# Chapter 16 Hu Resources Replaces Human Resources in Health Care

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#### **ABSTRACT**

Intelligent technologies are exponentially approaching the stage where healthcare professionals must begin to plan for the management of "hu" (human, software, and robotic) resources, replacing management of human resources alone in isolation from other intelligences. The healthcare industry in multiple levels and ways must begin to plan for human resources in health care to extend existing and to develop new conceptual and behavioral skills in order for humans, intelligent software, and robots to optimally partner with each other. The interaction among hu resources will be active and carried out in multiple modes and intellectual and emotional intensities. Healthcare professionals, who shape the social and cultural institutions around intelligence and active knowledge, can optimize the impact and performance of this intelligence partnership.

#### INTRODUCTION

"Hu" resource management will replace human resource management in health care. A hu is a human or other intelligent entity. Hus are in one of three basic forms: wet, soft, and hard, with the possibility of hybrids of two or more of these forms. A wet hu is an intelligent human being. A soft hu is intelligent software. A hard hu is an intelligent robot, i.e., intelligent software

DOI: 10.4018/978-1-61520-885-2.ch016

manifest in a physical form (Frenay, 2006). The phrase "hu resources" means that we recognize an essential equivalency among these three forms of intelligence in health care. Understanding this equivalency will allow the healthcare industry to optimize the health care of all wet hus through the services of all hus.

Consider how pervasive these hu resources are at the moment in new automobiles where we depend on these assisting intelligent technologies to support our safety. Search engine organizations, logistic enterprises, information technology,

agriculture, and the military have developed a dependence on such advanced technologies.

"Hu resource management will replace human resource management in health care." This statement of the author would once have appeared to be so outlandish as to be only a metaphor rather than a literal statement. Surely, some will point out, there is a vast difference still (if not half way to forever) between humans and current intelligent machines (Dwivedi, Bali, & Naguib 2002; Rada 2008). Indeed a recent book by Rada (2008) knowledgeably, and with insight, pictures a 2008 world which takes a far less futuristic perspective, even while noting the advances in information technology.

A healthcare organization wishing to return value to its stakeholders in the coming years should consider the strategic failure to optimize intelligence in whatever form. Consider the missed opportunity if human resources departments, managers of healthcare operations, leaders of the industry, and professionals do not understand HR to mean hu resources, instead of just human resources.

This discussion will not focus on human resources departments, but rather on healthcare professionals and managers. It is they who will need to learn to extend their existing skills and behaviors, and to learn new skills and behaviors in order to optimally partner with hu intelligence for the benefit of communities and individuals.

As software becomes embedded in our vehicles and systems, in our bodies and brains, it does so invisibly until the software needs to bring a matter to our attention. Where the software touches our awareness is at the surface of these systems. The surface or obvious human interface of software and robots will distract some until we become habituated. Still the fulcrum upon which we must leverage for an optimal effect on the health care of all is the intelligence of software and robots and how each health care worker can hinder or optimize the development of intelligent hus.

#### CO-EVOLUTION

More important than the distraction of artificial intelligence is the shift in our relationship with intelligent hus. We will no longer be passive users of artificial intelligence as one would use an essentially static hammer or an electronic medical record system. We are becoming partners, coevolving soft and hard hus with ourselves. Intelligent systems follow user-driven design and learn and improve with usage. Usage rather than form will determine function.

Machine systems, such as automobiles, that we use today are often mass produced. The basics made available to us at the point of purchase are determined in the factory. We can order a vehicle made from standard parts, choosing among those standard parts. Our vehicle is either a heavy-duty pickup or a small car suitable for just two people around town. Other than deteriorating, most of our vehicles will not evolve as we use them.

Intelligent systems will evolve as we use them. Today's voice recognition system evolves and improves with our use. Intelligent systems will develop functionality by seeking out modules and features to add to themselves as we, and they, need them. The challenge will be as individuals, wet hus, and teams use them within corporate environments. As professionals move from one corporate environment to another, they will want to take their version of a system with them. Also if licensing bodies and corporations seek certified consistency, a professional's intelligent systems will need to learn this and map variations from the original version to its current state.

Consider if the human shaping an intelligent system is not just the healthcare professional, but also the patient. As healthcare systems focus on an individual and a family or community over the life time of each individual patient, the intelligent system evolves to that user, individual, or network of individuals. These intelligent systems will learn from the systems of healthcare professionals, as patients today learn from their primary physician.

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