationships. Beyond just demonstrating their competencies, they found it important to share with the audiences symphonic representations of their lives. In an interview with the author, one eFolio participant said:

*I think it'd be difficult to separate completely, you know, who I am and what my immediate family loves are versus just me as a professional educator and nurse. ... I am not someone who's isolated to the world of professional nursing education. I also have conflicting, or competing maybe, obligations within my life that I need to balance, just as students do and other professionals do, and I think that that's a good thing, to show ... people that are reading my sites, I have other obligations in my life, and I manage to hopefully balance them all and be able to perform to the best of my ability in all those domains.*

Rather than masking the complexity of their lives from interpretation, she see value in having her audience consider her achievements in this larger context.

The eFolio software's open structure supports this kind of individually-defined portfolio use well. However, it makes it difficult for employers to find the portfolios of appropriate job candidates when faced with thousands of possibilities and to compare them in relationship to job requirements. In interviews, too, eFolio participants expressed a desire for their portfolios to be searchable by competencies, much as those of the Nedcar employees are, in order them to make new connections as well as represent their whole selves.

### **Employability in Layers**

The future of ePortfolio and employment lies with applications that can cultivate both network and symphonic selves together, providing both the employability infrastructure of Nedcar and the ability to assert individual integrity of eFolio Minnesota. While very difficult to achieve with the current generation of ePortfolio systems, rapidly maturing semantic web technologies enable both individually-defined structure and standardized representations of competencies. Most systems are either based on rigid XML specifications, such as that used by Nedcar, or produce unstructured XHTML, such as that used in eFolio Minnesota. The next generation of systems can use RDFa or similar scheme to embedded Semantic Web data that computers can index and analyze within unstructured Web pages designed for human readers [W3C 2007]. The technological barriers to an integrated ePortfolio system can be readily overcome.

The conceptual dissonance between two styles of integration and the two purposes is more challenging. Improving employability while simultaneously critiquing employability seems put ePortfolio to work on contradictory purposes. However, there is reason to believe that the nature of the digital medium and the structure of democratic society may both be conducive to keeping both in play in an integrated space. Richard Lahman argues that digital texts suggest two ways of reading, looking through and looking at. We look through electronic texts to consider their meanings, as we do with print, but we are also inclined to look at them, to examine their form and function [Lanham 1993]. These two seemingly contradictory ways of reading bind together into a "bi-stable equilibrium," and both are essential to our experience of such texts. Mary Catherine Bateson suggests that democratic citizenship itself requires such alteration of seemingly contradictory frames [Bateson 2001]. We must, for example, be committed to both the success of the candidates or policies we think best for the community and to the process of electing representatives and passing laws, even if that process may not end up favoring those leaders or programs. We must learn to think and act in "layers" to successfully fulfill our public roles.

As digital texts, electronic portfolios may also achieve a bi-stable equilibrium, one of participation and critique, both conveying employability and encouraging us to question the discourse that surrounds it. As tools within democratic societies, ePortfolios may prove to accommodate multiple layers of self-representation: Through making networked connections using structured information about competencies, portfolio authors can improve their employability; through representing these capabilities within symphonic narratives of the whole of their lives, they can critique the discourse that suggests that becoming more employable is solely their individual responsibility and should be a primary focus of their citizenship.

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