Causal Layered Analysis — Deepening the future

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While macrohistory structures the study of the future through time, in this article, the future is deepened through causal layered analysis (CLA).

Causal layered analysis is concerned less with predicting a particular future and more with opening up the present and past to create alternative futures. It focuses less on the horizontal spatiality of futures—in contrast to techniques such as emerging issues analysis, scenarios, and backcasting—and more on the vertical dimension of futures studies, of layers of analysis. Causal layered analysis opens up space for the articulation of constitutive discourses, which can then be shaped as scenarios. In essence, CLA is a search for integration in methodology, seeking to combine differing research traditions.

Rick Slaughter considers it a paradigmatic method that reveals deep worldview commitments beneath surface phenomena.[1] Writes Slaughter:

> Causal layered analysis ... provides a richer account of what is being studied than the more common empiricist or predictive orientation which merely 'skims the surface'. But because mastery of the different layers calls for critical and hermeneutic skills that originate in the humanities, some futures practitioners may find the method challenging at first.[2]

This article intends to reduce the possible difficulties in understanding and using causal layered analysis by providing a methodological perspective to the context of critical futures research, namely, poststructuralism.

Causal layered analysis has been successfully used in a variety of workshops and futures courses in the last sixteen years. It is especially useful in workshops which bring together individuals either of different cultures or with different approaches to solving problems. It is best used prior to scenario building as it 'opens up' a vertical space for scenarios of different categories. Some of the benefits of CLA are that:

(1)   CLA expands the range and richness of scenarios (the CLA categories can be used in the incasting phase);

(2)   when used in a workshop setting, it leads to the inclusion of different ways of knowing among participants;

(3)   it appeals to and can be used by a wider range of individuals as it incorporates non-textual and poetic/artistic expression in the futures process;

(4)   CLA layers participant's positions (conflicting and harmonious ones);

(5)   it moves the debate/discussion beyond the superficial and obvious to the deeper and marginal;

(6)   it allows for a range of transformative actions;

(7)   CLA leads to policy actions that can be informed by alternative layers of analysis; and

(7)   CLA reinstates the vertical in social analysis, that is, from postmodern relativism to global ethics.

Causal layered analysis can be seen as an effort to use poststructuralism, not just as an epistemological framework—as developed by thinkers such as Michel Foucault—but as a research method, as a way to conduct inquiry into the nature of past, present and future.

Causal layered analysis and futures research

Among other mapping schemes,[3] I have divided futures studies into three overlapping research dimensions: empirical, interpretive and critical,[4] with a fourth perspective—that of action research—emerging. Each dimension makes different assumptions about the real, about truth, about the role of the subject, about the nature of the universe, and about the nature of the future.[5] My own preference has been for approaches that use all four—that contextualize data (the predictive) with the meanings (interpretive) we give them, and then locate these in various historical structures of power/knowledge—class, gender, *varna* and episteme (the critical). This entire process must, however, be communicative; that is, the categories must be derived through doing, interaction with the real world of others—how they see, think and create the future.

Even as it integrates multiple perspectives, causal layered analysis is well situated in critical futures research.[6] This tradition is less concerned with disinterest, as in the empirical, or with creating mutual understanding, as in the interpretive, than with creating distance from current categories. Such distance allows us to see current social practices as fragile, as particular, and not as universal categories of thought—they are seen as discourse, an understanding similar to paradigm but inclusive of epistemological assumptions.

In the poststructural critical approach, the task is not one of prediction or comparison (as in the interpretive), but of making units of analysis problematic. The task is not so much to better define the future but rather, at some level, to 'undefine' the future, to question it. For example, of importance are not population forecasts but how the category of 'population' has become historically valorized in discourse; we might perhaps ask, why population instead of community or people.

Taking a broader political view, we can also query why population is being predicted anyway? Why are growth rates more important than levels of consumption? The role of the state and other forms of power such as religious institutions in creating authoritative discourses—in naturalizing certain questions and leaving unproblematic others—is central to understanding how a particular future has become hegemonic. But more than just forms of power, such epistemes or structures of knowledge may frame what is knowable and what is not, and define and bind intelligibility. Thus, while structures and institutions such as the modern state are useful tools for analysis, they are seen not as universal but as particular to history, civilization and episteme (the knowledge boundaries that frame our knowing). They are situated.

The poststructural approach attempts to make problematic trends or events given to us in the futures literature, and not just to discern their class basis as in conventional neo-Marxian critical research. The issue is not only what are other events/trends that could have been put forth, but how an issue has been constructed as an event or trend in the first place, and the 'cost' of that particular social construction—what paradigm is privileged by the nomination of a trend or event.

Using other ways of knowing, particularly categories of knowledge from other civilizations, is one of the most useful ways to create a distance from the present. For example, in our population example, we can query 'civilization', asking how Confucian, Islamic, Pacific, or Indic civilizations constitute the population discourse. Scenarios about the future of population become far more problematic once the underlying category of the scenario, in this case population, is contested. At issue is how enumeration—the counting of people—has affected people's conception of time and relations with self, other and state.[7]

The goal of critical research is thus to disturb present power relations by making problematic our categories and evoking other places or scenarios of the future. Through this historical, future and civilizational distance, the present becomes less rigid; indeed, it becomes remarkable. This allows the spaces of reality to loosen and the new possibilities, ideas and structures, to emerge. The issue is less what is the truth but how truth functions in particular policy settings, how truth is evoked, who evokes it, how it circulates, and who gains and loses by particular nominations of what is true, real and significant.

In this approach, language is not symbolic but is constitutive of reality. This is quite different from the empirical domain wherein language is seen as transparent, merely describing reality in a neutral way, or the interpretive (where language is opaque), coloring reality in particular ways. By moving up and down levels of analysis, CLA brings in these different epistemological positions but sorts them out at different levels. The movement up and down is critical, otherwise a causal layered analysis will remain only concerned with better categories and not wiser policies. By moving back up to the litany level from the deeper layers of discourse and metaphor, more holistic policies should ideally result.

Central to an interpretive and critical approach is the notion of civilizational futures research. Civilizational research makes problematic current categories,

since they are often based on the dominant civilization (in this case, the West). It informs us that behind the level of empirical reality is cultural reality, and behind that is worldview.

While the postmodern/poststructural turn in the social sciences has been discussed exhaustively in many places,[8] my effort is to simplify these complex social theories and see if poststructuralism can be used as a method, even if it is considered anti-method by strict 'non-practitioners'.[9]

The poststructural futures toolbox

The first term in a poststructural futures conceptual toolbox is deconstruction. In this we take a text (here meaning anything that can be critiqued—a movie, a book, a worldview, a person—something or someone that can be 'read') and break apart its components, asking what is visible and what is invisible? Research questions that emerge from this perspective include:

DECONSTRUCTION

Who is *privileged* at the level of knowledge? Who *gains* at economic, social and other levels? Who is *silenced*? What is the *politics* of truth?

In terms of futures studies, we ask: Which future is privileged? Which assumptions of the future are made preferable?

The second concept is genealogy. This is history: not a continuous history of events and trends, but more a history of paradigms, if you will, of discerning which discourses have been hegemonic and how the term under study has traveled through these various discourses. Thus for Nietzsche, it was not so much an issue of what is the moral, but a genealogy of the moral: how and when the moral becomes contentious and through which discourses.

GENEALOGY

Which *discourses have been victorious* in constituting the present? How have they traveled through history?

What have been *the points* in which the issue has become important or contentious?

What might be the *genealogies of the future*?

The third crucial term is distance. Again, this is to differentiate between the disinterest of empiricism and the mutuality of interpretative research. Distancing provides the theoretical link between poststructural thought and futures studies. Scenarios become not forecasts but images of the possible that critique the present, that make it remarkable, thus allowing other futures to emerge.

Distancing can be accomplished by utopias as well—'perfect', 'no', or far away places—other spaces.

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DISTANCE

Which scenarios make the present *remarkable*? Make it *unfamiliar*?
*Strange*? *Denaturalize* it?

Are these scenarios in *historical* space (the futures that could have
been) or in *present*, or *future* space?
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The fourth notion is 'alternative pasts and futures'. While futures studies has focused only on alternative futures, within the poststructural critical framework just as the future is problematic, so is the past. The past we see as truth is in fact the particular writing of history, often by the victors of history. The questions that flow from this perspective are:

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ALTERNATIVE PASTS and FUTURES

Which interpretation of past is *valorized*? What histories make the present
*problematic*? Which vision of the future is used to *maintain* the present?
Which *undo the unity* of the present?
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The last concept—reordering knowledge—brings a different dimension to the future and is similar to much of the work being done in civilizational futures research.[10] Reordering knowledge is similar to deconstruction and genealogy, in that it undoes particular categories. However, it focuses particularly on how certain categories such as 'civilization' or 'stages in history' order knowledge.

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REORDERING KNOWLEDGE

How does the ordering of knowledge *differ* across civilization, gender and
episteme? What or Who is *othered*? How does it denaturalize current
orderings, making them *peculiar* instead of *universal*?
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These five concepts are elements in a poststructural futures toolbox. There is a strong link, of course, to other futures methods. Emerging issues analysis,[11] for example, at one level predicts issues outside conventional knowledge categories but it does so by disturbing conventional categories, by making them problematic; it reorders knowledge. The notion of the 'rights of robots', for example, forces us to rethink rights, seeing them not as universal but as historical and political, as hard-fought political and conceptual battles. It also forces us to rethink intelligence and sentience, posing the question: What is life? Thus, a futures method such as emerging issues analysis, conventionally used to identify trends

and problems in their emergent phase, should not merely be seen as a predictive method; it can also be a critical one.

A civilizational perspective

From a civilizational perspective, it is crucial to explore the guiding metaphors and myths we use to envision the future. This perspective takes a step back from the actual future to the deeper assumptions about the future being discussed, specifically the 'non-rational.' For example, particular scenarios include specific assumptions about the nature of time, rationality and agency. Believing the future is like a roll of dice is quite different from the Arab saying of the future: "Trust in Allah but tie your camel", which differs again from the American vision of the future as unbounded, full of choice and opportunity. For the Confucian, choice and opportunity exist in the context of family and ancestors and not merely as individual decisions.

In workshops on the future outside of the West, conventional metaphors such as a fork in the road, the future as seen through the rearview mirror, or traveling down a rocky stream, rarely make sense. Others from Asia and the Pacific see the future as a tree (organic, with roots and many branching choices), as a finely woven carpet (with God as the weaver), as a coconut (hard on the outside, soft on the inside), or as being in a car with a blindfolded driver (loss of control).[12]

Deconstructing conventional metaphors and then articulating alternative metaphors becomes a powerful way to critique the present and create the possibility of alternative futures. Metaphors and myths not only reveal the deeper civilizational bases for particular futures, but they move the creation/ understanding of the future beyond rational/design efforts. They return the unconscious and the mythic to our discourses of the future—the dialectics of civilizational trauma and transcendence become episodes that give insight to past, present and future.[13]

Causal layered analysis includes this metaphorical dimension and links it with other levels of analysis. It takes as its starting point the assumption that there are different levels of reality and ways of knowing. Individuals, organizations and civilizations see the world from different vantage points—horizontal and vertical.

Causal layered analysis

Causal layered analysis is based on the assumption that the way in which one frames a problem changes the policy solution and the actors responsible for creating transformation. Using the works of P. R. Sarkar and Oswald Spengler,[14] I argue that futures studies should be seen as layered, both deep and shallow. Its textured richness cannot be reduced to empirical trends.

The **first** level is the 'litany'—quantitative trends, problems, often exaggerated, often used for political purposes (overpopulation, for example)—usually presented by the news media. Events, issues and trends are not connected and appear discontinuous. The result is often either a feeling of helplessness (what can I do?) or apathy (nothing can be done!) or projected action (why don't they do something about it?). This is the conventional level of futures research which can readily create a politics of fear; this is the futurist as fearmonger, warning: 'the end is

near'. However by believing in the prophecy and acting appropriately, the end can be averted.[15] The litany level is the most visible and obvious, requiring few analytic capabilities. It is believed, rarely questioned.

The **second** level is concerned with social causes, including economic, cultural, political and historical factors (rising birthrates, lack of family planning, for example). Interpretation is given to quantitative data. This type of analysis is usually articulated by policy institutes and published as editorial pieces in newspapers or in not-quite academic journals. If one is fortunate then the precipitating action is sometimes analyzed (population growth and advances in medicine/health, for example). This level excels at technical explanations as well as academic analysis. The role of the state and other actors and interests is often explored at this level. While the data is often questioned, the language of questioning does not contest the paradigm in which the issue is framed. It remains obedient to it.

The **third**, deeper level is concerned with structure and the discourse/worldview that supports and legitimates it (population growth and civilizational perspectives of family; lack of women's power; lack of social security, the population/consumption debate, for example). The task is to find deeper social, linguistic, and cultural structures that are actor-invariant (not dependent on who the actors are). Discerning the deeper assumptions behind the issue is crucial here, as are efforts to revision the problem. At this stage, one can explore how different discourses (the economic, the religious, the cultural, for example) do more than cause or mediate the issue but constitute it: how the discourse we use to understand is complicit in our framing of the issue. Based on the varied discourses, discrete alternative scenarios can be derived. For example, a scenario of the future of population based on religious perspectives of population ('go forth and multiply') versus a cultural scenario focused on how women's groups imagine or construct birthing and child raising, as well as their roles in patriarchy and the world division of labor. These scenarios add a horizontal dimension to our layered analysis. The foundations for how the litany has been presented and the variables used to understand the litany are questioned at this third level.

The **fourth** layer of analysis is at the level of metaphor or myth. These are the deep stories, the collective archetypes, the unconscious, often emotive, dimensions of the problem or the paradox (seeing population as non-statistical, as community, or seeing people as creative resources, for example). This level provides a gut/emotional level experience to the worldview under inquiry. The language used is less specific, more concerned with evoking visual images, with touching the heart instead of reading the head. This is the root level of questioning. However, questioning itself finds its limits since the frame of questioning must enter other frameworks of understanding—the mythical, for example.

Causal layered analysis asks us to go beyond conventional framing of issues. For instance, normal academic analysis tends to stay in the second layer with occasional forays into the third, seldom privileging the fourth (myth and metaphor) layer. CLA however, does not privilege a particular level. Moving up and down layers we can integrate analysis and synthesis, and horizontally we can integrate discourses, ways of knowing and worldviews, thereby increasing the

richness of the analysis. What often result are differences that can be easily captured in alternative scenarios; each scenario in itself, to some extent, can represent a different way of knowing. However, CLA orders the scenarios in vertical space. For example, taking the issue of parking spaces in urban centers can lead to a range of scenarios. A short-term scenario of increasing parking spaces (building below or above) is of a different order than a scenario which examines telecommuting or a scenario which distributes spaces by lottery (instead of by power or wealth) or one which questions the role of the car in modernity (a car-less city?) or deconstructs the idea of a parking space, as in many Third World setting where there are few spaces designated 'parking'.[16]

Scenarios, thus, are different at each level. Litany type scenarios are more instrumental, social level scenarios are more policy oriented, and discourse/ worldview scenarios intend to capture fundamental differences. Myth/metaphor type scenarios are equally discrete but articulate this difference through a poem, a story, an image, or some other right-brain method.

Finally, who solves the problem/issue also changes at each level. At the litany level, it is usually others—the government or corporations. At the social level, it is often some partnership between different groups. At the worldview level, it is people or voluntary associations, and at the myth/metaphor it is leaders or artists.

These four layers are indicative; there is some overlap between the layers. Using CLA *on* CLA we can see how the current litany (of what are the main trends and problems facing the world) in itself is the tip of the iceberg, an expression of a particular worldview.[17] Debating which particular ideas should fit where defeats the purpose of the layers. They are intended to help create new types of thinking, not enter into debates on what goes precisely where.

Case studies

(1)   The Futures of Managers

In work with the International Management Centres Association, we[18] have developed the notion of questioning the future. Many managers—in the action learning GE corporation framework—are trained to question the product or process but rarely to contest the paradigmatic (the culture or worldview) basis of their questioning. Moreover, questioning remains problem-oriented. By questioning the factors of production, or the product or the process, the goal is to improve effectiveness and efficiency. Discontinuities, what might change, and generally, explicit and implicit beliefs about preferred, probable and possible futures are not addressed. Thus the deeper and broader basis of the questions is not confronted. By underscoring the cultural and ideological basis of questioning, depth can result, as it turns the analytic gaze on the questioner herself. Why are certain questions being asked? Is it because of pressures caused by globalisation, for example, a concern for efficiency and profit? If so, why?

By transforming the question, the solution as well as the type of possibilities of transformation that arise themselves change. For example, at the typical litany level the answer to the question of the futures of managers is how many managers will be needed in 2010. At a deeper level, one might question what type of skills

managers would need (the social level). At an even deeper level, one might question if indeed we will need managers. This could be because of dis-intermediation—the end of the middleman—and through networking transforming capitalism. At the myth/metaphor ground level, we might ask why and how do we organize our societies such that command and control are central; why have managers at all? What are some other ways to organize ourselves? What would be the operating myths in such an organizational structure? How then might the future differ?

(2)   Unpacking Overpopulation

Among the favorite problems that futurists, particularly of the Club of Rome variety, list in their 'why the world is ending' catalogue is overpopulation. Clearly this is not a minor issue; however, the problem in itself is nested in a particular worldview (humans seen as resource eaters instead of minds that create new solutions). Yet the problem is stated as if it is universally accepted, a-cultural, apolitical, an issue of technique. But with even a smattering of knowledge of others, we would understand and appreciate, for example, that Islamic perspectives are quite dramatically different. In that instance, people are seen not as populations but as families.

If we analyze overpopulation from a layered view, we distinguish alternative problems and thus solutions and strategies. Generally when overpopulation is considered the problem, the solution is to reduce the birth rate. Governments are generally considered the best source of solutions to this problem. Family planning clinics are set up (in South Asia, for example) with occasional periods of enforced sterilization (as occurred during Indira Ghandi's rule). More severe solutions include China's one-child policy. Radio and television ads exhort individuals to have fewer children, as this will make the nation richer, and the World Bank provides extensive finances for such projects. For example, the World Bank recently provided Iran with US$500 million for the purchase of prophylactics.

The worldview behind this is that smaller populations mean fewer people fighting for limited resources at the national and global level. But at the myth level, generally it is the fear of the Other—of teeming masses of Asians and Africans entering the OECD islands of prosperity. If there were fewer people, Asian nations would swiftly develop, and thus rapidly create a world liberal culture and an efficient and rational interstate system (without requiring a transformation in the interstate system or multiculturalism in the West).

If we see the problem not as overpopulation but as a lack of women's power in the public and private spheres, our solutions become quite different. If we see how patriarchy works to construct women as the nation, the mother of the country, and the repository of men's dreams, then issues of power and social organization quickly enter the analysis. Is it better to have commercials on family planning or to change laws so women have more power? Is development merely an issue of increasing productivity or one of transforming feudalism?

If the issue of overpopulation is constructed as one of gender and power, then the social and economic analyses shift (well, at least, one enters social and economic analysis). They become focused on equal opportunity, representation in local and

national power. At the worldview level, the issue becomes that of challenging patriarchy and current notions of the nation-state, as well as of economic models that do not see people as families or as an investment. At the myth level, the issue becomes that of imagining a future where women and men live in a partnership society.

Alternatively, the issue can be constructed not as overpopulation but as the use of scarce resources and energy efficiency. Given the disparity in terms of which nations actually use the world's resources, the issue is no longer that of overpopulation but of questioning environmental policy in OECD nations. In the case of funds send to Iran, from this alternative perspective, the money might be better spent on increasing the energy efficiency of Iran's economy. At the worldview level, the problem becomes that of challenging growth notions of progress, of economy, and of moving toward sustainability. It is not people that are the problem *per se* but the social organization of the capitalist (and communist) economy. At the myth level, this is about contesting limits and searching for justice and balance.

Undertaking a layered analysis also helps us uncover why specific policy prescriptions do not work. For example, media campaigns in the world will not be effective unless language is used that negotiates with other cultures' notions of the ideal family (in traditional society, for example, those of large, extended, mutually supportive) or that addresses social security. We know well that birth rates fall when individuals believe their future is secure, and there is social security (as evidenced by the Indian State of Kerala). Policy that does not touch the worldview level (traditional society) or the myth level (the image of a secure future) will be useless.

The point of the above analysis is that how and at what level one constitutes the problem changes possible solutions as well as the scenarios that derive from them. Each problem and solution is based on an alternative notion of policy analysis (the social and the political) as well as worldview (issues of grand structure, power) and myth (unconscious assumptions of how the world is or should be). Depending on what problem one buys into and what level one employs, scenarios of probable, preferred and possible futures change. If the issue is overpopulation then we imagine scenarios such as:

- population overrun, Asia marches into the First World, as we are seeing with the current global refugee crisis;

- fortress Europe/America—keep foreigners out; or

- overpopulation solved as UN/national policy works and Asian nations become richer.

If the issue is women's empowerment, then the scenarios that result from research on the futures of population look quite different:

- women become empowered, work in the public sector and birth rates drop;

- women develop local economies wherein population density becomes a resource as individual labor increases productivity, since the yoke of feudalism is lifted. Economic and cultural depression decreases; or

- women's power reduces the burden on men to prove their masculinity through propagation of species (or religion or clan, or…). Thus, a future that is not defined by the nation-state, religion and territory results. The policy implications also change. Instead of pushing condoms and structural adjustments (which reduce security for the aged), World Bank dollars might be better spent on human rights, gender adjustments and provisions for security for the aging.

(3)   The Futures of the United Nations

If we take the futures of the United Nations as an issue, at the litany level, news on the failure of the United Nations (the UN's financial problems and its failures in Bosnia, Somalia and Rwanda) is of concern.

Causes, at the second level in the UN example, include lack of supranational authority, no united military, and the perspective that the UN is only as good as its member nations. The solutions that result from this level of analysis are often those that call for more funding or more centralized power. In this case, the UN needs more money and power. Often, deeper historical reasons such as the creation of the UN by the victors of WW II are articulated as factors impeding structural change.

At the third level, the analysis of current UN problems shifts from the unequal structure of power between UN member states to the fact that eligibility for membership in the UN is based on acquiring nation status. An NGO, an individual, a culture cannot join the National Assembly or the Security Council. Deeper social structures that are actor-invariant include centre-periphery relations and the anarchic inter-state system. They are the focus at this level. The solution that emerges from this level of analysis is to rethink the values and structure behind the United Nations, to revision it. Do we need a super-ordinate authority, or are market mechanisms enough to manage our global commons? One could, at this level, develop a horizontal discursive dimension investigating how different paradigms or worldviews frame the problem or issue. How would a pre-modern world approach the issue of global governance (consensus, for example)? How might a post-modern (global electronic democracy)?

At the fourth layer of myth and metaphor, in the case of the UN, some factors that could lead to an exploration of alternative metaphors and myths include issues of control versus freedom, of the role of individual and collective, of family and self, of the overall governance of evolution, of humanity's place on the Earth. Are we meant to be separate races and nations (as ordained by the myths of the Western religions), or is a united humanity (as Hopis and others have prophesied) our destiny? At the visual level, the challenge would be to design another logo for the UN, perhaps a tree of life or a circle of beings (instead of just the flags of nations currently arrayed outside the UN headquarters).

(4)   UNESCO/World Futures Studies Federation course

While the previous examples were logically derived, the following are based on actual futures-visioning workshops.[19] A CLA was conducted at a 1993 UNESCO/

World Futures Studies Federation workshop in Thailand on the futures of ecology, where the issue of Bangkok's traffic problem was explored. Here are the results.

At the litany level, the problem was seen to be Bangkok's traffic and related pollution. The solution was to hire consultants, particularly transportation planners at local and international levels.

At the social cause level, the problem was seen as a lack of roads, with the solution being building more roads (and getting mobile phones in the meantime). If one was doing scenarios at this stage, then there would be scenarios on where to build roads, and which transportation modeling software to use.

At the worldview level, it was argued that the problem was not just lack of roads but the model of industrial growth Thailand has taken. It is the big City Outlook that has come down through colonialism: the city is better and rural people are idiots. Wealth is in the city, especially as population growth creates problems in the rural area. The solution then becomes not to build more roads but to decentralize the economy and create localism; that is, where local people control their economy and feel they do not have to leave their life and lifestyle. Psychologically it means valuing local traditions and countering the ideology that West is best and that Bigger is Better. New leadership and new metaphors on what it means to be Thai emerged as the solutions.

(5)   Faculty of Work, Education and Training, Southern Cross University, Australia

When CLA was used at a seminar (in the Faculty of Education, Work and Training at Southern Cross University in 1994) on the future of enrolments, the results were as follows.

At the litany level, the problem facing the University was declining enrolments. University professors saw it as an external problem. It was believed that the government should do something about it, for example, increase the number of scholarships.

At the social level, alternative positions were explored. Among them that the faculty was too busy doing research, that there was a job boom and students preferred to work rather than sit in institutions. It could also be that the pool of students had declined, suggested participants. The solutions that result from this level of analysis are often those that call for more research to investigate the problem—or to create a partnership with industry. A precipitating action in this case study was the changeover in government from Labor to Liberal, with the government seeing education less as a social concern and more in economic terms.

At the next level, we explore how different discourses (the economic, the social, the cultural) do more than cause the issue but constitute it, that the discourse we use to understand is complicit in our framing of the issue. At this third level, participants discussed how conventional education no longer fits the job market and the experience of the world students might get from community associations or high-tech TV. The solution that emerged from this level was the need to rethink the values and the structure of the educational institution, to revision it—quite different from the litany level where the issue was more student aid, or the second

level where the solution was partnerships between the university, government and industry.

At this level, one could develop a horizontal discursive dimension investigating how different paradigms or worldviews (and related ways of knowing) would frame the problem or issue. How would a pre-modern world approach the issue of teaching and learning?[20] How might a postmodern?[21]

At the fourth level of myth and metaphor, issues that arose were: does schooling free us or is it merely social control? Should education still be based on the Newtonian Fordist model of the factory or is education about transcendence, the return to mission, the re-enchantment of the world? At this level, the challenge is to elicit the root myth or metaphor that supports the foundation of a particular litany of issues. In this case, the metaphors used were that of the university as prison versus the university as a garden of knowledge. This latter root metaphor was then used to aid in the visioning process, of imagining and creating futures participants desire.

(6)   Senior Management, Southern Cross University

Later at the same university, but at a workshop with senior management, the issue again was financial, this time a drop in government funding for education. The solution that emerged from the social analysis (focusing on the history of the state and education) was to diversify the funding source, to ask where else money could come from. This is in contrast to the litany level where the focus was on how to convince the government not to change its policy or to hope that the Labor government would once again be elected. At the discourse/worldview level, discussions revolved around the changing nature of education—on the decreasing importance of traditional education, and increased emphasis on skills for a global economy. It was the change in worldview from knowledge as sacred, the idea of the scholar, and the idea of the scientist, to that of the education to create better skilled workers in a global competitive marketplace that became the focus of discussion. It was believed that it would have to be individuals that lobbied the government to rethink its educational policy, not just universities. At the last level, the issue became that of rethinking money and exchange, as well as finding other ways to manage and fund a university.

Of all the many causal layered analyses done, this was the most difficult and least satisfying, largely because it was hard to see money in layered terms. It was nearly impossible to move outside the administrative-capitalist discourse—the jobs and futures of all in the room depended on that discourse. In this sense, spending more time on emerging issues (or on what-if questions) that might change the funding nature of the university might have been a better approach. Still, some important scenarios were developed from the analysis:

➢   the collapse of the university system in Australia;

➢   a corporate/industry aligned university;

➢   a virtual university (expanding its customers and reducing its overheads); and,

> ➢ a return to core enlightenment values. These helped clarify alternative futures ahead, as well gain consensus on the preferred vision held by participants (a mix of a virtual university and core enlightenment values).

(7)   Queensland Advocacy Incorporated

This case study is based on a seminar conducted on Queensland Advocacy Incorporated, Australia, a systems advocacy organization for people with disability. The broad issue under discussion was the practice of housing people with disabilities in institutions. At the litany level, the issue was framed as abuse and neglect within institutions. Participants reported that the state's solution is often prosecution of offenders and the creation of better institutions for those with disabilities. The locus of action has been government, with the media providing images of positive actions the state is taking for people with disabilities.

At the social causes level, the key issue facing the disabled has been the anxiety and frustration resulting from an imbalance of power within institutional settings. The solution is thus focused on the individual rather than the social structure, taking the form of therapy for individuals with professionals providing the solution.

At the worldview level, it is fear of difference and individualism that is the central problem. People with disability are 'othered', seen as separate from 'normal' communities. At this level, the solution offered was consciousness raising, a softening of individualism and a strengthening of community. The actors who could make this change are people with disabilities themselves—particularly through their various organizations.

Finally, at the myth and metaphor level, it is the story of inclusion/exclusion, of who is normal and who is abnormal that was paramount, said participants. The negative story is that of the Cyclops—the image of the one fundamentally different from us, and thus to be feared and loathed.

The scenarios that resulted were:

• society changes so that people with disability feel welcome;

• genetic technology eliminates 'disabilities'—a negative scenario for people with disability since this continues the location of their body in the space of non-acceptance; and

• continued ghettoization with occasional feel good media-led campaigns.

8.   Australian Pharmaceutical Manufacturing Association, Sydney, September 2001—Industry futures.

This project conducted in 2001 saw Managing Directors of various organizations associated with Australia's pharmaceutical industry use CLA to develop scenarios for the industry. CLA was adapted here by replacing worldviews with the competing interests of stakeholders. The litany level consisted of an event such as a child not being able to get appropriate medicine, and the corresponding system view was the type of medical system in nation (socialist equity based, market based) and the relationship between the market, the state, the consumer. However, it was at the worldview level that the various organizations began to see their

divergent and competing interests. For example, since the project brief was not to enter alternative worldviews (the naturopathic, for example), the worldview level was redefined to consist of stakeholder interests. Thus, we inferred how the generic drug companies would see a particular litany, as in the example above, a child not getting medicine. For the generics it was that drugs were too expensive, and alternatives were not being promoted enough by government. For biomedical start ups, the issue was that there were not enough incentives—market based as well as in the education system—to promote innovative science. Funds were going toward equity solutions and not toward creating new types of drugs. For the pharmaceutical companies the problem was government control of which drugs were subsidized. From the government view, the issue was that the system was too focused on profits and not enough on basic needs. Thus, the methodological improvement was that the category of worldview became that of stakeholder.

This is one of the benefits of CLA when used in workshop situations: alternative readings of the method can lead to methodological innovation.

9.   *Unpacking the futures of poverty*

So far I have presented CLA based on my own case studies. The last two case studies are based on research by colleagues. First is Ivana Milojević's unpacking of poverty using CLA:[22]

> At the litany level poverty is measured only through economic and other quantitative indicators. The discourse tends to focus on the overwhelming nature of global poverty, for example, estimates that currently 53% of the world population is classified as poor and that around 3 billion of people live on less then US$ 2 a day.

> At this level, the strategies for elevation of poverty mostly focus on the poverty relief and aid packages. The common response among the affluent is either *apathy*—the problem of poverty is so huge that it cannot be resolved; *helplessness*—I wish there is something I/we could do; or *projected action*—the government, UN or NGOs should do something! Sometimes, magical solutions, such as genetically modified rice and other crops, are also discussed.

> At the level of social causes, processes such as colonisation, modernisation, globalisation, capitalism, urbanisation, as well as national and international governance are discussed. Other indicators of poverty, such as access to education, health care, are included but poverty is still primarily measured through economic indicators, such as GNP and income per capita.

> Strategies usually include suggestions on how to increase economic growth rate or labour productivity and how to encourage foreign investment. Other suggested strategies include investments in agricultural research, education, health, creation of welfare safety net and so on.

> At the worldview discourse, the main debate is whether economy needs to be regulated. Libertarians and conservatives argue against any or

against any significant interference into the free-market economy, and maintain that poverty can only be elevated through the free flow of capital and labour. Some also argue that the widening gap between the rich and the poor is "a natural, necessary and even desirable component and hallmark of the improvement of the human condition".[23] That is, poverty is the *normal* condition of men and if the rich were not allowed to get ever richer the poor would never have any chance to improve their conditions at all. This they could do through ever- increasing access to tools of ever-increasing productivity, through acquiring advanced technology and by 'jumping on the bandwagon' of the general development and economic growth that entrepreneurs create.[24]

Left-liberals, environmentalists and socialists argue that the global Casino capitalism is directly complicit in creation of poverty where previously there was none as well as that the unregulated, 'free' economy/markets is a myth. They stress that poverty is not created through production (or the lack of it) but because of the way profits are distributed. They argue that although global economic activity has grown at nearly 3% each year and doubled in size twice over the past 50 years the number of people living in absolute poverty hadn't been reduced at the same pace. In regard to the widening gap between rich and poor they argue that this indeed is a problem because in the future world where "two-thirds are poor and deprived of basics and promise, there will not be any peace and security".[25] Contrary to the focus only on the competitive aspects of the human nature it is the cooperation that is seen as the only possible way out. The future is seen as a collaborative enterprise in which "well-being of the poor demands on the cooperation of the rich, and the safety of the rich relies on justice for the poor".[26]

Discussions on this level also allow for an analysis of the ways in which the discourses themselves not only mediate issues but also constitute them. Or how discourses we use to understand poverty directly influence strategies that are being put in place. For example, if poverty is understood predominantly in terms of economic indicators, only economic measures are going to be suggested. The strategies will therefore not include measures that work against oppressive social structures that are complicit in creation and sustenance of poverty, such as, patriarchy, for example.

At the myth/metaphor level deeper cultural stories are discussed. For example, in which ways Western advertisement or other propaganda makes indigenous populations believe that their own culture, dress, food, or language are inferior as well as how are needs for products and lifestyles produced elsewhere created. Or, in which ways are local and global narratives creating a situation in which some become easy prey for economic exploitation by others.

At this level, we can see how deep beliefs, such as the belief that humans are inherently competitive and selfish, create a worldview that informs discussions that formulate policies that determine the actions (or

the lack of it). Or how these actions and policies differ from those that are formed by the worldview that emphasizes the role of communication, cooperation, altruism, caring and nurturing as the main themes in human evolution.

At this level we can also investigate deep cultural myths and their relevance for poverty creation and elevation. For example, in the Western history two basic narratives about the relationship between men and nature exist. One is the myth of "The Land of Cockaygne", the land of milk and honey, the 'golden age' where the nature provides abundant resources and the magic bowl of porridge never empties. This is the land of unlimited consumption, limitless choices, and ever increasing growth and progress. The current version is consumer based global capitalism where new wealth and products are constantly being created. This is being done both through technological and economic innovations as well as through the colonisation of nature, lands, peoples, and space.

Another myth is that of Arcadia, where nature is bountiful but humans do not indulge themselves beyond their needs. It is the idea and the image about the harmony between humanity and nature rather then the image of domination and control of the nature by humanity so as to produce society and civilization. Throughout European history, the Land of Cockaygne was especially popular during medieval ages and among lower classes, which sought to relieve the drudgery of their everyday lives "through the pure satisfaction of sensual pleasures".[27] Arcadia, on the other hand, originated in ancient Greece and was revived by Renaissance humanists that were "seeking to restrain the selfish tendencies of the rich and powerful classes".[28] Its modern version are today's ecological, New-Age and anti-globalisation movements.

Milojević thus begins with the data of poverty and then moves the discourse vertically to what she considers the foundational myths that structure the social. Using CLA, she provides an integrated and layered reading of how to understand poverty and how to create poverty free futures. As she writes: "the worst thing that the mainstream discourse and both the 'left' and 'right' worldviews do is to describe poverty in such terms that it becomes unthinkable to imagine poverty-free futures".[29]

10.   *Doctoral research, Helena Pederson — Animal ethics*

This final case study represents research conducted by Helena Pederson for her doctoral dissertation on animal ethics. Informed by moral philosophy, critical pedagogy and ecofeminist social analysis, Pederson intends to: "challenge the current order of anthropocentrism, human–centredness in education, and explore the rationales for an alternative approach to values educational research and practice that is more inclusive in character".[30] Her research is based on the *humane education* approach, contextualising human–animal relations within a broader framework of social justice and empirical data material from a pilot study, focusing on the nature of how human–animal relations within a Swedish primary school. I quote extensively from her analysis:[31]

At the *litany* level, we have seen that a number of issues, or 'weak signals', concerning animal ethics in education have recently emerged. In Sweden, one example is the Ministry of Agriculture's discussion materials on animal ethics. It appears as if this material has been produced as a superficial response from the authorities to a driving force at the *systemic* level; namely, a growing awareness among young people about animal ethics, that may have created a pressure on schools to address the issues. At the *world-view* level, there are different competing discourses: We may consider the debate concerning the role of the school as a value fostering actor in society rather than just an institution for transmitting knowledge, and, since democratic values are highly esteemed in this context, how the position of the student has changed accordingly, making student influence an impetus for change at schools.

Pederson then brings in an alternative discourse — the liberal market ideology — and argues that the animal ethics discourse is a compromise outcome of these two discourses. She writes:[32]

Another discourse is a liberal market oriented ideology that places responsibility on educational institutions to educate primarily for the job market, and also to find their own sponsors; thereby restricting the space in which paradigmatic critique can take place in schools. The animal ethics discussion material may be the compromised outcome of these two competing discourses.

At the level of *myth*, underlying metaphorical statements may be constructed, such as 1) 'The School as a Panacea': The school as a main socialisation instrument by which to achieve various desirable aims (notably aims of certain powerful actors in society, be they an elitist, patriarchal church, a government, or multinational corporations); and 2) 'The Cartesian Heritage': If animal exploitation is abolished, human welfare will be jeopardised, since the advancement of humanity is, and will continue to be, built on this exploitation.

Along with the Swedish case study, she offers an example from a charter school in California:[33]

Another example of a *litany* level issue is the Humane Education charter school that is currently being established in California. At the *systemic* level, this school has been spearheaded by the animal welfare movement together with teachers. The level of *discourse* may in this case involve an increased awareness of 'the violence link' according to which animal abuse has desensitising effects and may also lead to violence also toward humans; as well as an increased awareness of relations of power and oppression related to the idea of 'the other', be they humans or animals. One possible *metaphor* here is 'The Web of Life': All beings on Earth are mutually interconnected and interdependent on one another. However, for certain parties to whom the establishment of this school is controversial, there may be a fear that the human privileges that follow from the *discourse* of anthropocentric hegemony are threatened. The

dominant *metaphors* in this case may be 1) 'The Creation': Human beings' supreme role as masters of the world have been ascribed to us by some omnipotent, religious authority; 2) 'The Food Chain': Since human beings are predators at the top of the ecosystem, it is natural (or even inevitable) for us to use other species for our own purposes; or, alternatively, 3)'The Zero-Sum Game of Ethics': Ascribing moral status to animals undermines the value of human beings proportionally."

From these CLA sketches, she suggests resultant scenarios:[34]

Scenarios could range from shorter–term *empirical–systemic* levels, such as the widespread implementation of humane education in national curricula due to student pressure and alliances between new social movements and politics; to the longer–term levels of *world-view* and *myth/metaphor* where a 'wild card' scenario could lead to the concept of speciesism completely losing relevance and being replaced by new, hitherto unimagined forms of 'otherness', since technological development, unexpected global disasters and evolutionary forces may result in the existence of only one single species on Earth. A relevant *myth* here may be 'Nature's Revenge': A fear that morally wrong behaviour will strike back at ourselves in the end.

Difference as method

While there are numerous other examples, hopefully the above give an indication of the possible beneficial uses of CLA. The utility of causal layered analysis is that it can categorize the many different perceptions of realities while remaining sensitive to horizontal and vertical spaces. Often individuals write and speak from differing perspectives. Some are more economistic, others are concerned with the big picture; some want real practical institutional solutions, others want changes in consciousness.[35] CLA finds space for all of them.

The key methodological utility is that it allows for research that brings in many perspectives. Indeed, each perspective can be used as a driver, since it represents an interest group. As mentioned above, we have used this approach in the Australian Government Action Agenda Research for the Pharmaceutical and Bio-tech Industry. The worldviews of Big Pharma, small bio-tech, generic drugs, the Government and customers become drivers of the type of future that will result.

CLA has a fact basis, which is framed in history, which is then contextualized within a discourse or worldview, which in turn is located in pre- and post-rational ways of knowing, in myth and metaphor. The challenge is to bring these many perspectives to a particular problem, to go up and down levels, and sideways through various scenarios.

Like all methods, CLA has its limits. For example, it does not forecast the future *per se* and is best used in conjunction with other methods such as emerging issues analysis and visioning. It could lead to a paralysis of action: too much time spent on problematizing and not enough on designing new policy actions. For newcomers to the futures field, it may dampen their inner creativity, since it categorizes reality instead of allowing for a free-for-all visioning. For a few, it is

too difficult. This is especially so for empiricists who see the world as either true or false (and who insist on being right instead of being located in layers of reality) or postmodern relativists who reject the vertical gaze CLA implies. CLA endeavors to find space for these different perspectives. It does not reject the empirical or the ideational but considers them both along a continuum.

In this sense CLA, while part of the poststructural critical tradition, is very much oriented toward **action learning** and **integrated methodologies**. Answers are neither right nor wrong. Instead, a dialogue that uses multiple ways of knowing is sought between the different levels. Interaction is critical here. By moving up and down levels and sideways through scenarios, different sorts of policy outcomes are possible and discourse/worldviews as well as metaphors and myths are enriched by these new empirical realities.

Of course, if at a workshop a discussion does not fit into our neat categories of litany, social causes, worldview and metaphor and root myth, it is important to work with the individuals to create new categories. However, in general, these categories work because they capture how we think and categorize the world— they capture the differences that are us.

[1] Rick Slaughter, "Developing and Applying Strategic Foresight," *The ABN Report*, Vol. 5, No. 10, December 1997, 7-15.

[2] Ibid, 11.

[3] See, for example, Harold Linstone, "What I Have Learned: The Need for Multiple Perspectives," *Futures Research Quarterly*, Spring 1985, 47-61. He divides futures into the technical, organizational and personal. Also see, Eleonora Masini and Karin Gillwald, "On Futures Studies and Their Social Context with Particular Focus on West Germany," *Technological Forecasting and Social Change*, Vol. 38, 1990, 187-199. They take Linstone's model and apply it historically to Europe and the US, seeing futures as going through technical, organizational and personal phases. See also, Zia Sardar, "Colonizing the future: the 'other' dimension of futures studies," *Futures,* Vol. 25, No. 2, March 1993, 179-187. Sardar argues for a colonization/decolonization dialectic. The classic map of futures studies remains Roy Amara's division into preferred, possible and probable. See Roy Amara, "The Futures Field," *The Futurist*, February, April and June, 1981. See also, Clement Bezold and Trevor Hancock, *An Overview of the Health Futures Field*. Washington DC, Institute for Alternative Futures, 1993. Bezold adds the plausible to Amara's three categories.

[4] Sohail Inayatullah, "Deconstructing and Reconstructing the Future: Predictive, Cultural and Critical Epistemologies," *Futures*, Vol. 22, No. 2, 1990, 115-141.

[5] Sohail Inayatullah, "From Who am I to When am I?: Framing the Time and Shape of the Future," *Futures*, Vol. 25, No. 3, 1993, 235-253.

[6] For the classical treatment of this, see Rick Slaughter, "Towards a Critical Futurism," *World Future Society Bulletin*, July/August and September/October 1984, and Wendy Schultz, "Silences, Shadows, Reflections on Futures," in Jim Dator and Maria Roulstone, eds. *Who Cares? And How? Futures of Caring Societies*, Honolulu, World Futures Studies Federation, 1988. Rick Slaughter writes that, "critical futures study is itself an approach to futures questions that arises from a deep understanding of the dysfunctions of the Western worldview. This can seem threatening to those whose professional interests are bound up with ... the industrial growth ideology. But, in fact, the analysis of dysfunctions at this deep level is only a ground-clearing exercise. Beyond this the task is of exploring new domains of cultural possibility and potential." See Richard Slaughter, "Developing and Applying Strategic Foresight," 11.

[7] See Manas Ray, "India, Fifty Years On: Revisiting Modernity," research paper, School of Media and Journalism, Queensland University of Technology, Research paper quoting Sudipto Kaviraj, "Religion and Identity in India" *Ethnic and Racial Studies*, Vol. 20, No. 2, 1997, 331.

[8] For the best discussion, see Michael Shapiro, *Reading the Postmodern Polity*, Minneapolis, University of Minnesota, 1992.

[9] Postmodernists would reject the idea that deconstruction etc should be seen as a method. It is considered an anti-method, focused on problematizing not on providing recipes for policy. Moreover, there are no practitioners of postmodernity, if at all, the episteme of postmodernity practices on us.

[10] See, for example, the works of Ashis Nandy and Zia Sardar. Short essays by these two can be found in *Futures*. Ashis Nandy, "Bearing Witness to the Future," *Futures,* Vol. 28, No. 6/7, 1996, and Zia Sardar, "Natural Born Futurist, *Futures*, Vol. 28, No. 6/7, 1996. Also see the special issue of *Futures* on futures generations thinking, which takes a Confucian approach to futures studies, *Futures*, Vol. 29, No. 8, 1997.

[11] Emerging issues analysis is a method which identifies issues before they reach the trend or problem phase. It makes the assumption that issues follow an s- curve growth pattern from emerging to trend to problem. For more on this method, see the path breaking work of Graham T.T. Molitor, Public Policy Forecasting, 9208 Wooden Bridge Road, Potomac, Maryland 20854, USA.

[12] See, Sohail Inayatullah, "The Futures of Communication," *Futures* (with Samar Ihsan and Levi Obijiofor), Vol. 27, No. 8, 1995, 897-904, and Sohail Inayatullah, "Futures Visions of Southeast Asia: Some Early Warning Signals," *Futures*, Vol. 27, No. 6, 1995, 681-688;

[13] Johan Galtung, "Enactment of a Universal Drama—Ethnic Conflicts," *New Renaissance*, Vol. 7, No. 1, 1996, 13-15.

[14] See Richard Slaughter 1989, "Probing Beneath the Surface," *Futures*, October 1989, p. 454 (Slaughter offers the brilliant idea of different types of futures studies from the litany- based to the epistemological-based. Indeed, it was Slaughter's presentation at the World Futures Studies Federation conference in Budapest in 1990 that I noticed that his division of futures studies into levels was more than a typology but a potential method). P.R. Sarkar (Shrii Shrii Anandamurti), *Discourses on Tantra—vol. 1 and 2.* Calcutta, Ananda Marga Publications, 1992 (Borrowing from Tantra, Sarkar argues that the individual mind is composed of layers. The first layer is the body, then the conscious mind followed by three layers of superconscious mind). See, Sohail Inayatullah, "Oswald Spengler: The Rise and Fall of Cultures" in Johan Galtung and Sohail Inayatullah, eds. *Macrohistory and Macrohistorians: Perspectives on Individual, Social and Civilizational Change*, Westport, CT, London, Praeger, 1997 (Spengler argues that reality should be seen as deep and shallow, not as truth or falsehood).

[15] The Club of Rome's *Limits to Growth* and other studies are modern examples of this.

[16] In Pakistan, for example, parking spaces are rare—parking as a regulatory discourse is not active there.

[17] Most policy thus merely reinscribes the modern capitalist worldview. However, by noticing how a particularly litany is shaped by a particularly worldview, this allows us to enter alternative worldviews and articulate different policy statements based on them. At the same time, CLA in itself is part of a worldview—one committed to methodological eclecticism but in the framework of a layered, post-postmodern view of reality. It thus not only challenges the "totalizing nature of the empirical paradigm" (to use Paul Wildman's phrase) but as well the horizontal relativism of postmodernism.

[18] Thanks to insights from Gordon Prestoungrange and Robert Burke.

[19] See, Sohail Inayatullah, "Teaching Futures Workshops: Leadership, Ways of Knowing and Institutional Politics" *Futures Research Quarterly*, Vol. 14, No. 4, 1998, 29-36.

[20] Perhaps: Community learning, through more spiritual approaches that revive the ideas of initiation into meaning and culture systems that current educational institutions lack, wherein merely an application form suffices.

[21] Perhaps: Focused on distant learning or interactive learning where boundaries between student and teacher, text and context disappeared.

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[22] Ivana Milojević, "Poverty-Free Futures," *Social Alternatives*, Vol. 20, No. 2, 2001, 19-23.

[23] www.libertarians.org quoted in Ivana Milojević, "Poverty-Free Futures."

[24] Ibid.

[25] S.P. Udayakumar, "The Futures of the Poor," *Futures*, Vol. 27, No. 3, 1995, 347 quoted in ibid.

[26] Udayakumar, 347 quoted in ibid.

[27] D.W Hollis, *The ABC_CLIOI World History Companion to Utopian Movements*. Santa Barbara, California, 1998,14 quoted in ibid.

[28] Hollis, 14, quoted in ibid.

[29] Milojević, op cit., 23.

[30] Helena Pederson, 'Schools, Speciesism, and Hidden Curricula: The Role of Critical Pedagogy for Humane Education Futures', *Journal of Futures Studies*, Vol 8, No 4, 2004.

[31] Ibid.

[32] Ibid.

[33] Ibid.

[34] Ibid.

[35] For an exploration of these differences, see Paul Wildman and Sohail Inayatullah, "Ways of knowing, culture, communication and the pedagogies of the future," *Futures*, Vol. 28, No. 8, 1997, 723-741.