SUSTAINABLE TENANCIES PROGRAM
DESIGN FOR WELLBEING IN PUBLIC HOUSING, NSW- AUSTRALIA

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ABSTRACT

Australia's housing authorities experience great challenges in managing social housing. In response, they have explored innovative service delivery approaches to enhance tenants' well-being. This paper presents two examples of social designs for tenancy management in public housing. The first, known as 'Sustainable Tenancies' program, is a one year project to reduce arrears among tenants with complex needs — conducted by a housing authority. The second example is an alternative reframing exercise based on Sustainable Tenancies and developed by the Designing Out Crime Centre (DOC). We used qualitative interviews and document analysis to evaluate the program. Subsequently, we applied Dorst's (2013) the 'Frame Creation' model of innovation to generate an alternative design to the program. The 'Sustainable Tenancies' evaluation revealed elements with potential for positive design of services in public housing. The alternative design highlighted the usefulness of reframing in providing fruitful new perspectives contributing to sustaining tenancies and increasing well-being for tenants.

KEYWORDS: *social sustainability, well-being, public housing, design, human values*

INTRODUCTION

Government agencies in New South Wales (NSW), Australia tend to favour the use of top down approaches in the implementation of social programs. These programs are often conceived under the mindset of government efficiency designed around existing bureaucratic boundaries. Social programs tend to operate with the expectation of changing patterns of behaviour influenced by the behavioural sciences. However, such approaches have been changing. While some social programs are adopting the 'libertarian paternalism approach (Jones et. al., 2011), others are shifting their focus to achieve a deeper understanding of experiences, meanings, core human values, and well-being (Desmet & Pohlmeyer, 2013). A focus on the end users of services is now seen as adding value to these programs. With different levels of success, government agencies have increased their partnerships with local groups and NGO's to add a bottom up approach to program implementation.

Bottom up approaches require a human centred focus to capture the psychological aspects playing a role in such programs. In particular, human services including housing are immersed in emotionally charged contexts. Empathy, sense of pride, sense of belonging, autonomy, and connection are core values that bring up emotions in everyday practices associated to tenancy management in public housing. Despite that, existing services tend to still operate in pragmatic and rational ways. This paper explores concepts of positive design and subjective well-being in the context of tenancy management in public housing, which investigates values and interests of the end users.

This paper presents an example of a program that was conceived in a top down approach and an alternative design based on the values of the groups involved in that program at the community level. After a brief review of relevant concepts and the context of social housing, this paper presents the Sustainable Tenancies Program, implemented to reduce arrears in one public housing estate located in NSW, Australia during 2013. Subsequently, we present an alternative design based on the lessons learnt from this program and conceived following a model known as Frame Creation that addresses design innovation, in this case, for social housing.

PUBLIC HOUSING AND SUSTAINABLE TENANCIES

The notion of public housing in Australia is emotionally charged and its residents are often misrepresented by the

media in negative ways. There is a view in some sectors of society that their poverty is a result of laziness, lack of effort, and lack of self-determination (Atkinson & Jacobs, 2008). Sensational media stories exploit opportunities to expose abuses to the welfare system and criminal behaviours when they are associated with public housing tenants, despite the fact that such cases are negligible (Walsh & Marston, 2010). Housing authorities are often perceived as negligent and are blamed for poor management of properties and housing tenants. There is a perception (reinforced by the media) that they enable negative behaviours such as vandalism due to inaction, or that they support 'undeserving' tenants (e.g. welfare cheats). The stigma towards public housing tenants and housing authorities makes tenancy management difficult and positive attitudes towards living in public housing uncommon.

Public housing was created to offer temporary accommodation to working class populations in times of recession. Today, their client base includes tenant groups who have lived in public housing for generations, receive government pensions, experience chronic unemployment, and have low educational attainment. In addition, mental health problems, family violence, and various types of disability are experienced by a proportion of tenants (Australian Institute of Health and Welfare, 2010).

With a few exceptions, the housing estates in NSW were built around the 1970s on the fringes of cities. Since then, they have remained isolated from the metropolitan areas with poor access to public transport, employment centres, and other amenities. The housing stock has also aged considerably and that makes property management increasingly more complex and expensive. Additionally, the decreasing government funding and the increasing demand for housing, in particular for the most vulnerable, has strengthened the difficult conditions in which Housing NSW operates.

In the past years funding has been injected into key public housing areas for community development programs (Randolph & Judd, 2000). These programs encourage collaborations and the formation of partnerships that contribute to an environment of familiarity, greater communication, and better understanding of, and between, key stakeholders (Camacho Duarte, 2013). Community development programs tend to enhance tenancy management and some districts are trying to integrate the lessons from such programs into their core business.

Housing NSW is the State government's agency in charge of allocating social housing and managing. Housing NSW is structured around geographical districts comprising a collection of suburbs. Each District has operational teams with a leader that supervises a number of client service officers or CSO's; and each CSO has a portfolio of about 400 properties (Family and Community Services Annual Report, 2012). Project officers, managers, and executives support operational teams. The core tenancy management tasks are: arrears, nuisance and annoyance, property care, and tenant damages. While the majority of tenants fulfil their obligations, there are small numbers that do not comply. In the suburbs where the Sustainable Tenancies program was implemented, the proportion of tenants who fall behind their rent is around 10%. Tenants in this group were invited to participate in this program. The following section briefly reviews design frameworks and methods that have been used in this study.

CONCEPTS AND METHODS FOR SOCIAL DESIGN

Behavioural sciences have been central in the development of public service programs (Jones et al., 2011); for example, the UK and Australia have used elements of nudge theory. This theory notes that there are two systems of human thought: the automatic, which is instinctive, and the reflective, which is deliberate and self-conscious. Nudge theory claims that by altering the context of the decision, the instinctive response can be 'nudged' to stimulate 'better choices'; e.g. eating healthier or drinking less alcohol (Jones et al., 2011). Furthermore, a new area of design that has the specific purpose of creating products, services, and processes that contribute to the achievement of meaning, fulfilment, and ultimately happiness, is positive design (Desmet & Pohlmeyer, 2013). Studies on happiness concentrate on the idea of subjective well-being; Eid and Diener (2004) define subjective well-being as 'one's multi-dimensional evaluation of their lives, including cognitive judgements of life satisfaction as well as affective evaluation of moods and emotions'. The multi-dimensional character of subjective well-being is becoming the focus of design researchers in the field of positive design.

Desmet & Pohlmeyer (2013) note that the multi-dimensional character of subjective well-being makes it difficult to compare or measure design explorations in this field. To address this issue they have developed the 'Framework for Positive Design' in which they define a triad of components of subjective well-being forming this framework. These three elements are: 1) design for pleasure (experiencing positive affect); 2) design for virtue (being morally a good person); and 3) design for personal significance (pursuing personal goals) (Desmet & Pohlmeyer, 2013). There have been various models developed to address the design of pleasurable experiences, particularly in product design and interaction design (Desmet, 2012). Furthermore, scholars in the field of economics have studied approaches to measure personal significance and use these in indicators of prosperity that are not based on wealth, but on what people are able to do with their resources (Nussbaum, 2000). Design for virtue addresses the idea that subjective well-being increases when one exercises a virtuous behaviour aiming for altruism or philanthropy. Positive design requires that these three elements are addressed at some level but not necessarily all at the same level. Desmet and Pohlmeyer (2013) also highlight that the Framework for Positive Design aims to promote a way of designing that addresses possibility-driven design, harmony and balance, personal fit, active user involvement, and long-term impact.

Similarly, Dorst (2013) uses elements of positive design, pleasure, meaning, significance, and virtue in the Frame Creation approach to innovation. This approach is a process of ideation based on the analysis of a complex problem, and the

identification of relevant stakeholders, their objectives, needs and aspirations. It involves a process of synthesis that reveals themes based on human needs and desires that are the foundation for the development of conceptual frames and design explorations. Human-centred design is one of the main principles in Frame Creation. This analysis not only focuses on end users (of products, services or spaces), but also on the requirements of the larger network of stakeholders involved in the design, maintenance, and operations related to the problem in question. Frame Creation has two main parts: one that deals with analysing the existing conditions around a problem, and the second one involves a 'creative leap' to envision positive new approaches to the problem. Eliciting emotional personal meanings through metaphors, stories, and anecdotes is an important part of this process. The frames that result from this ideation come from in-depth reflection on core human values, which are universal, and emotional experience that is subjective (Dorst, 2013).

This Frame Creation process is designed to engage not only designers but also stakeholders who have a deeper understanding of the complexities surrounding design problems. In this paper I analyse the Sustainable Tenancies Program; subsequently I use the Frame Creation process (Dorst, 2013) to explore themes and frames for alternative designs based on the program; finally I use Framework for Positive Design (Desmet & Pohlmeyer, 2013) to analyse the emerging frames more in-depth.

Close to the completion of this program, an evaluation was commissioned by the housing authority between September and December 2013. The evaluation aimed to review its progress and identify the social impact of the program. This paper uses data and findings from the evaluation to describe and analyse the program as it was implemented. Then, using data from the evaluation, the author and other staff from the Designing Out Crime Centre conducted a Frame Creation workshop to analyse the context, the stakeholder's values, and generate an alternative approach to this program. The alternative approach developed is then analysed using Desmet and Pohlmeyer's Framework for Positive Design. The data collection involved document analysis and in-depth interviews with key stakeholders. The interviews included tenants who were in arrears and participated in the program: housing staff; management; project officers and client services officers; staff from other organisations; trainers and project coordinators.

The Frame Creation process involves taking a step back from the 'reality' of the project and looking at the problem from a different perspective. The Frame Creation workshop was facilitated internally at the Designing Out Crime Centre by the researchers that conducted the evaluation. The alternative design emerging from this process will contribute to addressing arrears management from an alternative perspective using core values and positive design approaches. More prototyping, testing, and analysis will take place during 2014 before a new exploration becomes implementable. This paper reveals a bridge between the implementation of a program following existing processes, and the development of an alternative design

that sets up an alternate agenda to approach programs within the Framework for Positive Design.

THE SUSTAINABLE TENANCIES PROGRAM

This program was conceived and implemented during 2013. It aimed to reduce arrears in housing estates in the South Western Sydney District. The tenancy management team from Housing NSW in the area liaised with stakeholders, developed the project proposal, and managed the project throughout its implementation. The specific objectives of the program, as extracted from their program proposal, were:

- To reduce rental arrears of participating tenants

- To increase management practices and staff skills in relation to arrears portfolios

- To provide training to staff and tenants on financial management

- To develop and implement a mentoring program for tenants to expand the benefits of the training, and to support tenants in their financial management strategies

Training and capacity building were adopted as the vehicle to achieve long-term outcomes in sustaining tenancies, whilst at the same time improving management practices. The program consisted of two parts: a) the financial training, and b) the mentoring program. The financial training involved a six-session course delivered by a facilitator with expertise in finance (training and advice). The training was delivered to a mixed cohort of Housing NSW staff and tenants experiencing arrears. The mentoring program was designed for tenants who undertook the financial training and wanted to become mentors. The mentoring program was coordinated by a local NGO at the community level. Informal activities were initiated to support further sharing of information and learning about financial habits and management practices.

The content of the training program included themes such as: 1) Communication and conflict resolution; 2) Needs versus wants and emotional spending; 3) The basic budgeting model using the 'velcro' analogy; 4) Tips and tricks to spending with sense; 5) The advantages of saving money; 6) How your physical and mental health affect your financial health; 7) How to be self-sufficient now and in old age; and 8) Your money action plan, assumptions, challenges and support, targets and rewards. The trainer used presentations, interactive exercises, and handouts to deliver these contents.

The mentoring program involved more training on building personal confidence, communication, rapport, and interpersonal skills. The mentoring program used role play as an exercise to practice effective and positive communication between mentors and mentees. Handouts were also developed to support mentors during sessions, and a project officer was present whenever the mentors requested it.

Early assumptions in the conception of the program were that tenants experiencing arrears would be interested in

participating because it would benefit them personally (in learning personal finance management and gaining experience as mentors). This kind of training and mentoring experience it was assumed could lead to future employment opportunities.

The success factors stated in the program proposal were ambitious. Apart from reduction in rental arrears during peak times (e.g. Christmas), it was thought that tenants would be able to independently sustain their tenancies after the program. It was also felt that this program would provide the type of training that could increase the chances for paid employment for tenants, and that Housing NSW staff would translate the financial training into improved arrears management practices.

The program evaluation

The evaluation revealed insights on how participants experienced and reflected on this program. Overall, this program used training as a vehicle for change which is the traditional way in which Housing NSW operate. The novelty in this case was that they attempted to embed activities that elicited positive feelings and responses. For example sharing stories about living in public housing would elicit empathy between Housing staff and tenants. However, this program did not clearly communicate the empathy and trust agendas. It was expected that informal processes would flow naturally during and after program implementation. The following table shows a number of insights reported during the evaluation.

EVALUATION INSIGHTS (PARAPHRASED FROM INTERVIEWS) & FROM DOCUMENT ANALYSIS	ANALYSIS (USING DESMET AND POHLMEYER, 2013)
Conception	
Incorporating the lessons from the finalized community development strategy to tenancy management practices was an underlying aspiration behind this program. The proposal had to be sent for approval quickly and there was no opportunity for refinement of the idea; any adaptation would have to happen during the implementation. *(Housing NSW Manager)* The proposal was written using a template with emphasis on management efficiency, which limited the flexibility in the scope in terms of social outcomes. *(From document analysis)*	Applying community development strategies to Housing NSW core business can be interpreted as conflicting. As a government agency it is expected that Housing NSW offers support to community groups to address issues such as financial stress. However as the landlord, Housing is in the position of overseeing tenants' timely payments. Teaching tenants about financial literacy appears to be a compromised effort when it comes from the landlord. The program aimed to pursue personal goals (Design for personal significance) and encourage being a morally good person (Design for virtue). However, the goal — pay rent —was imposed as a central theme. This contradiction inhibited possibilities to achieve those objectives.
Financial training and mentoring program	
The financial training pursued two agendas: to teach practical habits for a healthy approach to personal finances, and to create an environment that fostered empathy and trust in the landlord-tenant relationship. *(Trainer)* The mentoring program required greater effort than it was anticipated because tenants needed formal training to develop interpersonal communication and mentoring skills. It was uncertain if this was contemplated in the proposal. *(NGO liaison)* The mentoring program did not have the frequency and attendance envisioned. Invited tenants showed interest in the beginning but many withdrew overtime. *(Trainer & NGO liaison)* Housing needs perseverance and more creative ways to capture the attention of tenants by tapping into their interests. *(Housing NSW staff)*	The training fulfilled the Framework for Positive Design in that participants experienced positive affect (design for pleasure). Attendees said they enjoyed the training; it was interesting, valuable, and pleasant due to the sharing of positive stories and the high energy of the trainer. The mentoring program targeted pursuing personal goals (design for personal significance) because they learnt skills that made them better at managing finances and helping others. These activities addressed design for virtue in that mentors felt they were doing a morally good task in helping their peers. Despite that training and mentoring addressed the three aspects of positive design to a point, tenant participation decreased significantly. This could be due to the focus on a management issue, such as arrears (possibly an unattractive angle for tenants) lacking the component of design for pleasure.

EVALUATION INSIGHTS (PARAPHRASED FROM INTERVIEWS) & FROM DOCUMENT ANALYSIS	ANALYSIS (USING DESMET AND POHLMEYER, 2013)
Informal support	
The informal tenant support group was proposed in a rather rigid format. Attendance decreased to the point that nobody attended the fourth meeting. *(Trainer & NGO liaison)* Future programs need to allow greater flexibility and soft entry approaches to instil a sense of ownership of informal sessions among tenants. *(NGO liaison)*	The assumption that informal groups and activities could grow in a snowball effect was an ambitious proposition. The evaluation data showed people would only commit to informal groups if they had a genuine connection to the program beyond paying the rent. It appears that the Framework for Positive Design and/or a Frame Creation approach could offer potential to identify what is really valuable to tenants and the values that will keep them committed over time.

Table 1. Sustainable Tenancies Program Analysis Table

Source: Data analysis sheets 2013.

EXPLORING ALTERNATIVE DESIGNS

The alternative design for the Sustainable Tenancies program was developed following the Frame Creation model for innovation. The reason for using this model was that in the evaluation we identified that the program attempted to develop a novel way to solve the problem of arrears, but was using traditional methods to achieve it. Therefore, we needed to reconsider the conception of the project to reveal the different perspectives surrounding the problem and find fruitful frames for future innovation.

Frame Creation involves the following steps: 1) Archaeology, which reviews the recent history of the problem and its formulation; 2) Paradox, identifying the 'what makes this problem hard to solve' question; 3) Context and Field, are the steps that analyse stakeholders and investigate 'what is important to them'; 4) Themes, is a step revealing the common values important to stakeholders by means of associations and reflection on core human values; 5) Frames and Futures are the steps that allow a creative leap; the themes become frames by unpacking the values and turning them into novel ways to look at the original problem. To do so, it is necessary to tap into emotional experiences and experiences of meaning personal and collective; and 6) Transformation and Integration are the final steps that investigate the changes and practices required for implementation and to identify opportunities for new approaches (Dorst, 2013).

The Archaeology was analysed in the context of the evaluation presented in the section above. The Paradox identified was that the power relationship between the landlord and the tenants is unequal by nature, and this limits possibilities for the development of relationships based on trust and empathy. Therefore, the program coming from the Housing authority could be taken by tenants as another obligation of the tenancy agreement rather than an opportunity to learn and change. In the
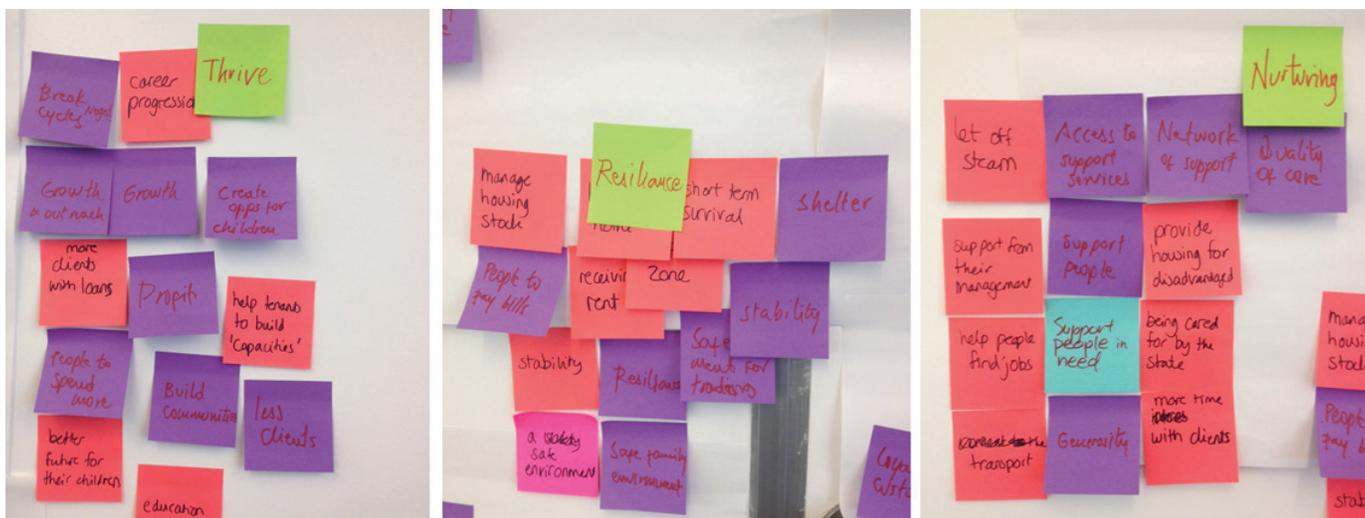

Figure 1. Frame Creation emerging themes

Context and Field we analysed a wider number of stakeholders beyond the participating parties and what was important to them. We identified that a common interest was to contribute to activities conducive to improving living skills for tenants in need. The idea of offering support services that function as a starting point towards independent living and personal growth of tenants was important to all. According to this analysis the highlighted themes were: Nurturing, Resilience, Drive, Commitment and Thriving.

In the Frames step, we unpacked the themes and revealed that they relate to the idea that by providing opportunities for personal growth in a way that encourages people to take control of their life and exercise their autonomy could lead to more independent and resilient individuals. Therefore, nurturing activities that encourage individuals to stay strong in difficult circumstances could lead to confident and self-reliant individuals that will not only survive but thrive.

The frames discussed were based on metaphors and personal experiences related to thriving. One of the frames discussed was 'the growth of a plant'; the other emerging frame was a 'road trip'.

The 'growth of a plant' frame

A plant needs the adequate environment and the basic nutrients (sunlight, rich soil, and certain temperature) to thrive; in difficult circumstances (for example in a storm) a plant can still survive, but possibly will not flourish; and if the circumstances become too extreme or permanent the plant would die. However, plants naturally have adaptation mechanisms for survival and some can thrive in harsh conditions (e.g. mushrooms grow in the dark). This metaphor could be fruitful when explored from the perspective of the adaptation mechanisms. If used in the context of public housing tenants, then a future program could focus not on the financial training per se (which is similar to the nurturing of a plant), but on the everyday tasks and strategies tenants use to address financial difficulties and financial stress, their own adaptation mechanisms. This frame leads us to explore questions such as: what do tenants do at Christmas in order to enjoy the holiday? What do tenants do when they have to go to the doctor and get medicines not covered by medical subsidies? The responses will provide cues for positive design initiatives because there is a lot to learn about adaptation mechanisms from people who have experienced high levels of disadvantage throughout their lives. To further explore this we would need to research further elements that would lead to design for human flourishing, and the Framework for Positive Design counts with the components to achieve it.

The 'growth of a plant' frame opens opportunities for the design of services that focus on adaptability and resilience. According to the Framework for Positive Design (Desmet & Pohlmeyer, 2013), designs that foster personal (and financial) resilience mainly fit into the design for personal significance. Furthermore, resilience and adaptability when pursued in a communal manner (with the family unit, and/or local community) could address design for virtue because by helping each other achieve financial success one can experience a virtuous behaviour. Under this frame, design for pleasure could be addressed by further exploring the metaphor of how a plant gets nurtured. For instance by finding the aspects in the design of a new service that really captures participant's imagination in the financial goal they aspire to (beyond paying arrears), or in the methods of service delivery that engage tenants in pleasurable ways (e.g. through games or using attractive interfaces such as smart phones), designers can achieve a nurturing and pleasurable service experience.

The 'road trip' frame

This frame was discussed because it relies on the autonomy of the individual. A road trip is a pleasurable experience that involves personal motivation, so that it is not an obligation or something imposed. This frame is fruitful because it involves a time-space dimension, which is relevant for the design of time-bounded programs. For the design of programs using the road trip frame as a metaphor can help in the development of proposals that are responsive to the environment and which acknowledge autonomy and self-determination of individuals or groups to achieve goals. Using metaphors as tools for service design, as opposed to rigid management models, could result in practical proposals with the appropriate scope for success.

In practical terms, a road trip requires planning, self-determination, and decision making; it involves a dialogue with the external environment, and a sense of control over circumstances, as well as challenges out of one's control. Using Desmet and Pohlmeyer's (2013) Framework for Positive Design, on an individual level, a road trip taps into the domain of personal meaning, goals, and aspirations. In the sense that one wants to move ahead, and reach the destination, this idea fits into the design for the personal significance component of the framework. A road trip elicits enjoying the moment and experiencing a series of temporary pleasures. When used as a metaphor this frame allows us to explore the moments or experiences that are most precious to tenants and implement them in the design of a service that addresses the dimension of design for pleasure. For example, exploring designs of services that help people saving for a car, for a road trip, or saving for a mobile phone in order to connect with loved ones. Using these frameworks to develop creative approaches for future programs is a needed shift to positively transform housing services. Design for virtue can also be fostered in services related to personal finance and more sustainable life styles. In the road trip frame a person can exercise autonomy by taking his or her family on the road to financial success, take the driver's seat and lead their loved ones to a better future, and in that way fulfil the design for virtue aspect of the framework. Designing services using the frames resulting from Frame Creation and the Framework for Positive Design could also contribute to a more pleasurable, virtuous, and fulfilling experience for the staff delivering services and for the housing authority as an organisation.
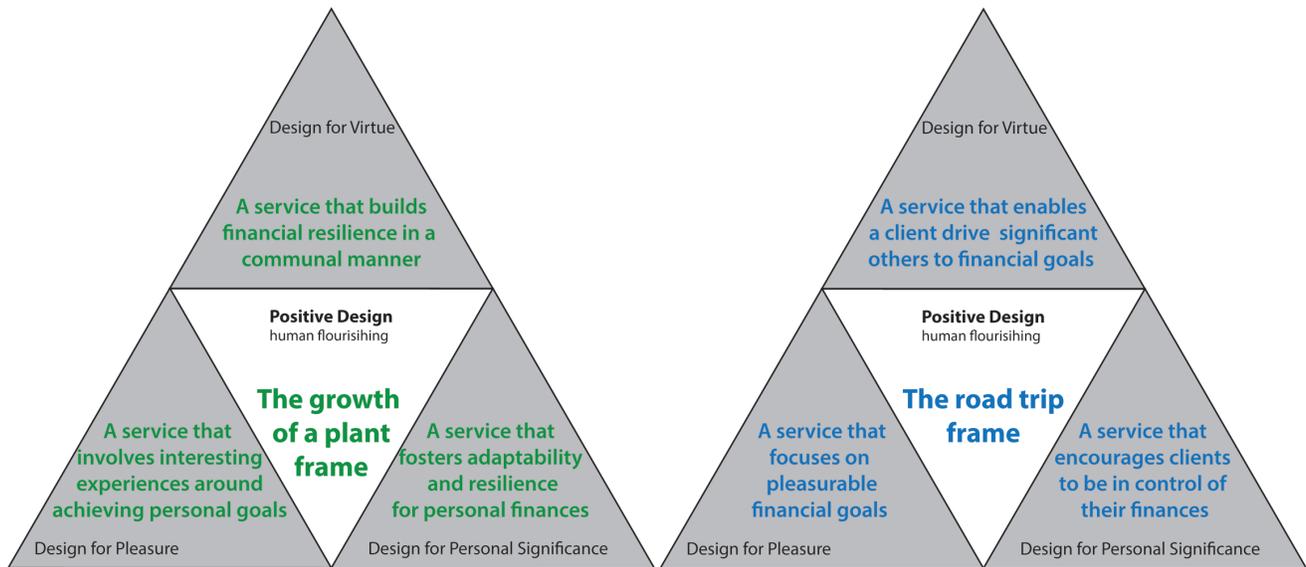
Figure 2. Emerging frames analyzed in the context of the Framework for Positive Design

DISCUSSION AND CONCLUSION

The final steps in the Frame Creation model, Futures, Transformation, and Integration are to be explored within the environment of the organisation(s) that manage complex problems. The Frame Creation exercise has opened up possibilities to explore financial management with public housing tenants more broadly (not limited to arrears management). The evaluation of the program illustrated that in its proposal stage the program was ambitious and relied on assumptions of good will; for instance, the assumption that tenants would be highly motivated to commit to the informal support group did not happen. Gauging individuals' motivations to commit to social programs is almost impossible when programs are developed from the top-down. The alternative frames presented are conducive to novel designs in which personal motivation can be further explored from a bottom up approach using human centred design. Desmet and Pohlmeyer's (2013) Framework for Positive Design enriches the conception of a design brief because it adds a layer of depth to the proposed frames so that in the design of a service for the purposes of achieving sustainable tenancies, other deep components of positive design and human flourishing can be addressed.

A key lesson from this analysis is that in the context of housing and family services, applying design tools based on positive design is highly relevant. Addressing subjective well-being in public housing environments require approaches that see the existing features of public housing tenants in a positive light and as strengths. The use of the Frame Creation model and the Framework for Positive Design revealed different perspectives to address key issues from the program in more creative ways that have not been identified before. Bottom up approaches that are centred on tenants and understand their values, meanings, and emotions associated to their experience of

services could be the entry point to positive design leading to social innovation in public housing.

Finally, the proposed frames offer a new agenda that investigate on a deeper level what is meaningful to tenants, and indicates a way forward in how services could address subjective well-being. Looking to arrears management from a positive perspective leads us to a research agenda guided by questions such as: why do some public housing tenants fail to pay their rent? What are the adaptation mechanisms public housing tenants use to manage their household finances in a context of scarce resources? And, How can organisations apply appropriate and effective design tools to achieve human flourishing and subjective well-being? Using the Framework for Positive Design explicitly, as well as the Frame Creation process, could lead to the exploration of creative ways to address financial sustainability for tenants tapping into their personal interests, goals, and values.

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REFERENCES

Atkinson, R. G., and Jacobs, K. (2008) *Public housing in Australia: Stigma, home and opportunity*. Hobart, Australia: Housing and Community Research Unit, University of Tasmania

Australian Institute of Health and Welfare (2010) *A profile of social housing in Australia*. Cat. no. HOU 232. Canberra: AIHW. Available from: http://www.aihw.gov.au/publication-detail/?id=6442468393. [10 February 2014].

Camacho Duarte, O. (2013) 'Can design support community safety and crime prevention programmes in areas of socio-economic disadvantage?', *Crime Prevention and Community Safety* ,15, (3) pp.223-239.

Dorst, K. (2013) 'Shaping the design research revolution'. Paper presented at the International conference of engineering design, ICED 13, Sungkyunkwan University, Seoul, Korea.

Desmet, P. M. A. (2012) 'Faces of product pleasure: 25 positive emotions in human product interactions', *International Journal of Design*, 6, (2), pp.1-29.

Desmet, P. M. A. and Pohlmeyer, A. (2013) 'Positive design: an introduction to design for subjective well-being', *International Journal of Design*, 7, (3) pp.5-19.

Eid, M. and Diener, E. (2004) 'Global judgements of subjective well-being: situational variability and long term stability', *Social Indicators Research,* 65, (3) pp.245-277.

Family and Community Services Annual Report (2012). Available from: http://www.housing.nsw.gov.au/About+Us/Reports+Plans+and+Papers/Annual+Reports/2011-2012.htm. [10 February 2014].

Jones, R., Pykett, J., and Whitehead, M. (2011) 'Governing temptation: Changing behaviour in an age of libertarian paternalism', *Progress in Human Geography*, 35, (4), pp.483-501.

Nussbaum, M. C. (2001) *Women and human development: The capabilities approach*. 3rd edition, Cambridge: Cambridge University Press.

Randolph, B., and Judd, B. (2000) 'Community renewal and large public housing estates', *Urban Policy and Research*, 18, (1), pp.91-104.

Walsh, T. K., and Marston, G. (2010) 'Benefit overpayment, welfare fraud and financial hardship in Australia', *Journal of Social Security Law*, 17,(2), pp.100-125.