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CAUSAL LAYERED ANALYSIS

Poststructuralism as method

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Causal layered analysis is offered as a new futures research method. Its utility is not in predicting the future but in creating transformative spaces for the creation of alternative futures. Causal layered analysis consists of four levels: the litany, social causes, discourse/worldview and myth/metaphor. The challenge is to conduct research that moves up and down these layers of analysis and thus is inclusive of different ways of knowing. © 1998 Elsevier Science Ltd. All rights reserved

In the context of using poststructuralism as a research method, this article introduces a new futures research method—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 back-casting—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. Rick Slaughter considers it a paradigmatic method that reveals deep worldview commitments behind 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 hopes to reduce the difficulties involved in understanding and using

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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 six years. It is especially useful in workshops with individuals either of different cultures or different approaches to solving problems. It is best used prior to scenario building as it allows a vertical space for scenarios of different categories.

Some of the benefits of CLA are:

1. Expands the range and richness of scenarios;
2. When used in a workshop setting, it leads to the inclusion of different ways of knowing among participants;
3. 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. Layers participant's positions (conflicting and harmonious ones);
5. Moves the debate/discussion beyond the superficial and obvious to the deeper and marginal;
6. Allows for a range of transformative actions;
7. Leads to policy actions that can be informed by alternative layers of analysis;
8. Reinstates the vertical in social analysis, ie 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.

Types of futures research

In earlier articles, among other mapping schemes,³ I have divided futures studies into three overlapping research dimensions: empirical, interpretive and critical.⁴ Each dimension has different assumptions about the nature of reality, truth, the universe, the future and about the role of the subject.⁵ My own preference has been approaches that use all three—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*⁶ and episteme (the critical).

Causal layered analysis is well situated in critical futures research.⁷ This tradition is less concerned with disinterest, as in the empirical, or with creating mutual understanding, as in the interpretive, but with creating distance from current categories. This distance allows us to see current social practices as fragile, as particular, and not as universal categories of thought—they are seen as discourse, a term similar to paradigm but inclusive of epistemological assumptions.

In the poststructural critical approach, the task is not prediction or comparison (as in the interpretive) but one 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. For example, of importance are not population forecasts but how the category of 'population' has become historical valorised in discourse; for example, why population instead of community or people, we might ask?

Taking a broader political view, we can also query why population is being predicted anyway? Why are population 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 forms of power, are epistemes or structures of knowledge which frame what is knowable and what is not, which 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 too are situated.

The poststructural approach attempts to make problematic trend or events or events given to us in the futures literature and not only 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 as well as the ‘cost’ of that particular social construction—what paradigm is privileged by the nomination of a trend or event as such.

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 do Confucian, Islamic, Pacific or Indic civilizations constitute the population discourse? Scenarios about the future of population become far more problematic since 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.⁸

The goal of critical research is thus to disturb present power relations through 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 constitutive of reality. This is quite different from the empirical domain wherein language is seen as transparent, merely in a neutral way describing reality, or as in 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 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 (the West in this case). 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,⁹ 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’.¹⁰

The poststructural futures toolbox

The first term in a poststructural futures 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 travelled 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 travelled through history? What have been the points in which the issue has become present, 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.

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?

The fourth term 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 as below:

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 explodes the unity of the present?

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.¹¹ 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.

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?

These five concepts are part of a poststructural futures toolbox. There is a strong link, of course, to other futures methods. Emerging issues analysis,¹² for example, at one level predicts issues outside of conventional knowledge categories but it does so by disturbing conventional categories, by making them problematic; it reorders knowledge. For example, the notion of the ‘rights of robots’ 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 have 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 travelling down a rocky stream, rarely make sense. Others from Asia and the Pacific see the future as a tree (organic with roots and with many choices), as a finely weaved 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).¹³

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.¹⁴

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 Rick Slaughter, P.R. Sarkar and Oswald Spengler,¹⁵ I argue that futures studies should be seen as layered, as 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, eg) 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, usually meaning the State, 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 who warns: 'the end is near'. However by believing in the prophecy and acting appropriately, the end can be averted.¹⁶

The **second** level is concerned with social causes, including economic, cultural, political and historical factors (rising birthrates, lack of family planning, eg). 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 analysed (population growth and advances in medicine/health, eg). 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.

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, eg.). The task is to find deeper social, linguistic, cultural structures that are actor-invariant (not dependent on who are the actors). Discerning 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 here. For example, a scenario of the future of population based on religious perspectives of population ('go forth and multiply') versus cultural scenario focused on how women's groups imagine construct birthing and childraising as well as their roles in patriarchy and the world division of labor. These scenarios add a horizontal dimension to our layered analysis.

The **fourth** layer of analysis is at the level of metaphor or myth. These are the deep stories, the collective archetypes, the unconscious dimensions of the problem or the paradox (seeing population as non-statistical, as community, or seeing people as creative resources, e.g.). 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.

Causal layered analysis asks us to go beyond conventional framings of issues. For instance, normal academic analysis tends to stay in the second layer with occasional forays into the third, seldom privileging the fourth layer (myth and metaphor). 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 results 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 carless city?) or deconstructs the idea of a parking space, as in many third world settings where there are few spaces designated 'parking'.¹⁷

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 on capturing 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, that is, 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.¹⁸ 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.

What follow are five case studies which illustrate CLA. The first is a theoretical case study and the rest are from workshops held in Asia and Australia.¹⁹

Case studies

The futures of the United Nations

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

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 centralised 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 then 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 national 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 superordinate 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 the Hopi Indians 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 flags of nations as currently outside the UN headquarters).

UNESCO/World Futures Studies Federation course

While the previous example was logically derived, the following are based on actual futures—visioning workshops. 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 were 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 that of 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, which transportation modelling 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 had 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 ie 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—from the fourth level—on what it means to be Thai (valuing local self-reliance, agricultural and Thailand's pluralistic cultural traditions) emerged as the solutions.

Faculty of Work, Education and Training, Southern Cross University, Australia

When used at a seminar to 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, a range of 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 students' experience of the world that they 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 different than 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 premodern 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 are: 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-enchancement 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 that 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.

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 funding for education from government. 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 can we get money. 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 empha-

sis 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 people 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 rooms depended on that discourse. In this sense, spending more time on emerging issues that might change the funding nature of the university (or on what-if questions) might have been a better approach. Still, some important scenarios were developed from the analysis: (1) the collapse of the university system in Australia; (2) a corporate/industry aligned university, (3) a virtual university (expanding its customers and reducing its overhead) and (4) a return to core enlightenment values. These helped clarify the alternative futures ahead as well gain consensus on the preferred vision held by participants (a mix of a virtual university and core enlightenment values).

Queensland Advocacy Incorporated

The final case study was a seminar conducted on the 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. The solution by the state is often prosecution of offenders and the creation of better institutions for those with disabilities, said participants. The locus of action has been government with the media providing images of positive actions the state is doing for people with disabilities.

At the social causes level, it has been the anxiety and frustration resulting from an imbalance of power within institutional settings that has been the key issue facing the disabled. 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: (1) society changes so that people with disability feel welcome, (2) 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 (3) continued ghettoization with occasional feel good media-led campaigns.

Difference as method

While there are 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 economic, others are concerned with the big picture; some want real practical institutional solutions, others want changes in consciousness.²² CLA endeavors to find space for all of them.

Causal layered analysis allows for research that brings in many perspectives. It has a fact basis, which is framed in history, which is then contextualized within a discourse or worldview, which then is located in pre and post-rational ways of knowing, in myth and metaphor. The challenge is to bring in these many perspectives to a particular problem, to go up and down levels, and sideways through varied scenarios.

Like all methods, CLA has its limits. For example, it does not forecast the future *per se* and is best used in the conjunction with other methods such as emerging issues analysis and visioning. It can lead to a paralysis of action ie too much time could be spent on problematizing and not enough on designing new policy actions. Individuals might find themselves speculating on layer upon layer of meaning (as they can with scenarios, creating endless scenarios, instead of focusing on the plausible, probable or preferred) instead of focusing on the actors that hold particular worldview commitments and the structures and epistemes they inhabit.

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 others, it is too difficult. This is especially so for empiricists who see the world as either true or false (who insist on being right instead being located in layers of reality, who reject that there are deeper levels embedded in their litany) or postmodern relativists who reject the vertical gaze CLA implies, who insist that there are not layers of meaning but just different equal spaces, all horizontally situated.

These limitations can best be overcome by moving up and down layers of inquiry, by not getting bogged down by the demands of any ideological perspective. 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. Answers are neither right nor wrong. Rather a dialogue between the different levels is sought. 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.

Causal layered analysis is best used with other methods such as visioning which can help create preferred futures, emerging issues analysis, which can help challenge our conventional views—shallow and deep—of reality, and backcasting, which can help generate a plan of action.

Causal layered analysis provides a method in which one can explore levels of

responses, decolonise dominant visions of the future and create authentic—that are sensitive to the different ways women and men, civilisations, class, people with disabilities and those without (among other categories) know the world—alternative futures. CLA helps in creating a distance from the present, in deconstructing particular futures, exploring alternative orderings or knowledge, and genealogies of the present and the future. It does not however forecast the future, but perhaps, neither should futures studies.

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Notes and references

1. Slaughter, Rick, Developing and Applying Strategic Foresight, *The ABN Report* 5(10), 7–15 (December 1997).
2. *Ibid.*, 11.
3. See, for example, Linstone, Harold, 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, Masini, Eleonora and Gillwald, Karin On Futures Studies and Their Social Context with Particular Focus on West Germany, *Technological Forecasting and Social Change* 38, 187–199 (1990). 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, Sardar, Zia, Colonizing the future: the 'other' dimension of futures studies, *Futures* 25(2), 179–187 (March 1993). Sardar argues for a colonization/decolonization dialectic. The classic map of futures studies remains Roy Amara's division into preferred, possible and probable. See his, Amara, Roy, The Futures Field, *The Futurist*, February, April and June 1981. See also, Bezold, Clement and Hancock, Trevor, An Overview of the Health Futures Field. Institute for Alternative Futures, Washington DC, 1993. 29 pages. Bezold adds the plausible to Amara's three categories. For a compendium with articles on methods by Schultz, Masini, Bezold, Slaughter, Sardar, Boulding, Milojevic and many others, see Inayatullah, Sohail and Wildman, Paul, *Futures Studies: Methods, Emerging Issues and Civilisational Visions* (A MultiMedia CD-ROM Reader), Prosperity Press, Brisbane, 1998.
4. Inayatull, Sohail, Deconstructing and Reconstructing the Future: Predictive, Cultural and Critical Epistemologies, *Futures*, 22(2), 115–141 (March 1990).
5. Inayatullah, Sohail, From Who am I to When am I?: Framing the Time and Shape of the Future, *Futures*, 25(3), 235–253 (April 1993).
6. Caste.
7. For the classical treatment of this, see Slaughter, Richard, Towards a Critical Futurism, *World Future Society Bulletin*, July/August and September/October 1984 and Schultz, Wendy, Silences, Shadows, Reflections on Futures. In *Who Cares? And How? Futures of Caring Societies*, eds Jim Dator and Maria Roulstone. World Futures Studies Federation, Honolulu, 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 of exploring new domains of cultural possibility and potential. See Richard Slaughter, Developing and Applying Strategic Foresight, *The ABN Report*, 5(10), 11 (December 1997).
8. See, Ray, Manas, India, Fifty Years On: Revisiting Modernity, research paper, School of Media and Journalism, Queensland University of Technology, Research paper quoting Kaviraj, Sudipto, Religion and Identity in India, *Ethnic and Racial Studies*, 20(2), 331 (1997).

9. For the best discussion, See Shapiro, Michael, *Reading the Postmodern Polity*, University of Minnesota, Minneapolis, 1992. What makes the poststructural approach to research different is that whereas the general tendency of critical theory is toward a critique of ideology, based on the presumption of an authentic model of intelligibility, the genealogical imagination construes all systems of intelligibility as false arrests, as the arbitrary fixings of the momentary results of struggles among contending forces, struggles that could have produced other possible systems of intelligibility and the orders they support.... Rather than presuming an underlying system of order... [genealogy and other poststructural modes of inquiry] assume[s]... that every interpretation of the order is an arbitrary imposition.... There is no natural limit summoning the process of inquiry.(2) Others take a different approach, removing postmodernism from its Nietzschean traces and asserting that it is post-modern, that is, explicit statements about what can and should occur after modernity. See Griffen, David Ray, *The Reenchantment of Science and Spirituality and Society: Postmodern Visions*, State University of New York Press, Albany, 1988. In contrast, Zia Sardar takes a critical approach to postmodernity. In Sardar, Zia, *Postmodernism and the Other: The New Imperialism of Western Culture*, Pluto, London, 1998, Sardar, citing Zygmunt Bauman and Eric Hobsbawm, argues that postmodernism, unlike modernity, embraces, evil, 45. Since moral reality is totally relativised—all judgements are merely expressions of alternative discourses—any particular position carries the weight of any other position. What this perspective misses are the efforts of Michel Foucault and others who have argued that the question of the price of a political position cannot be removed from poststructural inquiry. Moreover, the issue of who gains and loses is not framed only in a limited class sense but also in the sense of which knowledge commitments, which worldviews, which definitions of reality remain naturalised and which are contested. For more on this see, Nandy Ashis, *Futures Dissents* in Sardar, Zia, *Rescuing All Our Futures: The Futures of Futures Studies*, Twickenham, Adamantine, 1998. Like Foucault, Shapiro's intention is to reveal the circulation of power, to lay it bare. Causal layered analysis presents a model of inquiry which systematizes such an effort. However, given that postmodernity now comes to us as an extension of modernity, it is not surprising that what is embraced is total relativism and not the unveiling of layers of meaning, of politics.
10. 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.
11. 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*, 28(6/7) (1996), and Zia Sardar, *Natural Born Futurist*, *Futures*, 28(6/7) (1996). Also see the special issue of *Futures* on Futures generations thinking, which takes a Confucian approach to futures studies, *Futures*, 29(8) (October 1997).
12. 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-pattern growth curve 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.
13. See, Sohail Inayatullah, *The Futures of Communication*, *Futures* (with Samar Ihsan and Levi Obijiofor), 27(8), 897–904 (October 1995), and Sohail Inayatullah, *Futures Visions of Southeast Asia: Some Early Warning Signals*, *Futures*, 27(6), 681–688 (July/August, 1995).
14. Johan Galtung, *Enactment of a Universal Drama-Ethnic Conflicts*, *New Renaissance*, 7(1), 13–15 (1996).
15. See Richard Slaughter 1989, *Probing Beneath the Surface*, *Futures*, 454 (October 1989), (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). Sarkar, P.R. (Shrii Shrii Anandamurti), *Discourses on Tantra—vol. 1 and 2*, Ananda Marga Publications, Calcutta, 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). Also see, Inayatullah, Sohail Oswald Spengler: *The Rise and Fall of Cultures* in Galtung, Johan and Inayatullah, Sohail Inayatullah, eds., *Macrohistory and Macrohistorians*, Praeger, Westport, CT, and London, 1997 (Spengler argues that reality should be seen as deep and shallow, not as truth or false).
16. *The Club of Rome's Limits to Growth* and other studies is a modern example of this.
17. In Pakistan, for example, parking spaces are rare—parking as a regulatory discourse is not active there.
18. 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.
19. As a new method, there are limits to the number of case studies that can be drawn upon. I have also used CLA at a World Futures Studies Federation, Centre Catalan de Prospectiva, government of Andorra

and UNESCO course on the futures of communication. See, Ihsan Samar, Inayatullah, Sohail and Obijifor, Levi, *The Futures of Communication, Futures*, 27(8), 897–903 (1995). Paul Wildman has used the method at workshops for the Singapore Civil Service.

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.
22. For an exploration of these differences, see Paul Wildman and Sohail Inayatullah, *Ways of knowing, culture, communication and the pedagogies of the future, Futures*, 28(8), 723–741 (October 1997).

Appendix

Causal layered analysis

The table below offers a systematic presentation of CLA as a method. It can be easily used as an overhead transparency.

Context

- How one frames the problem, creates the solution
- Language is not neutral but part of the analysis
- Wisest inquiry goes up and down levels of analysis and across constitutive discourses

Horizontal levels

- Identification of Problem (what is the problem)
- Associated Solution (what is the solution)
- Associated Problem-Solver (who can solve it)
- Source of Information of problem (where is the problem/solution textualized)

Vertical levels

- The 'Litany' official public description of issue
 - Problem seems unsolvable or it is up to government or power to solve it
 - Little personal responsibility
 - Often appearing as News. Mediated by interstate system and conventional accounts of reality. Short term approaches. Government solves the problem.
- Social Science analysis
 - Short term historical factors uncovered
 - Attempts to articulate causal variables (correlation, causation, theory and critique of other theories)
 - Often State or monopolistic interest group has ownership
 - Solution often in Civil society in interaction with other institutions (values with structures)—partnerships.

Often appearing as Op-Ed piece or in a conservative journal

- Discourse analysis/Worldview
 - Problem constituted by frame of analysis
 - Strong focus on the genealogy of a problem
 - Many frames: paradigms, mindscapes, discourses
 - Solution often in consciousness transformation, in changing worldview, in rethinking politics of reality.
 - Solution long term action based on the interaction of many variables
 - Often appearing in fringe/peripheral journals

- Myth/metaphor analysis
 - Problem constituted by core myth (unconscious structures of difference, basic binary patterns)
 - Solution is to uncover myth and imagine alternative metaphors
 - Often appearing in the work of artists and visions of mystics
 - Solution can rarely be rationally designed