MAKING A DIFFERENCE THROUGH E-GOVERNANCE FROM BELOW: AN EVALUATION AND FUTURE DIRECTIONS

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ABSTRACT

This paper discusses a process evaluation of a project funded by an Australian Research Council Linkage Project with the South Australian Department of Health, Flinders University, University of South Australia and Neporendi Forum Inc, an Aboriginal NGO. The co-researchers comprising academics across a range of disciplines, service users and providers address wellbeing in terms of their lived experiences of what works, why and how. The outcome is the development of prototype software that is co-owned by the partners and has been tested out by the participants. The process has taken knowledge management beyond storage and retrieval of information to include the perceptions and meanings of the stakeholders. It has potential to enable costing the pathways in social justice terms, in order to make a case for participation both as 'a means and an end' to support wellbeing within particular contexts. The software can be updated as it is used and it has the wider potential to be applied in a range of governance contexts. The use of meaningful metaphors designed by the participants could a) tailor the software to different user and provider groups by b) enabling the participants to collect data on their areas of concern.

User-centric design is based on telling narratives and exploring perceived ontologies or meanings. The next step is to analyze the discourses for patterns (Christakis and Bausch 2006 and Van Gigch 1991, 2003 on meta modelling). Making sense of perceptions is through identification of patterns and making meaning/sense of the patterns based on weighting the choices. The number of times particular themes were raised or particular service choices made equals a weighting.

We used a pluralist approach and avoided a 'one size fits all' approach by using a) participatory action research and questioning, b) soft systems mapping, c) critique informed by Critical Systems Thinking and a Design of Inquiry System and d) social cybernetics applied to 'if then' scenarios.

The approach demonstrates the ability of people to design the content of the software and thus to engage in participatory design, e-governance and e-democracy which could be used to extend democracy to the marginalized and socially excluded. In the Australian context these include Aboriginal Australians, refugees and young people without the vote who will have to live with the decisions in the future. The current research is only with Aboriginal stakeholders aged 18 and above and it needs to be extended in the next phase to include younger Australians.

I will use most of the presentation time to give a practical demonstration of the software and to discuss its potential application.

1.   INTRODUCTION: WHAT IS THE PROJECT ABOUT?

This paper discusses research that is funded by an Australian Research Council Linkage Project with the South Australian Department of Health, Flinders University, University of South Australia and Neporendi Forum Inc, an Aboriginal NGO. We chose the most difficult problem in Australian context, namely social exclusion, unemployment, health, housing and addictions (gambling, alcohol and other drugs) with the hope that if we could create an interactive policy tool for a 'complex wicked problem' (with many interrelated variables and with a strong value base) (see Rittel et al 1973), we would be able to adapt the model to other less complex problems to inform policy on the basis of evidence.

The purpose of this research is to explore the relationships with service users and providers in the public and private sectors, in order to enhance the policy performance match between agents and principals (Warren, 1999). Thus it a) explores the relationships across variables more deeply with service users, b) provides a better understanding of what works, why and how, c) informs policy decisions.

Health, homelessness, poverty, alcohol misuse, gambling, family violence, unemployment, lack of skills and lack of social inclusion are the presenting problems that undermine Aboriginal wellbeing of service users. Service users are the designers of the research project on what 'works, why and how'.

The aim is to ensure that a) the service users build the capacity of the service providers, not the other way around to ensure a better match between perceived needs and service outcomes. b) to enable social inclusion (building on Carson et al 2007: 113 , Bourdieu 1986 and a critical reading of Putnam 1995). c) connecting with others who are from the same background (bonding) and making connections with those who are different (bridging) and creating links horizontally and vertically to bring about change strategically. The value of matching is enmeshed in the process of engaging those who have lived experience in social life. Wellbeing cannot be achieved through compartmentalized thinking and practice (Fougere, 2007).

2. RATIONALE FOR PRAXIS

The approach is based on complementary combinations of theory and methodologies matched to areas of concern defined by identifying all the stakeholders. In this context service users and service providers work with (rather than within interpretive, emancipatory approaches) by 'testing out' suitable matches with stakeholders who are to be affected by policy or practice. We test the hypothesis: The greater the use of participatory design processes to address complex problems (such as homelessness, family violence, drug use, unemployment and social inclusion issues) the better the problem solving outcomes for both human service users and providers. We test whether matching a response can alleviate the problem of an alienated and ill served community who vote, but feel that their diverse perceptions and needs are not addressed sufficiently by representative government and generic service delivery. It supports the recognition of diversity within the nation state and is open to explorations of the meaning of Aboriginality for wellbeing and identity. The process of engagement is in itself important for democracy, personal and public accountability for wellbeing and for advancing scientific research by extending the testing process. The mapping process is designed for supporting sustainable design for social and environmental justice for this generation and the next, not merely to predict or control for narrow sectarian interests. The process draws on the wisdom and tacit knowledge of people who are at the receiving end of policy and ensuring that they have a say in shaping the direction for the future and matching their needs with services

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and resources with this generation of life and the next in mind. This conclusion is the starting point for this research into public ethics in a global context where national boundaries need to be reconsidered to take into account regional and global sustainability.

3. DESIGNING THE ARCHITECTURE OF THE KNOWLEDGE BASE TO AID UNDERSTANDING BY BOTH SERVICE USERS AND PROVIDERS

As detailed in McIntyre-Mills 2007, 2008, forthcoming) the research process involved:
- Design of the content of the software through conversations, soft system mapping and weighting the number of times certain factors are closely related to each other.
- Using informatics to map pathways based on a generic computing algorithm.

Stories from co-researchers (both service users and providers) reveal domains of wellbeing described in terms of a continuum of overlapping domains with components made up of variables that need to be considered. The following dimensions of wellbeing:

Table.1:

Dimensions of wellbeing	Indicators
Physical health	Safe housing (free of violence) in a safe community, regular meals, household goods to support wellbeing (stove, fridge and washing machine, furniture), clothing, dental health and physical health.
Mental health	Good interpersonal skills, a sense of respect and belonging , trust in a network of people
Socio –cultural	Routine roles to maintain a household and connections with a community
	Access services such as health and education
Political	Engaged in decision making outside the private sphere, Sense of rights and responsibilities
Economic	Access to employment and
	Learning literacy, numeracy and computer skills and confidence.
Environmental and spiritual	Connections with 'country'

The words of the informants were used to summarise each theme. Typologies represent typical (but **not fixed**) overlapping **domains**. Changes from one domain to another were summarised as 6 dimensions (in

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baskets, out baskets, barriers, turning points and services that worked for them). As detailed elsewhere (McIntyre-Mills 2007c, 2008 forthcoming), the entry point for the user is as follows:

- Step one, please tell narrative. Then see which of the stories (based on the typologies) is closest to your own story. Select a story and explore and discuss with the service provider which story resonates and why.
- Add more information as data to enrich the knowledge base and to help the next service user.
- Walk through the interconnected and overlapping pathways and collect items for basket (based on the drawings and stories) and select items to discard (based on the drawings and stories).
- Identify the barriers on the pathway and give them a name.

Based on an analysis of the data, wellbeing for service users can be understood as a state that can be interpreted in many ways, it has many domains. For some it is:

1. *'Being employed'* and 'able to help others', because their 'life is in harmony';
2. *'Rebuilding';*
3. *'Making a transition'* by using a combination of services[1] ;
4. 'Keeping it together' after leaving a violent situation and trying to control drug and alcohol misuse – use cigarettes extensively;
5. *'Making the break' from* an unsatisfactory way of life;
6. *'Not coping'* and unable to leave or repeatedly returning to a violent situation.

Instead of using a flat continuum from 1-6 , we modelled a series of overlapping spirals spanning holistic, integrated service delivery to fragmented and compartmentalised delivery of services as options with many variants in between (See Downes 2006: 36). Those who are most in need require the most integrated services and the most participation in decision making. Those who are least in need require the least integrated services and are able to draw together services for themselves and act as facilitators for others, volunteers in service delivery or act as service providers for others. The challenge is to map the turning points for the a) better or b) worse that lead to changes in life and to c) identify the barriers from the point of view of both service providers and users. The metaphor of baskets is based on the women's metaphor of 'weaving together strands of meaning' (McIntyre-Mills 2006, 2007).

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[1] Using CDEP, ASK job network, Neporendi and Cultural ties.
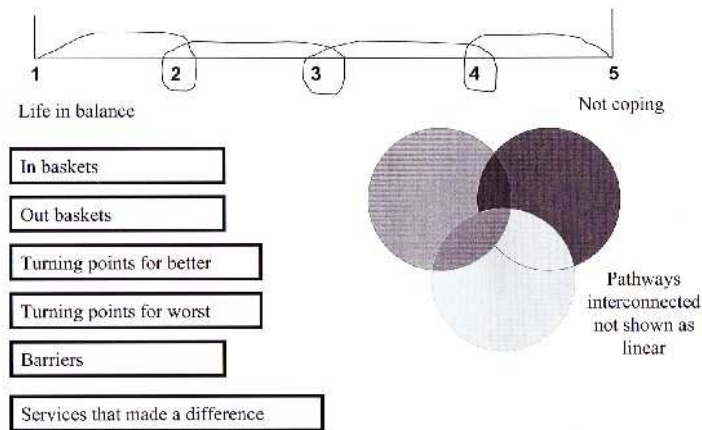
Figure -1 Healing Pathways in McIntyre-Mills et al 2006:287.

These patterns are drawn from analysing the stories of women and men.
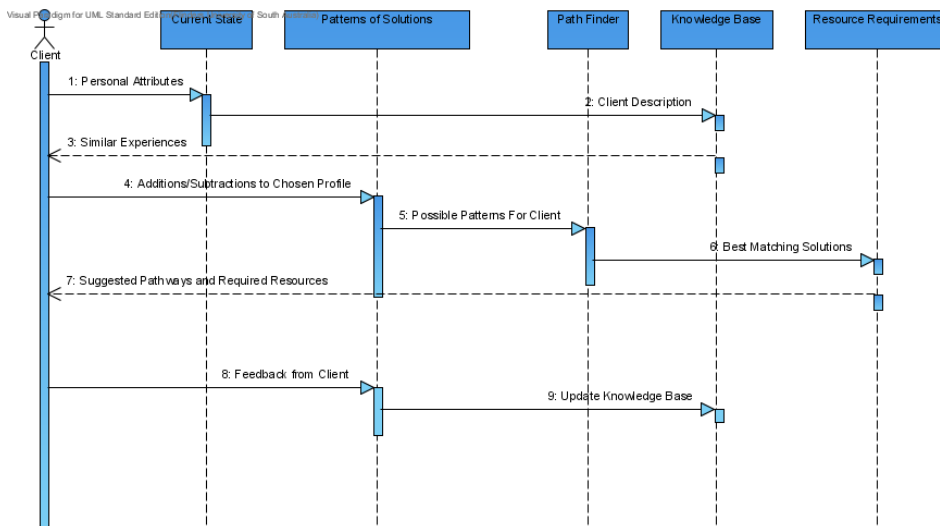The overarching architecture for the knowledge base in this model as illustrated below:

Figure 2: Sequence Diagram of System, De Vries 2006 (WIP), 2008[2].

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[2] The description of the prototype by De Vries appears in McIntyre Mills, 2008 forthcoming, Part 1. Part 2 on the architecture by De Vries operationalises the prototype.

4. MEANING MAKING

Wellbeing is a complex and contextual outcome that must reflect individual variance. The approach is critical, links theory and practice is contextual and systemic.[3] We conclude that bureaucratic and compartmentalized responses are inadequate to address complex multifaceted problems. The paradigm shift from the machine metaphor associated with lineal thinking to the complexity metaphor of interrelated systems and networks shape the research. People who experience the policy outcomes in their everyday lives need to fine-tune the policy through social inclusion in the design and monitoring of what works, why and how which has implications for representation and accountability. Open communication is mindful of multiple viewpoints, meanings associated with different cultural maps. It addresses ways to enhance knowledge management and decision making so as to narrow the gap between service users and providers. More profoundly, it enables the complexity of policy decisions to be matched by the complexity of the decision makers. Also to build in the rational testing process so that personal decisions are based on 'if then' scenarios, so the narrow pragmatist or ill informed decision maker is prompted to think through actions to enable decisions based on expanded pragmatism that sweeps in social , economic and environmental considerations for now and the future. Short run gains could be understood to boomerang as losses (poverty and pollution) that impact on their own safety or that of their children (Beck 1992, 1998, McIntyre-Mills et al 2006c). It needs to be supported by case workers for people in clinical situations, but it can be used creatively to enable moving beyond integrated decision making (Bammer 2005) to enable critical and systemic thinking, design and practice in a range of contexts in the public and the private sector.

As stressed in McIntyre-Mills (2007a, b, c, 2008), the theory of sociocybernetics (Beer 1974) stresses that understanding non linear relationships is a first step to developing policy responses. The data show multiple non linear relationships across:

- Socio-economic disadvantage that cause discrimination in housing options and prevents access to a home.
- The lack of security provided by a home base equipped with electricity, white goods and essential furniture from which to get a job, training or education.
- A sense of connection with a supportive wider community supports stable relationships. A home, sense of place is a necessary, but insufficient dimension of wellbeing.
- Domestic violence results in a lack of confidence and a sense of hopelessness.
- Hopelessness and a lack of confidence (as a result of their prior experiences) lead to women accepting domestic violence, because they do not know how to escape from it.

Context is all important to the design as the perceptions expressed are based on specific experiences which will be developed into conditional scenarios to guide action.[4]

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[3] The systemic approaches to the management of complex problems build on the work of critical systems thinking and practice (Jackson, 2000; McIntyre, 2000, 2002a, b, c, 2003, 2004; Romm, 2001, a, b, 2002; Flood and Romm, 1996; Midgley, 2000; Churchman, 1979, 1982 and Zhu, 2000).

[4] These suggestions are however, only meant to guide decisions made by service users together with a service provider, who could sit side by side and use the computer program to help identify which narratives resonate with their own experiences and explore the choices made by others and then to consider their own possible responses that could be added to the program. As each service user works with the program they will add items that they perceive to be valuable for the 'in baskets', items that need to be discarded. They will identify the turning points they have experienced for the better and the worse and the barriers (De Crespigny et al 2002) they have experienced.

The computer program learns as different users contribute and this is achieved by positioning the factors (that the service users perceive to be important) as synonyms in response to contextual scenarios by case workers in the domains section of the software. We need to continue to test the program to establish if it enables greater self knowledge and learning from others and better decisions, based on pattern recognition that could also help to make sense of the trauma and losses they have experienced.

We have concluded, however that participating in an active, constructive way in designing alternatives appears to be important as 'a means and an end' to support wellbeing. Being 'shamed' by service providers was discussed as being one of the greatest barriers (on this also see Atkinson,2002) to healing as it creates a sense of victim hood and leads to mistrust. If the dynamics make you feel disrespected, it undermines opportunities to build connections and pathways to wellbeing. The emotions felt by those who are turned away from service providers were expressed graphically as unfriendly interactions with intimidating, unsmiling service providers. What works, namely a circle of women talking as equals. This is supported by the work of Ainsworth and Bowlby (1991), Brewer and Hewstone (2004), Atkinson (2002) as well as Greenfield (2000) all of whom stress the importance of engagement that builds linkages across diverse groups , based on trust. Unfortunately negative racist, sexist communications have an opposite affect which is why supportive networks are vital for wellbeing.

The data from two men's focus groups and from two combined focus groups with men and women service users stress the importance of not only respectful communication and interactions, but warmth and friendliness. Borradori, Habermas and Derrida (2003) take up this issue and stress the implications of the quality of communication for democracy. Respect is not enough, warmth and the quality of the engagement matters. This requires building rapport through "two-way communication". Gore (2007) argues that one way communication raises many problems for democracy and the way in which two-way communication is vital for building relationships and creating attachments between people at the individual level and also at the societal level[5].

"As Miller and Ferroggiaro (1996) have pointed out 'respect and self respect are central components of an enlarged concept of citizenship…Respect affects how we are treated , what help from others is likely, what economic arrangements others are willing to engage in ..., when reciprocity is to be expected'. Respect acts as a resource for individuals, and should be considered a component of the norms of reciprocity, trust, and social obligation that are essential for minimising the risks of poor physical, psychological, or social health (Aday1994)[6]. Indeed, mutual respect and the avoidance of inflicting humiliation on people is the central concept of Margalit's 'decent society' (Margalit 1996). …honour and shame are soc crucial to human relations and may often become issues of life and death has long been recognised…." (Wilkinson 1998: 594).

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[5] Democracy is currently increasingly criticized for not representing the interests of diverse citizens and for not taking into account the social justice and environmental concerns that span national boundaries(Beer 1974,1994), Habermas, Derrida, and Borradori, 2003, Pape 2005, Devji 2005, Singer 2002 and McIntyre-Mills 2003, 2006a,b,c). As Savage (2005: 330) argues, there are many kinds of bureaucracy and current democratic forms are in need of an overhaul. Revitalizing democracy (Putnam 1995) and democratic institutions by finding new ways to engage the marginalized is the challenge (highlighted by Savage 2005) to which this research is addressed. Florini (2003: 83) sums up the challenge as follows: "…when decision making reaches the rarefied level of intergovernmental organizations or even informal multilateral rule making, the threads of democratic accountability can be stretched very thin. It is often hard to see such decision making systems as a means by which the people of the world, through the instrument of their freely chosen governments, resolve their common problems. … Accountability to the general public is at best indirect, and often, for all intents and purposes, it does not exist at all ...[The] mechanisms we have put in place to deal with large scale collective action problems seem so thoroughly inadequate when matched up against the scale of the problems…".

[6] Aday, L.A. 1994. The health status of vulnerable populations. Annual Review of Public Health. 15. 487-509.

The data *from service users* has produced very specific recommendations about a) meeting safety concerns that go beyond just physical housing and b) the importance of social networks to support those who have complex needs. c) Throughout the very detailed stories, supported by pictures and vignettes, the informants have stressed the value of respectful interactions from service providers.

The 'in basket metaphor' refers to the aspects that people perceive they need to enhance wellbeing. The

'out basket' metaphor refers to aspects they need to discard to enhance wellbeing. 'Barriers' refer to aspects that prevent wellbeing and turning points refer to positive and negative events. The data organised within the proformas highlighted the themes and the relationships between them (Figure 3).
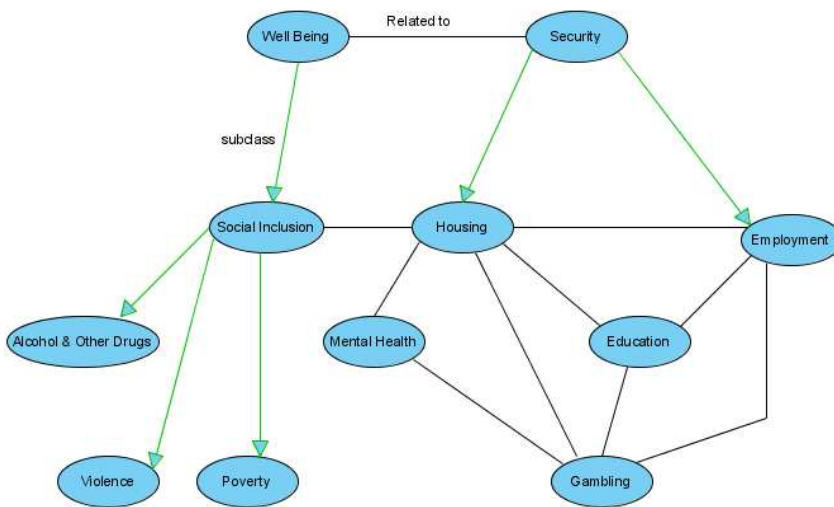

Figure 3. Graphical structure of issues and their inter-relationships (De Vries in McIntyre-Mills et al 2006: 295)

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3.1 Interactive modeling process

Once a preliminary analysis of the confidential, de-identified data was undertaken a series of iterative workshops were held to explore the map of factors with the participants to find the shortest pathway approach to achieving wellbeing outcomes. But the pathways are based on the perceived lived experiences of the service users as to what constitutes successful, integrated outcomes. The interactive modeling process could support matching services to need as long as it is seen as an aid to decision making and an aid to e-governance- not as a means to predict and control. It could also be used to enable accountability by making the pathways of choices transparent to users and providers.

The narratives and pictures (both abstract and concrete representations) were used to develop metaphors of weaving together strands of experience into baskets that could be used to:

- Tell their unique personal history shaped by a range of social, economic and environmental circumstances.
- Explore how it has been shaped by their experiences, for example of violence at home, homelessness, or unsafe neighbourhoods and limited networks.
- Identify with a story that others have told and explain how it is different and similar
- Assess positive life lessons and identify assets that they have and need for their 'in baskets'.
- Discard the problem areas from their lives by taking personal responsibility and
- Seek assistance to address identified needs that have been prioritized through considering their specific circumstances.

The model of the process is for the service user to tell their story to a case worker who *listens and who builds rapport over time* and then to choose which of 3 basic stories is closest to their own. They then adapt that story in detail to their own by adding factors to the map. Thus it grows to accommodate their needs. The most positive aspects were considered to be its potential for creativity, innovation and social inclusion. Mapping ideas conceptually is important for making sense of one's life. This is important because of Miller's conjecture (1956) that human beings cannot hold more than a few variables in mind at a time, they cannot make all the connections across them. Dynamic models can help to make sense of the issues which they face.

These patterns are drawn from analysing the stories of women and men. Wellbeing can be seen as having the following dimensions, as detailed in Figure 4:
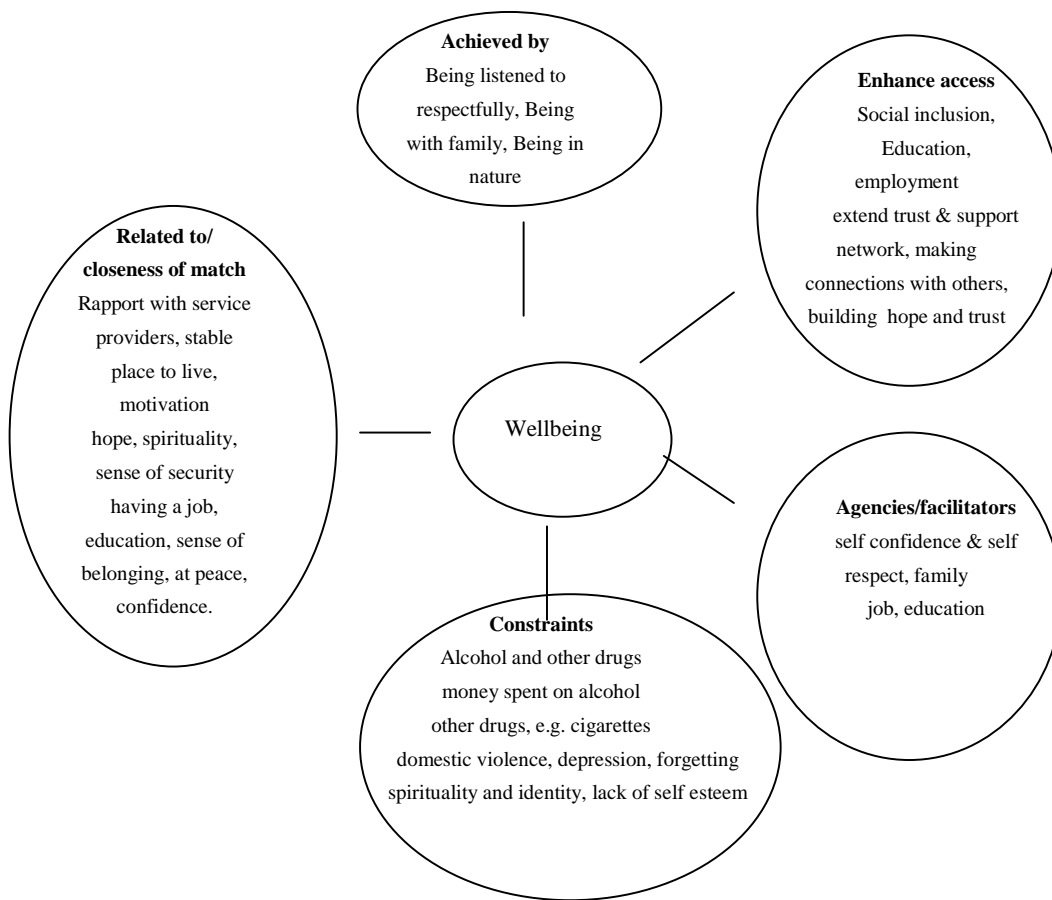
Figure.4: Map for the proforma (see McIntyre-Mills 2006c, 2007c and forthcoming)

Combinations of 5 axial factors appear important at this stage of the analysis:

- **Home safety** (and being free of violence)
- **Health** (physical and mental health – appearance, energy)
- **Purpose** (Formal Employment or preparation for employment /profession employment/CDEP / training / education)
- **Connection/belonging** (people and place), volunteering, community leadership and cultural spirituality
- **Self respect and confidence**, feeling good about oneself which is linked with being able to access services, work, study, maintain a stable home for children.

The inference from the analysis of the data so far is that by providing a combination of factors (safe housing, meeting basic physical needs then accessing education and employment) wellbeing becomes possible. To overcome barriers in accessing services, it is vital that service providers in mainstream and specific services are welcoming to ensure that the confidence of service users is built. The role played by holistic or (one –stop shop outreach) is important in this context as it enables rapport and relationships to be formed. Also a quickly

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negotiated pathway capable of dealing with 5-7 variables to ensure that the above mentioned axial themes are addressed effectively and efficiently would enable better outcomes.

5.   AN EVALUATION OF SOFTWARE

An evaluation of software designed in partnership with an Aboriginal NGO and the South Australian Department of Health and the Australian Research Council was held on the 12 February, 2008 at Flinders University entitled " User-centric Design: Pathways to Wellbeing" [7]. This was a timely date, just prior to the apology made by Prime Minister Rudd for the past injustices to Aboriginal people. The workshop was attended by Aboriginal and non Aboriginal health service providers and academics. Wellbeing is a perception of quality of life that spans a number of interrelated factors, but it is underpinned by meeting not only basic needs but by being involved in one's community and having a sense that one is able to influence one's social environment . The viewpoints of service users /members of the public form an integral part of policy making to achieve a perceived sense of wellbeing.

The most negative aspects were based in part on the fact that the prototype needs a touch screen interface to enable a range of users to traverse flexibly through the data. The most positive aspects were considered to be its potential for creativity, innovation and social inclusion. The most negative aspects were based in part on the fact that the system is still a less than robust prototype without the Java interactive interface needed to be able to traverse more flexibly through the data.

Other comments reflected a lack of understanding of the design as they were concerned about the need to have more complex stories as a starting point for the software, without understanding that the complexity begins with the service user's story which is used to update the existing software.[8] Overall the feedback was positive and the next step is to find a way to find finding to take the generic prototype to the next stage and to find ways to generalise the software to other areas such as service delivery to local government or matching the needs of diverse interests within regional areas. This would involve working across national boundaries that are both conceptual and spatial (including organisational). This is a big step and needs the support of interested groups to assist us with the process of approaching both public and selected private sector funders.

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[7] The project grew out of institutional design in capacity building to enable better communication across conceptual and spatial boundaries. The process of engaging stakeholders was all important to addressing wellbeing which is a complex, interrelated concept based on perceptions and values along with the meeting of core basic needs, it requires respect and a sense of being connected with the community in which one lives. The approach is dedicated to extending participatory democracy and governance to Aboriginal service users, based on their perceptions of what works, why and how, but it has greater potential for more generic application.

[8] The process is for the service user to tell their story and then to choose which of 3 basic stories is closest to their own. They then adapt that story in detail to their own by adding factors to the map. Thus it grows to accommodate their needs. The distinctions across some of the factors such as have and needs is arbitrary, because it is based on their perceptions , not on different lists.

Strengths	Weaknesses	Opportunities	Threats
The program has a memory. Helps with access to services and awareness of services available.	Timeline for the actions is needed	Friendly facilitators are needed to work with people to promote the program at places like Centrelink and women's centres.	The language in the stories and in the drop down menus needs to be customised for the user groups so that the worker is not more powerful than the service user.
Computer access for clients.	Need to distinguish between violence within a household and extended family violence. Concentrated activity may be too intense for clients and they may need to have a day to go through the programme and the whole pathway may be too much to consider at any one time.	Envisage the program to be used in waiting rooms of Sexual health clinics and by counsellors.	
Helps with self awareness and a chance for people to take control of their own lives. Useful and easy to use. A nice way to identify needs. Innovative ideas /tools to match needs. Good design and a clear bright screen. Great way of thinking through and documenting stories experiences and plans		Best way to understand the program is 'to have a go'.	
		Service providers need to know about the program. It needs to be promoted.	
Good start in helping people think about their situation and options. Having a print out to keep with them would be useful.		This needs to be tested out for each user group and modified with a facilitator.	
It provides a structure for helping people that can be constantly built upon. Will make it easier to see whether clients are making progress		The steps in the pathway could be presented as a route that could take many months or years to achieve. Monitoring of use and outcomes needs to be ongoing.	
Provides options for easier access to useful information rather than ploughing through copious case notes. Makes providers think about client's real situations as well as making clients think about this. Private information if desired by not using one's own name. Can print out 'where you are at' and 'where you want to go'. Interesting use of technology. Good use of narrative and personal stories which validates the qualitative approach. Like the aspect of relating to		'Web based' library or sharing of local and regional information with Community services and commonwealth	
		Possible interface with CISA data base of community services.	
		The concept/tool could easily be modified to any environment where there is a partnership between workers and clients in health services such as Torrens House working with staff on parenting.	
		Service users need to work	

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others stories. Good use of a positive proactive approach. Tool to focus on needs and actions that are realistic. Concept of baskets (in and out) is good and concept of turning points is good.		along side case workers who can help them to identify personal barriers. Opportunity to share resources/knowledge between people or for data to be de identified so pathways not people are the focus. Need to list grief, fear, loss pain, sadness, and suffering. Fairly easy to use. It will develop into a useful tool that captures clients and workers knowledge.	

Table 2: SWOT of Software design to date (McIntyre-Mills 2008 forthcoming)

Some of the service **providers** who tested out the program did not understand that user perceptions shape the pathways and the users decide what they are going to put into their 'in and out baskets'. The service users decide what **they** think is positive and negative. The 'if then scenarios' are about testing out 'what if I were to do the following' and then seeing the implications of decision in the pathway. This testing out of ideas is the basis for learning. The complexity begins with the service user's story that is used to update the existing software. The program enables both the service users and providers to add information so that richness of the pathways can be increased. In other words, the program learns and grows. The idea is not to provide the user with many complex stories, just a starting point for the user to tell their **own unique** story, reflect on it with the case worker and then to build their own detailed story into the spaces provided. The stories of other people are only portals for entering their own unique details.

Co-researchers test the prototype at a workshop hosted by Flinders University and Centre for Aboriginal Research on 12 February 2008

6. OUTCOMES

The intended outcomes were as follows:
1. More effective matches of services to perceived need.
2. Better able to combine services to meet complex needs. This has implications for governance, because people at the receiving end of the decision can test out ideas and so this makes the rhetoric of subsidiarity a reality, namely good for democracy and for science. It provides a generic tool for governance and has implications for e-governance. Pattern recognition and meaning making is vital for making sense the trauma and losses they have experienced.
3. Taking an active, constructive step away from the problem to wards co-creating a solution, because the service users become participants in designing solutions and they take control of their healing.
4. Capacity building of service providers by service users.
5. Improved outcomes for service users.
6. Develop and pilot a computer tool to inform decision making by both users and providers.
7. Creation of an updated data set on the areas of concern.

The first three outcomes have been achieved but outcomes 4-7 will be an ongoing challenge for the future. The involvement of the participants extends democracy and governance and enables network governance to occur.

7.   FUTURE DIRECTIONS

Fragmented thinking has implications for policy and practice. It excludes and alienates and is inherently respectful only of power. A personal and public morality and conscience is supported by ethical thinking in terms of apriori norms and aposteriori consequences of our actions for self, others and the environment. Balancing individual needs and group norms requires reflection and deciding on where to draw the boundary of what is acceptable and what is beyond the pale (Midgley 2000)[9].

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[9] According to Scheff and Retzinger: "adaptive problem solving requires part/whole analysis, understanding the relations between parts and wholes. This is largely a cognitive capacity, although emotions also play a part. Moral behaviour requires understanding the

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Wellbeing is a perception of quality of life that spans a number of interrelated factors, but it is underpinned by meeting not only basic needs but by being involved in one's community and having a sense that one is able to influence one's social environment (McIntyre-Mills, 2006c, 2007 a, b, c). The viewpoints of service users /members of the public form an integral part of policy making to achieve a perceived sense of wellbeing (McIntyre-Mills et al 2006c).

8. CONCLUSION

We have demonstrated that the process works very effectively for a complex problem which requires a holistic and simultaneous intervention. It has strong applicability to other areas such as enabling young Australians to have a say in reducing the size of our carbon footprint at the local government level. The social, economic and environmental factors to support wellbeing could be used as a basis for their deciding on what needs to be added to their ' in baskets', 'out baskets', what the 'turning points' will be for the better and the worse. They could consider what we have now and what we need for future generations and use tests for sustainability (Murray et al 2007). The implications are that the voting process could enable people to engage in discursive democracy and to shape decisions of policy makers who will be able to count the number of times people have made particular combinations of selections.

But also – more importantly – the 'if then' scenarios could enable them to think through the implications of choosing one pathway rather than another, so it will help to build social responsibility and a sense of rights. The process of engaging stakeholders was all important to addressing wellbeing which is a complex, interrelated concept based on perceptions and values along with the meeting of core basic needs.

Wellbeing requires respect and a sense of being connected with the community in which one lives. The design of inquiring systems approach (West Churchman , 1971, 1980) is dedicated to extending Critical Systems Thinking (see Jackson 2000, Flood and Romm 1996, Midgley 200, 2007, to participatory democracy and governance McIntyre-Mills 2003, 2004, 2005,2006a,b,c) and specifically to Aboriginal service users, based on their perceptions of what works, why and how. We conclude that people who experience the policy outcomes in their everyday lives need to fine-tune the policy through social inclusion in the design and monitoring of what works, why and how which has implications for representation , accountability , accounting and risk

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consequences of one's actions, of the part they may play in the whole system of relationships in which one is involved. Although part/whole analysis can be undertaken intentionally, slowly and systematically , as in careful linguistic work on the structure and meaning of dialogue, and in the ethnography of cultural artifacts, it is usually involuntary, rapid and covert…The emotions most central to conscience are probably pride and shame. Lewis refers to these emotions as the 'moral emotions' (1976). Normal shaming is conscience building. The caretakers approval results in pride ; disapproval in shame…a secure bond involves what Stern calls attunement: the parent and child are intellectually and emotionally connected in a way such that each ratifies and legitimates the others existence …the ratification of oneself, of both being and doing , seems an instinctive feature of all humans and other social creatures…" (Scheff and Retzinger 2001: 177-179). They go on to make the case that human beings who fragment their thinking can become immoral. "Specialisation has its uses, but a general problem-solving ability- that is basic human intelligence – requires … playful, spontaneous kind of thinking and feeling…" (182). Linear fragmentation of thinking and practice can be a convenience a rationalization for not taking acknowledging rights and responsibilities. for not balancing individualism and collectivism. The project grows out of institutional design in capacity building to enable better communication across conceptual and spatial boundaries.

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management. It is rational to extend the testing process beyond professionals and to draw on the lived experiences of people who can provide valuable insights on the issue.

The point that needs to be stressed is that representation and accountability rest upon testing out and matching responses to context. This requires an expanded form of testing so that those on the receiving end of the decision are part of the testing process. This upholds both the principle of subsidiarity and Ashby's Rule (1956) which was tested out in this project.[10] The research has potential for more generic application.

Enhancing representation, accountability and social inclusion will be on the policy agenda for the foreseeable future. Future research needs to focus on ways to enhance policy making by testing out young participant's ideas based on questioning and considering options. Thus it could develop a new intergenerational approach based on understanding views from below, in order to explore areas of convergence and divergence in the area of representation and accountability (Christakis and Bausch 2006, McIntyre-Mills 2006b, c 2007c). 'User-centric design for wellbeing' to enhance policy making is a new area of research to enhance accountability (McIntyre-Mills 2007a, b, 2008 forthcoming). It connects the diverse theories on the need for better representation, intergenerational social, economic and environmental accountability and sense making (across the sciences) to support wellbeing with diverse, young stakeholders. It will fill a gap in the understanding of the relationships across energy futures, climate change (Flannery, 2005, Stern, 2007, Odum 1996) and identity formation by integrating the following bodies of literature through a critical systemic research and analysis:

- Intergenerational accountability[11], ethics, sustainability (Elkington 1997) and
- Local-global identities of young people with diverse origins, life chances and cultural backgrounds (see McIntyre-Mills 2003, 2006c, Bogue,1989,Giddens, 2001, Bourdieu, 1972, White 2001, Borradori,

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[10] The process used in the project was to move from the complexity of personal stories to typologies based on their perceptions then to ask them to select one of the typologies which will be a starting point for building their personal story.

[11] How do we achieve governance, accountability and greater capability in a post wealth society where sustainability based on systemic rather than single line accounting?In *Environmental Accounting* Howard Odum, a systems thinker explains that accountability for wellbeing is based on assessing ways to live sustainably with the next generation of life in mind. He reminds us that all wealth is "produced from and maintained by the environment, sometimes helped by people and sometimes not…" (Odum 1996: 6). Thus to achieve the United Nation's Millennium Goals for a sustainable future requires rethinking accountability and accounting processes, because climate change (affected by carbon emissions) impacts on all aspects of life and is critical for our wellbeing. The work of Howard Odum on 'environmental accounting supports the rationale for the research. Elkington supports triple bottom line accounting, starting point for a new score card. Pierre (2000) and Florini (2003) discuss the importance of participation to enhance accountability. Florini stresses that the Aarhus convention could inform the process of governance. McIntyre-Mills (2006c) in Systemic Governance draws on Christakis with Bausch (2006) and Singer (2000) to argue for the value of subsidiarity and the importance of contextual matching. These elements together with the informatics software developed in the research could make a difference. The challenge for both representation and accountability is to enable us to balance individualism and collectivism. Extreme forms of individualism lead to the undermining of the 'greater good' and public interests, because of egotism and the pursuit of personal interests. A case in point is the way in which American electoral process spends vast amounts of money on individual candidates within both major opposition parties. The extreme forms of collectivism lead to the undermining of individual rights and responsibilities and the control of the state. Both extremes pose casualties for social and environmental sustainability which rest on matching balanced responses to specific areas of concern, but which are still governed by the principle that we can be free to the extent that we do not undermine the diversity of others within this generation and the next. This requires a delicate balance of apriori norms and aposteriori performance measures. This requires ensuring that the matching process takes into account the test of whether the decision is in the interests of both this generation and the next. Accountability cannot extract from the next generation to support a current generation's life style. The mistake made by Darwin in his discussion about the survival of the species acc to the social psychologist Triandis (1995:5) is that we need to consider competition not of individuals but of the collective species within their environment. Cultural lenses of individualism helped to shape his theory, which is why we need to be mindful of theories and be open to testing out ideas.

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2003,Elliot and Lemert 2006) with perceived wellbeing and the concerns of those who struggle to be heard and are most likely to be disadvantaged in an increasingly networked world (Castells 1996,1998) unless processes enable user-centric design (Banathy, 2000, Christakis with Bausch , 2006, McIntyre-Mills 2003,2006).

8.1. Addressing the wicked problem of social justice and sustainability through enhancing participation

Addressing complex wicked problems of climate change, epidemics, security and pollution remain central problems for democracy and governance internationally (See Held, 2005). This research explores the extent to which participation as *a means and an end* enhances the capability of people to make rational choices for themselves and others through thinking through options. The global commons is under threat (Held, 2005, Stern 2007)) and we need to find a way to address the challenges in such a way that we can address sustainable futures whilst balancing collectivism and individualism.

8.2. How people speak to the future on sustainable energy and wellbeing

We need to:
- Gather data based on young people's perceptions and experiences of positive ways to reduce our carbon footprint to support wellbeing, through community based activities and life style changes.
- Ensure that those who will have to live with the decisions have a say and are not excluded from networked society.
- Collect the data using a multimethod approach comprising research conversations, arts and narrative to inform the development of software for integrated decision making based on their own experiences and world views (see McIntyre-Mills 2007).
- Enhance decision making by enabling the participation of diverse young people so that they can have a say in policy making and 'debating governance' (Pierre 2000) to address their social and environmental concerns (McIntyre 2006 a, b, McIntyre-Mills 2000, 2002 a, b, c, 2003, 2006c, 2007a, b). Bourdieu (1977) in the '*Outline of a Theory of Practice'* stresses the importance of understanding the worldview of participants. He talks about the landscape of ideas and concepts which people inhabit. Representation and accountability for a sustainable future is assisted by matching domains of knowledge to areas of perceived concern by testing out ideas with those who are to be at the receiving end of the decisions and with future generations in mind (McIntyre-Mills 2007d).
- Work with local governments and schools to facilitate the action research with young people based on our prior *wellbeing, quality of life and development related* projects. These local government areas include culturally diverse young people with diverse life changes. The processes and the empirical data could be used in the public and private sector. The strength of the research is that it could focus on a shared area of concern, namely: social and environmental sustainability challenges.

By developing a 'design of inquiry system' (see Churchman, 1971, 1982) to broaden the participation of the marginalised and young people so that they can have a say in policy making that meets their social and environmental concerns[12].

The options and practical implications for democracy and governance policy and include: Isolationist, nationalist realist stances based on the notion of separate interests and separate world views will lead to competition and conflict. Multilateralism based on diverse pluralist ideas based on communication across conceptual and spatial boundaries is vital, but requires the capability to think critically and analytically and to engage in dialogue. Multilateralism based on federalist regions spanning national boundaries based on commensurable shared commons, informed by subsidiarity and the notion of Ashby's Rule of Requisite Variety and an understanding of our common fate as 'one world' could provide a way forward.   This requires the capability to think through 'if-then' scenarios so as to develop an understanding of shared concerns about rationality and the extent to which democracy is failing (see Christakis and Bausch 2006, McIntyre-Mills et al 2006, 2008 forthcoming).

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[12] This could enable us to test ways to ensure that those who are to be at the receiving end of a decision are part of the decision making process, so that the complexity of the decision is matched by the complexity of the decision makers. Better processes to ensure social inclusion and participatory democracy could address wellbeing more effectively. These issues of accounting and accountability have been raised by Indigenous thinkers internationally.

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