Abstract
In times of unprecedented global change, effective governance requires effective policy making. The exponential rate of social change and the cultural, demographic, environmental, technological and economic challenges of our time are making this task increasingly difficult. The public sector is stretched, struggling to meet the competing and changing demands of citizens. The very speed and heterogeneity of social change – indeed, the changing nature of change itself – means that the task of governing is likely to become more difficult in the future. At the same time, precisely because of the increasing rate of change, governments around the world are pressed to manage innovation and change in innovative and more effective ways. To improve their chances of effective policy making, many governments across the world are using foresight methods to address the changing nature of change. Foresight-based methods have assisted businesses and governments in identifying the implications of current trajectories and alternative future possibilities, as well as in moving towards preferred futures. Businesses and governments have thus attempted to enhance their ability to influence the directionality of change as well as to best adjust to current and coming transformations. Indeed, governments and government agencies around the world have used a range of futures and foresight approaches since the mid-twentieth century. These approaches have all but accelerated towards the end of the twentieth and the beginning of the twenty-first century.

Parallel to this acceleration, innovative foresight methods have been developed and used to:

1. Improve “a social process of dialogue, networking, partnerships and collaboration among and between researchers, industry, policy makers and governments along with the other relevant stakeholders”;
2. More effectively and efficiently identify and meet society’s use of existing resources;
3. Develop inclusiveness and transparency during foresight processes;
4. Develop more tailored design processes for specific governmental stakeholders in order to address key issues faced by their organisation;
5. Interact and further “help guiding strategy, policy and decision making to anticipate and shape future developments”.

One such innovative method is Causal layered analysis (CLA) – “a method that focuses on opening up spaces for alternative futures” whilst simultaneously unearthing policy approaches “more likely to succeed”. CLA is both a theoretical and research framework which deepens analysis and foresight processes as well a tool for the redirection of politics and policies which increases the breadth of possible solutions. Based on numerous case studies – i.e., CLA processes implemented in workshops and within research projects in Australia and Asia – the presentation will outline key contributions that this innovative method makes for policymaking.

Keywords: Foresight, Public Policy, Future, Causal Layered Analysis, Case Studies
**Introduction**

... *directly needed for grand-policy crafting is foresight, the ability to foresee alternative futures and the likely consequences of different interventions with historical processes – so as to decide what to do now and what to plan to do in the future, subject to revisions depending on actual development.* (Dror, 2006: 88-89)

Due to a change in the speed and complexity of change itself, and due to societies facing complex and ever evolving challenges, policy-oriented foresight itself needs to change in order to address such complexity and uncertainty. Indeed, recent “post-structural turn in futures studies” (Ramos, 2014: 35) has shown that there is no “silver bullet” to address social challenges, rather, foresight practitioners need to “draw on a number of traditions and discourses as a ‘strategy mix’” (ibid.). The goals of policy-oriented foresight are to increase “the effectiveness of decision-making processes by contributing to systematic thinking in the policy realm about the uncertain future … [and] … to inform the development of policy that is ‘robust’” (van Asselt et al. 2014: 54). This means that successful and effective policy-oriented foresight needs to assist in improving “the probability of desirable ones [futures], decrease the probability of the undesirable ones, and gear up to coping with the inconceivable sure to come” (Dror, 2006: 90).

But how is this best done? What type of a novel ‘strategy mix’ can be successfully implemented in practice to support policy making?

In his latest article and based on a broad scan of the literature on foresight for public policy, futurist Jose Ramos (2014) argues that so far seven distinct traditions and discourses for anticipatory governance can be identified. These are (Ramos, 2014: 36):

1. Science, Technology and Innovation Foresight (STIF)
2. Anticipatory Democracy (AD)
3. Futures Commissions (FC)
4. Foresight Informed Strategic Planning (FISP)
5. Transition Management (TM)
6. Integrated Governmental Foresight (IGF)
7. Network Foresight (NF)

Ramos’s in-depth analysis demonstrates the existence of a great diversity of approaches and that “the best strategy to use depends greatly on context, needs and aims” (ibid.: 46). Foresight practitioners should thus, argues Ramos, rely on the rich legacy of existing work in the futures field and work from “the vantage point of traditions, discourses and experiments” (ibid.: 50).

Futurist Sohail Inayatullah (1990) identified earlier these main traditions within foresight/futures field as: predictive-empirical, cultural-interpretative and critical-discursive. In 2002 Inayatullah has added yet another, more recent approach: anticipatory action learning. And since 1998 (Inayatullah, 1998, 2002a, 2002b, 2004, Inayatullah & Milojević 2014) a theoretical and methodological framework has been developed – Causal layered analysis - that integrates these various traditions. While certainly no ‘silver bullet’, Causal layered analysis (CLA) has been shown to both open up spaces for alternative futures whilst simultaneously unearthing policy approaches “more likely to succeed” (Absar, 2014: 136).

Since late 1990s, CLA has been used by researchers, academics, workshop facilitators, educators, artists and policy-analysts and -makers. It is a theoretical framework but also a practical methodology easily adaptable to academic research and for workshop processes. The remaining sections of this paper present various case studies – policy oriented foresight activities and processes within which CLA was implemented.
Methodological approach

Causal layered analysis (Inayatullah, 2002: 55) 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”. CLA consists of four levels: litany (quantitative problems, trends, often exaggerated, often used for political purposes); social cause (interpretation given to quantitative data, i.e. STEEPLE analysis); discourse/worldview (that supports and legitimates or challenges social structure) and metaphor/myth (deep stories, collective archetypes, images).

CLA has been used as a stand-alone process as well as in conjunction with other futures methodologies. For example, CLA was combined with scenarios and scenario art, the futures wheel, the futures triangle, visioning, backcasting, strategic questioning, and strategy and policy development in a case study by Lederwasch (2014). In workshop settings, CLA has most commonly been used to “bring depth” into an analysis, and thus used “just after scenarios to ensure that scenarios have depth” (Inayatullah, 2004: 16). At the same time, research by Curry and Schultz (2014: 71) has shown, alternatively, “the scenario development process (and the development of alternative futures) does not begin until after the worldview and/or metaphor layers have been first constructed and then inflected to disrupt the prevailing view”. Thus CLA has been used both before and after the scenario development process, depending on the needs and context of the futures practitioners and participants. Further to this, CLA has been used in both analytic research as well as in workshop settings. The CLA process during workshops commonly follows the methodological approach described below:

1. An explanation of the method and its levels is given. Examples of previous case studies (e.g. Inayatullah, 2004 and Inayatullah and Milojević, 2014) are provided in workshop settings. Examples which show that policy responses are affected by how a problem is defined and framed are also given - such as a recent study of crime behaviour. When crime is defined/framed as a “beast”, for example, participants preferred funding to go to policing and jailing; but when crime was described using the metaphor of a “virus”, participants favoured funding for education and anti-poverty programs (Thibodeau et al., 2009).

2. Participants are then asked to individually, in small groups or collectively identify an issue or a problem at hand. The ideal size for the application of CLA is of 4–5 small groups with 5–6 participants each, although CLA has also been done individually or in larger groups. In ideal conditions, participants come from diverse backgrounds (i.e. reflecting age, gender, class and cultural diversity), as this assists with the articulation of different stakeholder/worldview positions. Problems or issues are sometimes decided in advance, in which case a facilitator undertakes preparation, gathering as much information as possible about the group and the organisation and conducting horizon scanning for the particular issue. Other usual, beneficial preparations (previous research, inquiry into participants’ backgrounds and their previous exposure to futures or CLA, composition of participant group, etc.) fall under the general guidelines needed for good facilitation.

3. Preparatory reading materials are sometimes provided before the workshop in order to speed up the in-workshop CLA process. Reading materials cover previous CLA case studies or information about the issue in question (statistical data, demographic reports, economic and other projections, futures scenarios, media coverage, policy documents, strategic plans, annual reports, public announcements, comparative analyses, environmental scans, journal articles, and other relevant material). Facilitators of CLA workshops, however, found that “whilst it was vital that the facilitators had a good
4. Litany identification comes after the general introduction to the workshop (i.e. getting to know the participants and their level of exposure to futures) and selection of an issue (individually and collectively). Curry and Schultz (2014: 74) report regarding this step that “CLA begins with energy and humour: our participants found generating the ‘litany’ or buzz of common wisdom and events around an issue easy and at times amusing”. Litany-generating starters have included: “What has been reported in the headline press and in the media generally about the issue or problem at hand?”. “Create a provocative newspaper headline about the issue.”, “The litany, by and large, generates feelings of helplessness, apathy and calls for government to do something. Are there any concrete manifestations of this regarding the issue/problem?”, or “Imagine an article penned about [your] organisation today. What would the subject matter be? What publication might it be found in? Would it be positive or negative? And, ultimately, what carefully crafted words would be chosen for the title that would accurately convey the organisation’s story?” (Spencer and Salvatico, 2014: 81).

5. After identification of an issue and litany statements (including facts and figures; ‘the data’) participants are asked to identify the causality behind the litany, by using the STEEP method (Palmer & Ellis, 2014: 424) for example. Questions generating social causes-level analysis include: “How is the litany, or the problem/issue at hand, usually explained? What are some of the more common and some of the less common interpretations of the underlying causes of the issue? What systemic factors (trends or drivers of change) do you believe are driving the [issue] described by the litany?" (Conway, 2014: 466) This activity generally identifies “initial (and potentially superfluous) first-level causes” (Spencer and Salvatico, 2014: 81) but may also generate discussion on multi-causalities. Analysis thus sometimes go deeper and wider, depending on the participants’ background knowledge and previous foresight training.

6. The third layer of CLA focuses on identifying stakeholders’ positions, generational perspectives or worldview perspectives. For example, Sykes-Kelleher (2014: 225) has identified “worldviews and discourses behind the current global governance system” and “unrepresented nations’ and peoples’ preferred global governance future”. Questions generating worldview analysis include: “What assumptions are driving the social causes? What would be some key stakeholders perspectives on the issue? How does the issue affect various generations now and into the future? Whose perspective is dominant? Whose voice is not being heard?” (Conway, 2014: 466).

7. Like the worldview level, the last layer of CLA is also sometimes more difficult for participants to uncover; for example, they may struggle with differentiating between the worldview and myth/metaphor layers. As this level is about the unconscious dimensions of the problem or issue it lies more in the domain of the artists and storytellers or of those who “normally live close[r] to Chaos” rather than in the domain of “truth-holders” who maintain order (Graves, 2014: 54), such as, perhaps, policy-makers. Still, myths and metaphors can be identified through the presentation of images, symbols and stories and/or through artistic interpretation by the participants (drawings, drama, evoking of fables and archetypes). Almost “everyone understands the power of images, needing little convincing of the old adage “a picture is worth a thousand words”” (Spencer & Salvatico, 2014: 83). Spencer and Salvatico (ibid.: 83) found that “attaching visual meaning and expressions to an organisation’s unfolding story allows teams to deepen and strengthen the guiding narrative” and that “representing information in a visual or graphic form has been proven to deepen learning and help participants make large-scale connections”. CLA has been used in a drama context to analyse the actions, reactions and dialogue of characters (individual and group) in a crafted performance
Myth/metaphor-generating questions include: “Can you come up with deep stories, archetypes or popular fables that relate to the issue in question? How does the issue feel? Can you create analogies or culturally-linked metaphors which describe how each worldview is experienced and felt” (Terranova, 2014), “Can you come up with some images or symbols that best represent the issue and how you feel about it? What other myths and metaphors might we employ?” (Spencer & Salvatico, 2014: 85). The process often leaves participants surprised and sometimes even with “a mystical/mythical feel to being part of something special” (Burke, 2014: 351). Not uncommonly, it is this fourth layer of the myth/metaphor analysis that remains “the most compelling aspect” of projects and analysis (Kuah, Chin & Huifen, 2014: 323).

8. Inayatullah often leads participants through a role-playing game as well. In this process, the participants are divided into four groups, each of which is assigned to one of CLA’s layers: the litany, the system, the worldview and the metaphor. An issue is selected, either future or current. The litany group articulates a number of headlines. The system group articulates causal explanations of the issue. The worldview group is broken down into the relevant worldviews of stakeholders. The last group is responsible for developing metaphors that explain the issue or challenge it, thus creating a new litany. The game goes back and forth between the groups with the intention of finding new strategies and scenarios. The facilitator asks each group, in real time, “Does the system support the strategy?” and “Is there a supportive metaphor?” Then, as a new strategy or narrative emerges, the varied stakeholders are questioned. They are asked to respond. The process goes through a number of rounds until either the litany headlines are accepted or new litanies based on new metaphors and supportive systemic strategies emerge. This gives participants a real-time understanding of CLA. They then go through a more rigorous academic analysis of the issue.

Results, discussion and implications

Participants and researchers who implemented CLA have reported the following results:

“CLA had a profound effect, like a curtain being lifted (to reveal) the huge leap we had to make... we realised we couldn't just continue doing what we were doing”. (CLA workshop participant, quoted in Terranova, 2014: 378).

“For the facilitator, the strength of CLA lies in its ability to broaden and deepen discussion and understanding, to move from the obvious and superficial to the deeper levels of beliefs, experiences and emotions. This can be achieved in a non-threatening, non-judgmental manner that leads participants to a wider range of policy options than would otherwise have been possible”. (Terranova, 2014: 377).

“CLA provides a valuable interpretive framework for the deconstruction and reconstruction of complex social issues. As a tool for deconstructing social issues, CLA provides a clear methodology, which extends analysis and interpretation beyond a more rudimentary thematic analysis and as illustrated is well suited for the deconstruction of qualitative data sets. A clear process to the analysis can serve to strengthen and further legitimise the methodology and as such further encourage cross-disciplinary adoption”. (Bishop & Dzidic, 2014: 444).

“CLA process allows the development of strategy across all four levels. This gives back to me a sense of agency”. (Black, 2014: 141).

“In analysing the multiple layers of the human experience, CLA leads to a fuller understanding of the present, and a richer imagination of desired futures”. (Kuah, Chin &Huifen, 2014: 323).
“CLA is an important tool in the futures field as it helps practitioners develop positive images of the future that are anchored in the real-life aspirations of those stakeholders engaged in the work of social change. CLA recognises that human consciousness itself is the main agent in social change. Institutions, too, as a working product of many consciousnesses, have the capacity to develop foresight in order to best cater to future needs—be they economic, social or personal. As Sohail Inayatullah points out, it is through the interaction of self, other and environment that innovation “from the edge” can occur”. (Bussey, Bjurström & Sannum, 2014: 518).

“CLA is a great entry pathway for developing a more comprehensive appreciation of the need for a new global consciousness which is backed up by new ways of thinking and behaving”. (Black, 2014: 142).

Three concrete examples show ways in which CLA has contributed to policy-oriented foresight:

**CLA case study 1: Australian agricultural policy** (Researchers: Brian J. Bishop, Peta L. Dzidic and Lauren J. Breen).

<table>
<thead>
<tr>
<th>Table 1. CLA</th>
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<tr>
<td><strong>LITANY</strong></td>
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<td><strong>SOCIAL CAUSES</strong></td>
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<td><strong>WORLDVIEW</strong></td>
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<td></td>
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<tr>
<td><strong>MYTH/METAPHOR</strong></td>
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This case study has helped understand ‘the discrepancy between ‘top down’ and ‘bottom up’ or local decision making and has thus suggested appropriate strategies as to how this can be remedied. These included genuine engagement and distributive and procedural justice (Bishop et al., 2014: 171). In a nutshell “CLA enabled the possible transformation from disengaged and disempowered rural communities to communities that are actively, genuinely and meaningfully engaged in determining their futures” (ibid.).

**CLA case study 2: Exploring the socio-economic aspirations of Singaporeans** (Researchers: Adrian W. J. Kuah, April Chin, and Bai Huifen).

For this case study CLA was chosen as a foresight methodology in order to “address and attempt to reconcile the tension between growth and equity as it relates to Singaporeans’ socio-economic aspirations” (Kuah et al., 2014: 324). It was implemented to complement broader discussion among Singaporeans on how Singapore society and economy should evolve and grow. Specifically: the three main objectives of the project were to: (1) Evaluate the effectiveness of CLA as a foresight methodology; (2) Build capabilities in the Singapore government foresight community through the actual application of CLA to policy issues; and (3) Develop a whole-of-government appreciation of the socio-economic aspirations of Singaporeans through inter-agency collaboration (ibid.: 324-325). Courtesy of CLA processes the implications for government and policy purposes were that “the emphasis will
shift from measurable indicators of success such as GDP growth, to a more whole-of-society, qualitative notion of progress” (ibid.: 336). Another insight was that “the role of government will need to broaden from one of ‘regulator, arbiter and provider’, to a more facilitative role by convening and providing the platforms for citizens to explore, initiate and collaborate” (ibid.: 337). This includes the shift in the mind-set from “one of control to one of influencing for outcomes” (ibid). Or, in other words “while the government remains largely the steward of the public commons, there will be a need to rethink authority over and accountability of the collective interests of the community and country” (ibid.). CLA helped expose narratives that were already ‘out of sync’ with certain segments of Singapore’s society and facilitated development of alternative, counter-narratives. CLA also helped highlight that even updated alternative narrative is likely not going to “consist of one definitive myth, given the increasing diversity of Singapore’s society”. Lastly, CLA has brought to the open what workshop participants already knew intuitively: “that national narratives are not and cannot be monopolised by ‘civil servants’” (ibid.), rather, they are created by all members of a society.

CLA case study 3 Demystifying the Hawala System using Causal Layered Analysis (Researchers: Umar Sheraz and Nauman Farooqi)

CLA lens was implemented in this case study in order to better understand one of the primary forms of the informal economy—the Hawala, a trust-based system used to transfer funds across countries and continents. CLA was applied to six different stakeholders’ perspectives and four different socio-economic classes perspectives: workers/shudra (beneficiaries of Hawala), warriors/ksatriya (international and local policing systems), intellectuals/vipra (the economists and policy-makers) and the merchants or accumulators of capital/vaeshyan (Hawaladars as well as formal value transfer systems like banks and money changers). CLA outlined the changing nature of the Hawala system and the challenges it faces, whilst simultaneously unearthing a preferable policy solution for value transfer systems. Such policy solutions are based on revaluation of informal value transfer systems in the global economy, beyond “sectorial silo focus” (Sheraz and Farooqi, 2014: 341). The findings (which integrate multiple narratives) are presenting in the table below:
Table 5. Integrating the narratives

<table>
<thead>
<tr>
<th>LITANY</th>
<th>Formal Value Transfer Systems</th>
<th>Informal Value Transfer Systems</th>
<th>Warriors</th>
<th>Intellectuals</th>
<th>Bottom of the Pyramid</th>
<th>Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawala is illegal/against the system</td>
<td>Hawala is pro-poor and trust-based</td>
<td>Hawala is used for money laundering and terrorism support</td>
<td>Hawala is illegal/against the system</td>
<td>Maximum value for my money</td>
<td>Value Transfer without ID and tax deduction is now available to passengers at all major airports</td>
<td></td>
</tr>
<tr>
<td>SOCIAL CAUSES</td>
<td>Command and control</td>
<td>Policing, lock and key</td>
<td>Custodians of Legislation, Legitimization, Ethics and Morals</td>
<td>E-money, IVTS</td>
<td></td>
<td>A melting pot of cultures and ideas</td>
</tr>
<tr>
<td>Want a piece of the pie</td>
<td>Pariahs, Robin Hoods</td>
<td>People with hammers view everything as a nail (The formal financial sector is an exception)</td>
<td>Short-term, litany focused, not transformative (Paint over dirt)</td>
<td>If they let down their own, what will they do for me?</td>
<td>Looking beyond predictable possibilities</td>
<td></td>
</tr>
<tr>
<td>WORLD VIEW</td>
<td>The world is our fortress</td>
<td>The higher the wall of the fortress, the deeper you need to dig</td>
<td>To make the fortress stronger, we need to have higher walls</td>
<td>When you live in a river, it is not wise to mess with the alligators</td>
<td>Financial apartheid</td>
<td>Build a door in the wall</td>
</tr>
<tr>
<td>MYTH &amp; METAPHO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Why is there a wall in the first place?</td>
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Conclusions

As has been shown in these and dozens of other case studies (Inayatullah, 2004, Inayatullah & Milojević, 2014) CLA enables the exploration of multiple causalities, which is crucial in “a complex world where we have to shift from causal determinism to a network-based approach [and wherein] there is a greater need for sense-making to monitor and adapt to emergence” (Kuah, Chin & Huifen, 2014: 338). By surfacing “deeply buried and taken-for-granted worldviews, myths and metaphors” this theoretical framework and research method has helped develop “a richer design of alternative futures that incorporates the socio-cultural and psychological dimension” (Kuah, Chin & Huifen, 2014: 336). By moving up and down the four layers “an appreciation of different ways of knowing and alternative responses” (Lederwasch) so important in our diverse world is encouraged. As a relatively new futures research method” and despite some of its limitations (Milojević, 2014: 554-555), CLA has shown its “utility… in creating transformative spaces for the creation of alternative futures” (Inayatullah, 1998: 815). Most importantly, it has helped deepen policy oriented foresight and public-policy oriented strategies, assisted in improving the probability of desirable futures whilst providing a flexible and novel ‘strategy mix’. 
References


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1 FTA Conference Call for contributions
2 Ibid.
4 Analysis of Social/demographic, Technological, Economic, Environmental, Political, Legal and Ethical Factors.
5 CLA is used differently as a research methodology, description of that process is beyond the scope of this paper.