

## Position Statement for Medichi Conference, Klagenfurt, April 2007

The past, and in particular the three generations which precede us, defines and bounds the way we perceive our world. And the subtext of these few generations is one of technology. We 'europeanize' but our identities remain national; the career is still based upon real rather than virtual commuting; we actively pursue the technologies of globalization yet emotionally contest the economic and political implications. We live our lives in a period of transformation which is tightly entwined with our technologies, yet we are largely unaware of the broader dimensions of this transformation and of the incongruities between external context and internal perception. What binds us to past values, what drives us to put these aside, what choices are ours to make in forming the future?

An historical appreciation of the technology-laden previous century could sharpen our understanding of ourselves and our choices. But the requisite confrontation with our past would, I fear, be more ambitious and problematic than learning some names and dates. If it is time to start to redress this situation (are we ready?) then we must be clear about our objective in teaching a different kind of history. Should such a new curriculum be aimed at creating a better informatics specialist or generating more interest in a career in informatics? Or is it to be aimed at (producing) the broadly educated individual who, while not being an IT specialist, is nevertheless at home with the context of information tools and services and is able to evaluate critically the intellectual, social, and economic tradeoffs of possible information infrastructures? If the answer is the latter we must first ask: does a small slice of such an information-aware population already exist? Or must we start from scratch?

In Western Europe, a majority of the population is considered 'computer literate'. What does that mean? That people can surf the net, modify their digital photos, and 'google' effectively? That our MBA's can fabricate totally entertaining multi-media PowerPoint shows and that our medical doctors have successfully completed courses on how to use MEDLINE? I recently gave a course to seniors on how to create a web site; my 'students' are now applauded as IT whiz kids. My neighbor, a business owner who studied back in the 1980's and is adept with all the general office skills, thinks that the forerunner to the computer was the IBM memory typewriter. The internet is a popular cocktail topic and everyone is an 'expert'; yet few can imagine what an informatics student might 'study' - other than perhaps Microsoft Office and web design. And the specialists are prone to believe in technology without context.

Are we to infer from all this myopia that we as a population are able to deal with the choices that are part of the information age? Despite, or perhaps because of, a widespread superficial familiarity with the tools of the information society, few people concern themselves with what a computer or a network actually is or why these things are here. The intellectual underpinnings of our digital structures are of diminishing interest to a society concerned with making things 'work'. This is ironic at a time when information-based issues are dominating political agendas, research budgets, and military defense strategies and where the average human being should be able to grapple with such questions as:

- Is the internet a public good or a private one? How do we reconcile the international character of the internet with laws of individual nations and the values of individual communities?
- What is a digital identity? Which laws are needed to protect the individual in the case of identity theft? How 'good' are the databases upon which such digital identities are based? How did they evolve and how have demands for accuracy changed? What happens when my public identity is divorced from my private identity? Is anonymous identity a sensible concept? Are there historical precedents?
- Who owns information? The history of the copyright 'can be seen as a process through which capitalist societies found a way to wed the printing press and the marketplace'; does the Internet undermine the economic rationale for copyright and demand the consideration of alternative compensation systems in place of exclusive right?
- In an era of hi-tech statistical determinism, does anyone know (or care about) what a false positive is? How has the computer made the use of and devotion to statistics change over the past few decades? Do

we bother to understand the statistics or do we simply consume the 'answers' that our computers spew out?

As a society we are not ourselves able, nor are we preparing our children, to deal with such issues. While they are central to the economic, social, and cultural life of society as a whole, they are being discussed and decided upon in vocabulary and settings of which many citizens have little knowledge and less concern. We are technology consumers who naively follow the recommendations of those supposedly 'in the know'.

I do not believe that we can redress the situation with a context-free informatics history, a history which focuses upon the milestones and heroes of informatics while ignoring the contexts in which this and other technologies impacted and were impacted by society. I would argue strongly for an educational process which addresses socio-political-technological contexts of change: why and how, in the past 100 years, have play, education, money & banking, voting, warfare, trade, and the human body, to name just a few, been and are being transformed? How has technology-weighted change impacted society's longevity, obesity, sense of isolation or inclusion, tolerance, or over-all well being? Would America have come about without the telegraph and the steam engine? Can the internet provide a similar locomotive for the EU and can the past help us understand this process? Who were the gainers and who the losers of technological change and what do they tell us about the process of globalization? Has democracy and or the middle class been threatened or abetted by recent information technology?

I doubt that either the informatics or the history teacher is ready for this and I have no idea how to convert all this into workable curricula for various levels of education. But it is time to start and perhaps this conference will be a critical first step.

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