

# Does life on the Internet achieve Plato's dream of overcoming space and time as well as body?; and Phenomenology of Skill Acquisition; the dangers of education on the Internet; Internet Platonism met

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Plato (c. 427–347 BC) thought that what we really are is our soul, and that this soul will survive after death, indeed death is seen as the release of the soul. Plato is thus asserting that soul and body are distinct substances, bodies die, but souls are immortal.

To those people they know what Information, they are seeking thru' the Net, Internet is a wonderful place. BUT to those persons who are just wasting their time to surf the Internet is nothing and makes no sense. Because access to too much knowledge doesn't mean anything. Internet is a trash, where pearls are hidden. Justifying the above issues, "Cyberspace has no fixed boundaries or places. We revel or despair amidst everything and nothing." [Albert Borgmann in "Opaque and Articulate Design"] The Net is different. There is no specific need it satisfies; so everything it becomes is a surprise. If the essence of technology is to make everything as convertible and optimizable as possible, then the Internet is the perfect technological device.

In the deep sense, there is no information can be found on the Internet, rather only signal is available on the net. People with critical thinking and his/her interpretation can only change the signal into information. We need media competence.

*"Thinking machines to build is an old researcher dream. Now computer enthusiasts believe, Internet could become an intelligent super organism."*

The increasing spreading of the Internet leads to a serious knowledge loss of humans. We have actually better access to databases on the Internet,

but we lose thereby sections of our knowledge. (Philosoph warnt vor Wissenverlust durch das Internet)

In the book Hubert Dreyfus in greater depth, says relying on the internet would actually discourage the passionate commitment that he sees at the heart of advanced learning. The risk-free anonymity of the internet, he says, makes it a good medium for slander, innuendo, endless gossip, and ultimately boredom.

“Users today see cyberspace as trapped in the screens of their workstations. But few of them understand what is going on behind the screen, hence they view cyberspace as trapped in a netherworld. We will one day move out of this netherworld into the physical world of smart spaces. Most things in our physical real-world environment will be Internet-enabled via embedded technology. The environment all around us will be alive with technology—in the common surfaces and in our desks, clothes, eyeglasses, refrigerators, vehicles, hotel rooms, even our fingernails and other places in our bodies. We will likely have a “bodynet” connecting all the devices we are carrying; it will act as our surrogate in communicating with the bodynets of others, as well as with the rest of the smart spaces in which we will be immersed.” (Leonard Kleinrock, *Breaking Loose in Communications of the ACM*, September 2001, Vol. 44 & No. 9)

[In cyberspace, communication will be] redeemed from all the inefficiencies, pollutions, and corruptions attendant to the process of moving information attached to *things*. – Michael Benedikt]

According to Hubert Dreyfus (Kierkegaardian view) "The inability to distinguish the trivial from the important eventually stops being thrilling and leads to the very boredom the aesthete Net surfer dedicates his life to avoiding. So, if one throws oneself into it fully, one eventually sees that the aesthetic way of life just doesn't work to overcome leveling. Kierkegaard calls such a realization, despair."

- I think an instructional method is only a good as the commitment
- to education of the people behind it.

So my arguments in the form of question are: Will the instruction method and present day pedagogy is suitable for the Internet teaching? Or will

education be good, when we will engage Internet in teaching? Where is the body with moods, when we want to take risks and to have shared social practices? I see no shared social practices, when we enter in the Cyberspace to teach people.

In the rush into cyberspace we leave our physical presence and our real-world environment behind. The internet, undoubtedly a remarkable modern communication tool, \_still does not empower us to enter\_ the office of the person at the other end of connection. We cannot look out their window, admire their furniture, talk to their office mates, tour their laboratory, or walk outside. We lack the equivalent of a body at the other end with which we can move around in, communicate through, and observe with. But two famous computer scientists, at University of California, Berkeley are trying to use tele-embodiment techniques by combining elements of the internet and tele-robotics, and it is possible to transparently immerse users into navigable real remote worlds filled with rich spatial sensorium and to make such systems accessible from any networked computer in the world, in essence Tele-Embodiment. At last, we will have to see, how much presence and embodiment can be delivered by Ubiquitous telepresence and tele-technology.(Reference: Ubiquitous Tele-embodiment: Applications and Implications, Eric Paulos and John Canny)

"Cyberspace presents us with a dilemma. We are physical beings who experience the world through our bodies. The notion of a separation between abstract mind and physical body has been battered and eventually buried by western philosophers since Kant. In its place came new ideas, important among them phenomenology, articulation of perception and action as process involving mind, body, and world....But cyberspace has been built on Cartesian ideals of metaphysical separation between mind and body: When we enter cyberspace, even a 3D world, it is the "mind" that enters. It may be regaled with an exotic 3D form, but such a form is an avatar only for the mind. The body stays outside." (From Tele-Embodiment and Shattered Presence: Reconstructing the Body for Online Interaction, John Canny and Eric Paulos)

Since Nietzsche declared that God is dead; the Cartesian split of body and mind came in a Critical state of an existential paradox. Descartes saw the human as an immortal soul connected by God to the mechanical body. In the Western culture of today, the desire to explore the endless realm of

the mind seems to manifest itself in our increasing use of the Computer. This technology promises a playground for our human minds; without the limitations of our physical body and world. Cyberspace can be what we want it to be. Most people are throwing their minds through their computer screen into Cyberspace, leaving their vulnerable bodies with moods behind. This can in other words called as Escapism from Reality, lead to weaken our physical health. In the desire to understand the limitations of the physical body and world we stumble over the fundamental paradox that we cannot escape our body as long as we want to live. But because most of the people in the Western world don't believe in an immortal soul, our physical life is the only life we have; without our body we cannot exist. The split between mind and body; the desire to transcend the limitations of our physical body (Nietzsche) & (Plato) Plato also observes how soul lost its feathers, and fell to earth and how perception of beauty helps the soul to regain them. If we spent most of our time looking at a screen... Without knowing why, but convinced that this is the new step in human existence evolution, then we clearly have missed the point of why we exist.

I think, Hubert Dreyfus book forces people to (re)think the issues of teaching on the Net and (re)invent Internet teaching for the betterment of our society, if it ever be possible??

And moreover Hubert Dreyfus as a philosopher is not going to become involved in criticizing some specific uses of the Internet and defending others. His question is a more speculative one: What if the Net became central in our lives? What if it becomes what Joseph Nye, dean of Harvard University's Kennedy School of Government calls an irresistible alternative culture? To the extent that we came to live a large part of our lives on the line, would we become super or infra human?

In seeking an answer, we should remain open to the possibility that, when we enter cyberspace and leave behind our animal-shaped, shared social practices, emotional, intuitive, situated, vulnerable, embodied selves, and thereby gain a remarkable new freedom never before available to human beings, we might, at the same time, necessarily lose our ability to distinguish relevant from irrelevant information, lack a sense of the seriousness of success and failure necessary for learning, lose our sense of being causally embedded in the world and, along with it, our sense of

reality, and, finally, be tempted to avoid the risk of genuine commitment, and so lose our sense of what is significant or meaningful in our lives.

Indeed, in what follows, he hopes to show that if our body goes, so does relevance, skill, reality, shared social practices and meaning. At last he says. If that is the trade-off, the prospect of living our lives in and through the Web may not be so attractive after all.

I think, in his book he criticizes the false promises of high-tech. In his book Hubert Dreyfus is criticizing the too broad notions of embodiment by the technofantasizers such as Ray Kurzweil and Hans Moravec who are trying to stretch the notion of body into virtual territory. I fully agree with his criticism. (Cf George Johnson, Wired Magazine, January, 2000.)

Lovers of the Internet claim that we will soon be able to live our lives through a vast Network that will become more and more dense like a tissue or like an invisible ocean in which we will swim. They see this as a great opportunity.

Wired Magazine tells us:

Today's metaphor is the network – a vast expanse of nodes strung together with dark, gaping holes in between. But as the threads inevitably become more tightly drawn, the mesh will fill out into a fabric, and then – with no voids whatsoever – into an all-pervasive presence, both powerful and unremarkable... In the words of Eric Brewer, a specialist on computer security and parallel computing, it will be "a giant, largely invisible infrastructure that makes your life better."<sup>i</sup>

Given that many people now agree that, as things are going, we will soon live our lives through such a vast, invisible, interconnected infrastructure, we must surely ask: *Will* it, indeed, make our lives better? What would be gained and what, if anything, would be lost if we were to take leave of our situated bodies in exchange for ubiquitous telepresence in cyberspace? We can break up this question into two: How does relating to *the world* through teletechnology affect

our overall sense of reality? And what, if anything, is lost when human beings relate to *each other* by way of tele-technology? To answer these questions, we will first have to explore the more general question: what is telepresence and how is it related to our everyday experience of being in the presence of things and people? (Hubert Dreyfus, CHAPTER 3: DISEMBODIED TELEPRESENCE AND THE REMOTENESS OF THE REAL)

I agree with Hubert Dreyfus on the issues of hype about hyper-links. His first chapter clearly elaborates the \*mangel im Netz\* (sorry this is German) means scarcity, shortness, shortage and flaws.

Will technology alone is sufficient to bring the change in our society? I also agree, technology is a tool. But where are the teachers who would fully equip with competence to teach? And, competence can never be gained and attained in the Cyberspace. Competencies can only be gained in shared social practices, whether it is of poor or good quality. If it is poor, one should again to do it better by taking risks in shared situations.

I think most people are not familiar with the ongoing issues of lack of competent teachers in United States of America. Currently, there is a huge problem amongst educators on the issues of use of technology in classroom and education. In my strong view, the meaning of education day-to-day is falling down. The Internet is too far (at its infancy stage) to be used in teaching and education to gain knowledge and wisdom. It is really ironical that most people say, "Internet is a super-organism" that makes no sense to me, is totally nonsense; though I also use Internet to a great extent to contact people. Moreover I run and moderate six mailing lists, but I give credit to Hubert Dreyfus's reading of Heidegger, Merleau-Ponty to bring out the issues on which people were long pondering.

Philosopher Albert Borgmann points out the problem with distance education: "Billions of dollars are dedicated to educational hardware and software, but next to nothing is spent to get reliable information on the costs and benefits of the expenditures.... The rhetoric of recasting education within the framework of information technology is well attuned to the promise of technology and, in fact, to the implementation of that promise. The disburdenment from the constraints of time, place, and the decisions of other people is the unique accomplishment of modern

technology and finds its everyday realization in consumption. Supported by the machinery of technology, consumption is the unencumbered enjoyment of whatever one pleases. The pleasures of consumption require no effort and hence no discipline."(Albert Borgmann, *Holding On to Reality: The Nature of Information at the Turn of Millennium*, Chicago: The University of Chicago Press, p. 207.)

I think, when phenomenology and hermeneutics will be brought together to interpret technological issues in our society, then the result will be the same as what Hubert Dreyfus purposely does in his book.

His book also immensely answers and argues the question "Are the new ways that we have of communicating with one another – teleconferencing, telecommuting, telerobots and internet web cams – resurrecting the skeptical doubts that Descartes had raised and which we thought we had overcome?"

In distanceless cyberspace one can move easily and instantly from one experience to the next and indulge one's desires in numerous ways and, if the promises of cyber enthusiasts can be trusted, in every conceivable way before long. To the ease and instantaneity of movement corresponds the movers' ability to escape from the inertia and imperfection of their bodies. They can now reverse the course of Case in *\_Neuromancer\_* who had lost his ability to move in cyberspace: For Case, who would lived for the bodiless exultation of cyberspace, it was the Fall. In the bars he would frequented as a cowboy hotshot, the elite stance involved a certain relaxed contempt for the flesh. The body was meat. Case fell into the prison of his own flesh. [-Albert Borgmann, in "Heidegger and ethics beyond the call of duty-]

In my view, Cyberspace is embraced as the realm where one can live and celebrate the life. Life in Cyberspace is inauthentic and unreal. "Cyberspace has no fixed boundaries or places. We revel or despair amidst everything and nothing." [Albert Borgmann in "Opaque and Articulate Design"]

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Other benefits of the Internet tend to receive more attention. These have to do with the autonomy of persons. It is obvious that the Internet can help

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people who, for whatever reason, are bound to their homes, participate in social life. It is doubtless easier for people to turn to their personal computers than to go out and chat in cafes or lend books from libraries. So, the Internet has the potential to replace the lack of physical mobility of persons by virtual mobility (Ethics and the Internet, Anton Vedder, 2001)

Along the same line of thought on which Hubert Dreyfus is working, I am also developing an online project related to disembodiedness which can be found at

[http://www.angelfire.com/ks/learning/Disembodied\\_Telepresence\\_of\\_Arun.html](http://www.angelfire.com/ks/learning/Disembodied_Telepresence_of_Arun.html) The Project is known as The Disembodied Telepresence of Arun Tripathi as \_Socrates Mind\_ The issues regarding the project came to my mind, when I visited Heidelberg city in October 2001. On the webpage, I have pasted my several pictures. Most people are confused whether I am in Heidelberg or in Darmstadt or in Dortmund. What people have seen on the webpage, are my pictures not me and my living body and moods (according to Merleau-Ponty terms). What I want to show and elaborate via my webproject, that I will be elsewhere but disembodied telepresence will be any corner of the world. Thanks to WWW our mind goes every corner of the world, by leaving our vulnerable bodies with moods which is highly responsible for share social practices in our society. As we have noticed, some net enthusiasts rejoice that, thanks to progress in achieving such telepresence, we are on the way to sloughing off our situated bodies and becoming ubiquitous and, ultimately, immortal. When we are engaged in shopping, playing games, chatting on the Internet and such similar activities, our bodies seem irrelevant and our minds seem to be present

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wherever our interest takes us. In only shared social practices students can turn information into knowledge and practical wisdom.

Like embodied commonsense understanding, cultural style is too embodied to be captured in a theory, and passed on in courses. It is simply passed on silently from body to body, yet it is what makes us human beings and provides the background against which all other learning is possible. It is only by being an apprentice to one's parents and teachers that one gains what Aristotle call practical wisdom -- the general ability to do the appropriate thing, at the appropriate time, in the appropriate way. To the extent that we were able to leave our bodies behind and live in cyberspace and chose to do so, nurturing children and passing on one's variation of one's cultural style to them would become impossible. (Chapter 2: How far is Distance Learning from Education?)

### Fear and Trembling on the Internet

"The world's fundamental misfortune," the 19th century Søren Kierkegaard writes, "is ...the fact that with each great discovery ...the human race is enveloped ... in a miasma of thoughts, emotions, moods, even conclusions and intentions, *which are nobody's, which belong to none and yet to all*..." The great discoveries Kierkegaard is referring to are those made possible by the use of technology, and his concern is that the use of technology often results in human beings having a "destitute" relationship to the world. As exemplified for Kierkegaard by the popular press, the use of technologies not only transform face-to-face relationships, they create masks behind which people hide from one another. It is this latter point that is especially important. For Kierkegaard, what ultimately drives people to use technology, and to create masks through its use, is fear. "What rules the world," Kierkegaard writes, "is... the fear of humanity. Therefore this fear of being an individual and this proneness to hide under one abstraction or another... Ultimately an abstraction is related to

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fantasy, and fantasy becomes an enormous power... [T]he human race became afraid of itself, fosters the fantastic, and then trembles before it."

Although the prose may be somewhat oblique, what Kierkegaard recognizes is that traditional face-to-face encounters between individuals structure the dynamics of communication in ways that can be avoided through the use of various technologies. For instance, face-to-face communications often permit the immediate and dynamic clarification of the appropriateness of a particular piece of information. Moreover, the contexts of face-to-face communications generally impose a stronger concern for the veracity of information and instill in the participants a greater sense of responsibility both for *what* is communicated and *how* it is communicated. For Kierkegaard such elements are essential to our most "important" and characteristically human experiences. Using technology to avoid these experiences represents, for Kierkegaard, a fear of, and an attempt to flee from what it is that is most important and characteristic of our own humanity. Kierkegaard, like many others, sees an inherent tendency to transform human experience in the use of technology. However, what particularly concerns him is that using technology to mediate our communications permits us to reconstruct human relationships devoid of the experiences most important to our humanity. For these reasons Kierkegaard writes that, "[F]rom fears of the others, one dares not to be an I and therefore strives to become an impersonal something... This again has led to anonymity." The dynamic force behind contemporary technology is, for Kierkegaard, fear, which turns the impersonal, anonymity-enhancing powers of technology into an attraction.

It is the possibilities of anonymity permitted by the use of technology that, as Kierkegaard sees it, removes communication from what he refers to as "The Situation". The Situation represents for Kierkegaard that characteristic of individual existence that distinguishes the "individual" from the "crowd" or "the public". In "The Situation" you and I have the possibility of having an encounter not as anonymous agents, but as people with distinctive, accessible histories. Because of this, communication within "The Situation" can become individualized - my words can become words meant *for* you and words that you can recognize as being *from* me. When communication is removed from this context, the identity of those communicating becomes a mere abstraction, and words cease to belong to anyone in particular. In an anonymous exchange devoid of particular content, "all personal communication and all individuality have

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disappeared; no one says I *or speaks to a Thou*... It is the old sophistry of being able to talk – but not of holding a dialogue. For dialogue immediately posits: *Thou and I*, and such questions as require 'yes' and 'no'...

Impersonal, technologically-generated contexts become, for Kierkegaard, a "miasma" that offers a convenient escape for those who are unwilling to accept the often challenging, sometimes even distressing, contingencies and expectations that are unavoidable in face-to-face "dialogue" between individuals.

So, what is to be done with all of this? Kierkegaard's analysis offers an insightful explanation of why someone would write, as Maia Szalavitz recently did in a *Newsweek* editorial, that "I was immediately hooked by [the Internet...] a world where what you write – not how you look or sound – is who you are. It had definite appeal to someone who has always found socializing difficult." We often allow technological replacement of standard face-to-face activities, not because we fail to realize that the number of immediate face-to-face interactions is diminishing, but *because* the reduction is taking place. As Szalavitz suggests, we often appreciate not having to deal with the "difficulties" that traditional relational contexts require. But, is there not something "healthy" about learning to deal with those difficulties? Such questions encourage us to reconsider Kierkegaard's fundamental assumption that there are some experiences – perhaps constituted by or inherent in traditional face-to-face activities – which simply cannot be captured in and conveyed by technologically mediated communications. As Kierkegaard's "fear of humanity" thesis suggests, perhaps some of our attempts to reach beyond the legitimate framework of such relationships arise not because we are trying to preserve the relationships to an illegitimate extent, but because we are trying to subvert them and escape them. Consequently, Kierkegaard challenges us to question our motives for *wanting* to displace such activities.

If, as people other than Kierkegaard have agreed, technologically-mediated contexts really do foster a more impersonal atmosphere of communication, and if Kierkegaard is right that such impersonality and anonymity diminish important aspects of interpersonal relationships, then we should ask why we increasingly allow technology to transform our world in such ways. Kierkegaard's claim of a psychological attraction toward anonymity and interpersonal isolation – an attraction that comes from *within* the individual – suggests that it is insufficient to describe

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"technological reality" as "invading" the private space that is the individual. For Kierkegaard there is always complicity involved in the way we allow ourselves to be transformed by technological society. Technology, even in its negative forms, enters our lives as much by invitation as by invasion. From a Kierkegaardian perspective, technological society plays an enabling role for the "fearful" individual who chooses to hide behind the fantastic abstractions provided by technology.

With these remarks in mind, we will explore in more detail the Kierkegaardian critique of technologically mediated communications. We will compare the Kierkegaard's account of technology's appeal with that offered by Marcuse in an attempt to delineate the degree to which technology is responsible for dehumanizing our relationships with others. Finally, we will offer some positive recommendations for how technology can, in some carefully defined contexts, offer possibilities for communication that should be embraced and supported

Dreyfus Model of Learning and Skill Acquisition –Research of Dreyfus brothers on Skill and Learning (Hubert Dreyfus extensively discusses in the second chapter: How far is Distance Learning from Education?)

“Expertise is pattern discrimination and association based on experience. It is intuitive. There is no evidence you can reduce it to rules and theory. Hence, Artificial Intelligence probably can't be produced using rules and principles. That's not what intelligence is.”

The research of Hubert and Stuart Dreyfus demonstrated what has become a widely-accepted model of how individuals progress through various levels in their acquisition of skill. The Dreyfus brothers labeled individuals in these progressive stages as novice, advanced beginner, competent, proficient, and expert. These stages should be reflected in curriculum planning when considering at which appropriate levels residents should be introduced to particular skills.

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## What is a Skill? The Phenomenology of Learning (P/NP) by Professors Hubert L. Dreyfus and Stuart E. Dreyfus

People have claimed that computers can be programmed to exhibit skill in such domains as medical diagnosis, face recognition, and in playing games such as backgammon and chess.

Professor Hubert Dreyfus's publications include: *What Computers (Still) Can't Do*; *Being-in-the-World: A Commentary on Division I of Heidegger's Being and Time*; *Mind over Machine* (with Stuart Dreyfus); *The Power of Human Intuition and Expertise in the Era of the Computer*; and *On the Internet*. He thinks of himself as an applied philosopher reflecting on the bearing of the work of existential thinkers such as Soren Kierkegaard, Martin Heidegger and Maurice Merleau-Ponty on current cultural developments such as the attempt to create artificial intelligence, and the effect of the Internet and various technologies that facilitate action at a distance, on everyday human interactions.

Professor Stuart Dreyfus has authored or co-authored 3 books on dynamic programming, which is a method for determining the optimal sequence of decisions in problems involving a process evolving over time. The method assumes a "model" of the situation, meaning a rule describing how decisions affect the evolution of the process and what elements of the situation enter into the rule. Since the method is only as good as the "model," and the "model" often must be provided by an expert in the area modeled, his interest turned to how experts acquire decision-making skills and whether they can be expected to provide reliable "models." This led to work with his brother, Hubert, and to their joint book *Mind over Machine*. In which they argue that experts generally don't develop and use such "models." He is now investigating "model-free learning," a method by which a brain or a computer algorithm can successfully acquire a skill without ever developing a "model."

According to Stuart Dreyfus's model-free learning: For a dynamic (sequential) decision process, he considers a model being identification of what constitutes "state" (i.e., what, perhaps including past history, is needed to predict behavior), dynamics (for determining the effect of a decision given the state, and cost (for determining the cost, if any, of taking a decision given the state. The dynamics and cost rule can involve random variables. Model-free means determining the optimal decision

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policy for such a process be observing the results at each stage of the process of various decisions (experimentation) and adjusting decisions accordingly without using this observed behavior in order to learn what constitutes state, what are the dynamics and what rule produce the costs. That one can optimize decisions without attempting to learn a model is contrary to what adaptive control algorithms usually do, but he believes it is what brains do.

## The Phenomenology of Learning and Skill Acquisition

### Stage 1: Novice

In the beginning you learn to recognize objective facts and features, relevant to the skill. Characteristic of relevant elements are that they can be recognized context-free, i.e. without reference to the overall situation. The novice acquires basic rules to follow, acting upon those facts and features. The rules are also context-free, i.e. no notice is taken to the surroundings. On account of this the novice feels very little responsibility for the result.

### Stage 2: Advanced beginner

The novice needs to cope with real situations. When he does, he will improve his performance. This means that the advanced beginner does not learn by rules or verbal description, but by experience. "Through practical experience in concrete situations with meaningful elements, which neither an instructor nor the learner can define in terms of objectively recognizable context-free features, the advanced beginner starts to recognize those elements when they are present". The new elements are called "situational", i.e. they are relevant in a specific situation. The advanced beginner will now refer his decision-making to both the context-free and the situational elements. Like the novice the advanced beginner applies learned rules to recognized components, and therefore feels little responsibility for the result.

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### Stage 3: Competent

As time goes, there is no possibility to keep all elements (both context-free and situational) in mind. If the performer does, he will not focus on the goal. He needs to adopt a hierarchical procedure of decision-making. He also needs to organize the situation, choosing an organization plan, and then examine small set of factors. Accordingly the competent with a goal in mind sees a situation as a set of facts. The particular constellation of those elements decides a certain conclusion should be drawn, decision made, or expectation investigated. The competent feels responsible for his outcome, since he is more involved in the process than the novice and advanced beginner.

### Stage 4: Proficient

The proficient is deeply involved in his task. Certain features of the situation are more important than others. Step by step salient features change, and deliberation is not possible. The proficient has experienced similar situations in the past and so associates with present situations plans that worked in the past and anticipates consequences that previously occurred. The proficient respond to patterns without decomposing them into components, this is called "holistic discrimination and association". The proficient is recognized by involved and intuitive understanding followed by detached decision-making.

### Stage 5: Expert

An expert generally knows what to do base on mature and practiced understanding. The expert does not see problems in some detached way. The skill of an expert is a part of him and he is deeply involved in coping with his environment. "When things are proceeding normally, experts don't make decisions; they do what normally works". With enough experience in a variety of situations, all seen from the same perspective or with the same goal in mind but requiring different tactical decisions, the mind of the proficient performer seems to group together situations sharing not only the same goal or perspective but also the same decision, action, or tactic. At this point not only is a situation, when seen as similar to a prior one, understood, but the associated decision, action, or tactic simultaneously comes to mind. An ability to discriminate an immense number of situations is produced by experience. With expertise comes fluid performance.