

Community Networking 99 – Engaging Regionalism

‘New pioneers: Rural women and communication technology’

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Abstract

This paper details several important lessons learned from a collaborative action research project conducted in Queensland, which made very effective use of a range of interactive communication technologies, including email discussion groups and audioconferences. The project successfully created close partnerships between women in rural communities, people in government and industry, and a multi-disciplinary research team. It aimed to facilitate rural women's access to communication technologies (particularly email and the Internet) to enhance community development and women's empowerment. Of all the project activities, the online discussion groups had the most empowering effects on both individual groups of women and local groups of women. The online connection facilitated daily communication, information sharing, networking, cooperating and support, thus contributing to human capacity building and the development of local leadership.

One of the key findings from the project was the role that social capital plays as a key enabler of successful community development. It is therefore critical to strengthen and increase social capital by forming strong social networks, developing active civic participation, and fostering a sense of trust and community. This is particularly important in rural communities, which are facing economic and social challenges that in some cases threaten their very existence. A culture of trust and a sense of community ownership facilitates the creation and implementation of new solutions to the problems that face these rural communities, include technology-based solutions such as the introduction of the Internet.

This paper examines the link between engaged regionalism and social capital through the exploration of Australian rural women's participation in an online discussion group called 'welink'. A qualitative analysis of the online conversations that have taken place on welink allows some distinguishing concepts to be identified. The four key elements, sharing information, networking, cooperating and supporting, are intrinsically interlinked. Another feature of welink has been the way the medium of electronic mail has been embraced to enable cooperative work on shared issues between geographically dispersed participants. It has been particularly adopted to enable shared planning and writing of submissions and funding proposals, which would not otherwise have been possible within the constraints of submission deadlines that have commonly been unrealistic for rural dwellers.

A feature of this cooperation is the degree to which it has operated across boundaries: not just the boundaries of geography, but the boundaries of jurisdiction of government, industry, academia and rural citizenship. This ability to cooperate across boundaries is likely to be increasingly important as governments implement principles of economic competition, forcing rural communities to establish demand in order to obtain even basic social and community services. Telecommunication services are of primary concern in this regard. It will be those communities, geographic or virtual, that can cooperate to demonstrate demand that will succeed in attracting ongoing services. The women on welink are already demonstrating this cooperation, demand and engaged regionalism.

DEFINING ENGAGED REGIONALISM

Engaged regionalism or civic participation can be a catalyst for community development. Such participation comes about through identifying shared goals, developing cooperative networks and building trust. As a consequence, members of the created community are able to work towards the achievement of goals, both more effectively and on a larger scale than can individuals working alone. This paper considers an online civic community — *welink* — in which trust, shared goals and cooperation form the basis for actions that contribute to a 'bottom-up' community development approach. In the case of *welink*, communication and cooperation between rural, academic, industry and public sector members of the community has enabled significant '... networks of civic engagement' within which reciprocity is learned and enforced, trust is generated, and communication and patterns of collective action are facilitated' (Foley & Edwards, 1996: 41).

Such civic participation enables the community to address issues, while also strengthening social capital. Trust, cooperation, and collective action are part and parcel of social capital, the 'store of trust and goodwill ... [that] enhances our quality of life and provides the base for the development of financial and human capital.' (Cox, 1995: 11). In developing active civic participation, communities are also acting to enhance levels of social capital. As Putnam has stated:

On the demand side, citizens in civic communities expect and get better government ... they are prepared to act collectively to achieve shared goals ... Most fundamental to the civic community is the social ability to collaborate for shared interests (Putnam, quoted in Cox, 1995: 20).

Increasingly, it is being recognised that community development goals cannot be achieved by 'top-down' bureaucratic approaches in which outside experts 'solve' community problems. What is needed for rural communities are 'bottom-up' area-based approaches which recognise that rurality is characterised as much by diversity as by commonality, and that different strategies are necessarily required to meet the needs of particular communities.

RURAL WOMEN AND SOCIAL CHANGE

In rural communities women have been particularly affected by the social effects of economic downturn and the rationalisation of services. Concern for their communities is something felt and expressed by rural women generally, not only those who are involved in primary production, and this concern reflects women's traditional roles in the maintenance of the social fabric and the promotion of community (Moyal 1989; Grace, Lundin and Daws 1996).

Changes in gender roles in rural social contexts have significant positive implications for the potential use of advanced communication and information technologies to promote socio-economic development in rural communities. Women have become more actively involved in agricultural production, frequently replacing paid (male) labour on the family farm, managing the bookkeeping and/or contributing financially through off-farm employment. They are also increasingly active in the health and education professions, in small business and community development, in local government and in the formation of new rural women's organisations. These social and productive roles contribute in important ways to the strong vested interest in communication issues expressed by women in rural and remote situations (Rural Women and ICT's Research Team 1999).

FACILITATING CHANGE

As well as changes in gender roles, rural communities worldwide have begun to feel the impact of major demographic, social, economic and institutional changes. What is needed to assist rural communities in meeting such challenges is an explicit, comprehensive, community-oriented rural development policy (Sher & Sher 1994: 4), that recognises both the diversity of the rural population, and the importance of social, environmental and economic dimensions. Policies will be limited if they do not recognise the interdependent nature of all of these elements, and make the critical link to community development.

Recent accounts have argued that the diversity of women's roles is assuming increasing importance (Alston 1995a; Alston 1995b; Board 1997; Grace 1994; Teather 1996). Two developments may be seen as growing out of this recognition. There is broadening official recognition of the inappropriate absence of women from decision making and leadership positions in the wider community (Karpin 1997) and specifically in decision making forums affecting rural communities (Board 1997; Rowe 1997):

Wall (1989) found that the more viable communities contain more women in leadership positions ... (Wells & Tanner, 1994: 249).

At the grass roots level, women themselves are organising within their own communities to strengthen their capacity to be recognised and to have their voices heard on a wide range of issues affecting all people in rural communities (Grace and Lennie 1997; Grace et al. 1996; Liepens 1998; Teather 1996).

A user needs study prepared for the Queensland Government by the Information Planning Branch (Wilson and QRRAC 1996) acknowledges that because women are heavily involved in small business and responsible for home and distance education of children, they have a leadership role in the uptake of communication and information technologies. Therefore: 'Specific strategies need to be developed to ensure that women have adequate access to the information they require on communication and information and telecommunication services as well as adequate training' (Wilson and QRRAC 1996: 41). Findings from the QUT research project ('Enhancing Rural Women's Access to Interactive Communication Technologies', Rural Women and ICT's Research Team 1999) support rural women's positive attitudes and uses for interactive communication technologies and has found that women appear to have more positive attitudes to interactive communication technologies. In addition, findings from this research have demonstrated that rural women are significant communication channels for business and service-related activities, as well as social and familial maintenance in rural communities, and that they exercise leadership in a range of ways (Daws 1997). This leadership is facilitated by their active mobilisation of and participation in social networks within and across rural communities.

WOMEN'S ELECTRONIC NETWORKING

Electronic networks, as a particular form of social network, can be a key tool in establishing strong links and relationships within communities and, thus, a valuable contributor to social capital. Electronic networks are capable of fostering and sustaining both strong and weak tie relationships, and are potentially an effective means of initiating interaction and dialogue, new alliances, inter-personal networks and cross-sectoral links between government, business and community organisations. Electronic networks cut across organisational boundaries, creating mechanisms that can enable the bottom-up articulation and sharing of local knowledge. In rural communities, electronic networks can bring new information resources and open new communication channels, as well as offering a means for bridging geographic and cultural gaps between community members.

Welink

How the project operated

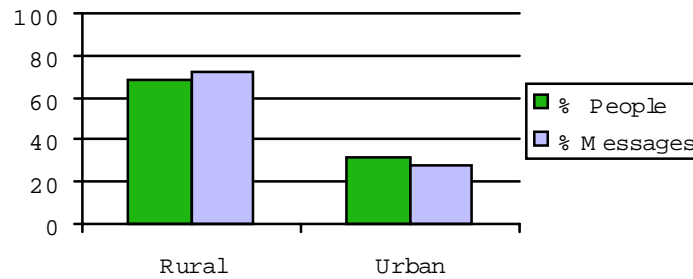
The research project 'Enhancing Rural Women's Access to Interactive Communication Technologies' 1996–97 (The Rural Women and ICTs Research Team, 1999), established electronic discussion between participants as a means of exploring the extent and variety of uses rural women would make of this form of communication. This was achieved first through the use of informal multiple addressing of messages and subsequently through the establishment of an electronic discussion list. The informal discussion came to be referred to generically as *wechat*, short for women's electronic chat. The formal discussion list is known within the project as *welink*, which is a shortened version of its mailing address and refers to its goal of linking women across rural and urban settings, and across state and national boundaries. By November 1997 the scope of this list had been extended to provide the capacity for rural women to communicate with others in rural settings throughout Australia and internationally, and also with women in urban settings including women in government departments and tertiary institutions. A small number of men have also subscribed to the list.

List members were encouraged to use the list for whatever purposes they chose. A friendly, informal atmosphere was established early with the tone being set by the conversational style of messages, initiated by the research team, and quickly adopted by the rural women and others as they joined in the conversation. The result has been the generation of an extraordinarily rich source of data on rural women's interests and experiences, extending well beyond their interest in communication technologies and frequently providing a vivid picture of their daily lives.

Who has become involved?

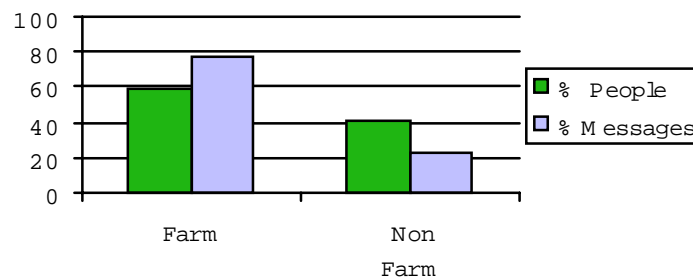
Knowing the composition of the membership of the discussion list *welink* is an important component in understanding its potential as a forum for cooperative engagement in community development practices and activities. From its initiation the project's electronic networking activities have involved women in academia and in government departments and industry as well as women from rural communities. Growth in this activity has continued to reflect this diversity of membership. Rural women have consistently contributed the majority of the correspondence.

Chart 1: % Rural and urban distribution of membership and information flow on *welink* March to November 1997



Source: Daws 1997

Chart 2: % Farm and non farm membership and information flow among rural members of *welink* March to November 1997



Source: Daws 1997

Qualitatively, the use of the list is characterised by a high degree of egalitarianism. Putnam notes that:

. . . the interactions which create social capital are most likely to occur in egalitarian communities where people voluntarily contribute time and effort and receive positive reinforcement (Putnam, quoted in Cox, 1995: 17).

Distinctions are not generally made in terms of participants' urban, rural or any other standing except where these are being consciously explored in discussions such as how to define 'rural', what urban consumers are doing with beef, and the role of men on the list.

Contributions to the list are generally conversational, including snippets about personal matters and daily life together with discussion of a range of topics of interest to rural and urban members alike such as teleworking, breast feeding and the death of Princess Diana. The resulting impression is that *welinkers* are women first and members of specific locational and employment categories only as a secondary consideration.

Chart 3 compares *welink* membership and usage patterns for those in pastoral and agricultural industries with those in government and industry and those in tertiary education settings. Again this shows higher rates of usage among farm members than other categories with government and industry members having the lowest rate of participation in the activity of the discussion list.

rwp/welink.htm), the seeking and providing of information has not been unidirectional. It has also provided opportunities for the development of changed perceptions. For some government and industry partner list members inputting information has been the predominant activity. However, this group has also both responded to requests for information, and used the list's capacity for accessing a range of views from members of rural communities to obtain information. Participation in *welink* has enabled the core business of government department representatives to be directly informed by clients' needs and views. As well, however, it has added richness to industry and government *welinkers'* perceptions of rurality:

First the humanity - *welink* emails engage the heart and soul as well as the mind. So many email lists are cold exchanges of information and technology without any sense of personality from the contributors.

Second - the amazing women on *welink*. . . . Their intelligence, capability, openness, generosity and hugeness of spirit literally take my breath away. Sitting in my air-conditioned office, I find their attitude and response to difficulties and setbacks inspiring and humbling.

Third - the reality checks. I work in a bureaucracy so it is important and salutary for me to know what is REALLY going on out there, and what people are REALLY thinking about . . . (government partner representative, *welink* message, 1998).

Equally, rural people have gained a means of connecting with government in ways that were previously unavailable to them:

I have made some wonderful contacts through the Internet with people concerned with rural issues and I use email regularly to network with them. This gives me the potential, from our property hours from the nearest town, to influence the policy formulators and decision-makers. Through technology, rural communities can now have a loud and persistent voice (rural woman, *welink* message, quoted in The Rural Women and ICTs Research Team, 1999).

Organisational, geographic and social boundaries have been transcended, enabling, the bottom-up articulation and sharing of local knowledge. Informal networks created through sharing experiences and information in a conversational manner have facilitated the processes of more formal networks between government, business and community members.

Some rural members have developed extensive expertise in locating information electronically, a feature of the project which has enhanced the sense of equality among the participants. Where such sources of information have been identified, these have been communicated to the list to facilitate access for others. Thus, through their inclusion in a diverse, cross-boundary weak tie network, women 'bump into new information or new sources of information unintentionally' (Wellman, 1996: 2). Often the information is mentioned incidentally in the course of the 'chat' — it is, as Wellman notes, 'information obtained serendipitously [which] helps solve problems before they occur and helps keep people aware of organisational news'. In the case of *welink*, it is not only organisational news that is passed on, but information of value to those living in a rural context:

[representative] from the Office of Rural Communities has just sent me a message asking me to encourage our project participants to take part in the next Talk-a-bout program. You'd have an opportunity to ask questions to Graeme Burkett from the Information Industries Board. Graeme has been involved in a study looking at how we can get more equitable access to new technologies, particularly in rural areas (government partner representative, *welink* message, 1996).

2 *Networking*

Networks that link horizontally to other communities can also contribute to local community development. Multicommunity collaboration is a concrete indicator of this type of linkage. Strong vertical networks to regional, state or national centres can be important for locally initiated economic development by linking . . . community individuals and groups to resources . . . beyond community limits (Flora et al. 1997:629).

Geographically spread networking is clearly one of the major contributions which electronic discussion lists have to offer. The networking provided by this project, and particularly by *welink* can be seen as one of its major strengths. This is because it has succeeded in providing direct, immediate and effective links between women in diverse locations and from diverse occupations:

On another topic, I have just received, via gira, another mailing list I subscribe to, some information about initiatives taken by women in various parts of the globe following the UN World Conference

on Women at Beijing last year. I have not deleted the message, so I can forward it to any of you who may be interested (academic, *welink* message, 1996).

For many participants, the sense of trust, shared concerns and social support that has arisen from online conversations has prompted networking in other forms — contact by telephone, for example, exchanging visits, or participation in formal committees. Thus many of the *welink* relationships are also characterised by multiplexity, in that participants are linked by more than the single online tie:

I do love *welink*. I know [*welink member*] in entirely another (Victorian) context, and I look forward to telling her when next we meet that I know that she is now the Chairman of [*a major organisation*] because I learned about it through an IT network set up for rural women in Qld! (rural woman, *welink* message, 1999)

I subscribe to another listserv about community/economic development (members are predominantly in North America). I received this message about a conference - Community Access '96, and thought many of you may be interested in its focus on how communities can use and benefit from the Internet. Although the organisers claim that this "virtual conference" is probably the first in Canada, we know that the QUT Communications Centre team have pipped them with their efforts at the Mareeba Queensland Rural Women's Network conference! (government partner representative, *welink* message, 1996).

Such multiplexity has facilitated the development of high-trust, cooperative relationships which have had significant economic and social outcomes for both individuals and communities. The following extracts from a conversation about breastfeeding on *welink* demonstrate such high-trust relationships:

Hang in there with the breast-feeding, but only if it's right for you too. It may be the best thing for the baby, but can be appalling for the mother at the same time. We had our third child "on the cheap" and I was determined to breast feed him, having failed dismally with his two sisters. I did too, but it WAS hard work. . . Took me most of the time though to learn to trust my own instincts and not to take TOO much notice of what other people told me I should be doing (rural woman, *welink* message, 1996).

So I agree wholeheartedly . . . do what works well for you and to hell with all the other good advice and well wishers! And whatever you do - don't feel guilty about the choice you make. . . I wonder what [*male academic members of the research team*] think about this conversation? (academic, *welink* message, 1996).

I think it is great that something like this can be discussed in a group like this and strike a cord with the various "types" within our group. Wonderful stuff! (rural woman, *welink* message, 1996).

And, when one of the men on the list told his own breastfeeding story, responses again underline the level of warmth and trust generated, and the special nature of communication on the list:

[name of male academic member]

What bravery to admit that you probably wouldn't have been game to say some of those things in a face to face meeting! Shows we have a new age man on our project team! (academic, *welink* message, 1996).

Good on you [name] for your comments and I think that there are many things many of us would not say face to face (rural woman, *welink* message, 1996).

3 Cooperating

A feature of the practice of leadership on the project's discussion lists has been the way the medium of electronic mail has been embraced to enable cooperative work on shared issues between geographically dispersed participants. It has been taken up particularly as a means of enabling shared planning, and shared writing of submissions and funding proposals, which would not otherwise have been possible within the constraints of submission deadlines that have often been unrealistic for rural dwellers. An example of such processes can be seen in the formal application by the Queensland Rural Women's Network for funding of the BridgIT rural Internet training project (<http://www.qrwn.org.au/bridgit.html>). The Rural Telecommunications Infrastructure Fund approved \$2million for the three-year project.

Community development - vertical networks in action

A member of the executive of the Queensland Rural Women's Network (QRWN) provided this account of the collaborative effort which went into the development of the QRWN submission to the Rural Telecommunication Infrastructure Fund initiative, Networking the Nation:

[Name] is writing the “Networking the Nation” submission for the network. We had a great meeting with Michelle Scott (the Queensland case manager for the federal government’s “Networking the Nation” project) in Winton... The network submission is very exciting and we are hoping to continue working closely with QUT and Webb Services. As usual all our modern communication is being well worked but there is still little as good as hearing a friend’s voice (*welink* message, 1997).

Information about this initiative was circulated through the list in July, and its importance and potential was discussed during the project’s 1997 round of workshops. It was around this time that the project team had met with representatives of the Networking the Nation project team including Michelle Scott. Michelle subsequently subscribed to *welink*, creating the opening for meetings such as the one described in the email message above. The other references are to further email communication regarding the development of the QRWN proposal between QRWN members, members of the QUT project team and the Department of Primary Industry Webb Services manager, Kerry Cody, also a *welink* member.

A feature of such cooperation is the degree to which it has operated across boundaries: not just the boundaries of geography, but the boundaries of jurisdiction of government, industry, academia and rural citizenship:

. . . I’m going upstairs to the National Office of the Information Economy (NOIE) to work on rural telecommunications policy . . . At least now *welink* really will have one more direct line to the policy makers . . . And I’ll be able to keep an eye on some of my favourite projects.

I don’t yet know who the acting State Manager will be but I’ll encourage them to join *welink*. I’ve found it fantastically useful professionally as well as a joy personally (government partner representative, *welink* message, 1999)

This ability to cooperate across boundaries is likely to be increasingly important as governments implement principles of economic competition, forcing rural communities to establish demand in order to obtain even basic social and community services. It will be those communities, geographic or virtual, that can cooperate to demonstrate demand that will succeed in attracting ongoing services:

. . . linking mobilized citizens to public agencies can enhance the efficacy of government. The combination of strong public institutions and organized communities is a powerful tool for development (Evans, 1996: 204)

4 *Supporting*

Finally, the glue which appears to hold all these activities together is the practice of supporting. This incorporates recognised practices such as modelling and mentoring to support and promote the development and practice of leadership skills and knowledge. Equally it involves a range of activities which build motivation, commitment, the courage to start, and the perseverance to continue. The foundation for all of this is the practice of connecting.

Largely because of shared context, and the personalisation of the communications, strong tie relationships have also developed between participants on *welink*. As also seen in the breastfeeding discussion earlier in this paper, personal problems and experiences are shared and support given:

One thing I wanted to bring to the attention of you all on a more serious note is that absolute depression that is in our area at the moment. Yesterday . . . [t]here were a lot of bush people in town collecting their kids from the 4 boarding schools . . . Nearly everyone I spoke to seemed depressed and had had enough. After 5 years [of drought], it gets harder and harder to put on a happy face. Those that had got the early storms were okay, but it was quite evident in the women who most often carry the worries that their husband has plus also being the main carer of the children. I know that I have been worse than ever this year (rural woman, *welink* message, 1996).

For me [the best things about the online conversation has been] some of the humorous stuff, getting such a good response to my cheeky topic breastfeeding, the support during drought last year and after [baby’s name] was born and some of the thought provoking stuff people raised that made you write a response immediately it was all so interesting (rural woman, *welink* message, 1997).

The foundation for such support-oriented activities is the practice of connecting. In *welink*, this entails the virtual connection provided by accessing electronic communication technologies. Most important, however, is the personal connection that comes from building relationships and fostering a safe and supportive environment. This role is particularly important to the approximately 40 per cent of *welinkers* who live in relatively isolated circumstances. For them, *welink* is not so much an electronic discussion list as a place in the kitchen to gossip over a cup of tea (Daws, 1997), and the chat is a way to create a sense of belonging within an extended, diverse, supportive community.

At the end of the day, the people who take part in *welink* are all just that, people. It is much easier to approach a government official if yesterday you were laughing with them over getting bogged in your own driveway!

This morning we got bogged in our driveway!! Yup, right in the middle of the city, had to get my flatmate out of bed to sit on the other wheel arch in the back of the van!! That didn't work so it was push time... we won eventually. Ha, funny but a bummer, late again. . . (academic member, *welink* message 1997).

What I want to know was had it actually rained!

I once got dry bogged in wheel tracks made by a big truck that had trucked out decks of sheep from our "Unthank" yards when it had rained a little. Months later (being new to the bush and bush driving) I fell into these huge tracks in our little Gemini on my way to work. My new husband could not believe that the bottom of the car was resting on the ground between the two tracks and 2 of the wheels spinning freely in these huge tracks. He said didn't you see them! And I of course said of course I did I fell into them didn't I!! (rural woman, *welink* message 1997).

In creating and enabling the maintenance of these personal connections, *welink* exemplifies the relationship-building — and the subsequent possibilities for collaborative, community-focused action — which is so critical to the growth of social capital in a community. At its heart, this appears to be what *welink* has offered rural women in the way of a forum for practicing leadership and community development.

ICTs AND SOCIAL CHANGE

In the rural and remote communities in this project, the particular significance of women as users of communication technologies lies in:

- the diversity of their activities and responsibilities within rural and remote communities;
- changes in women's social roles, including their greater participation and leadership in paid employment, agricultural management, community development and in public life generally;
- the way women integrate the various aspects of their lives, including their capacity to integrate social and economic issues;
- the value of women's communicative capacities and styles in the maintenance of social cohesion and the promotion of community development, and
- their role in initiating and facilitating change processes which are of social, economic, environmental and cultural benefit (Rural Women and ICT's Research Team 1999: 152–153).

An example of such change processes can be seen in the successful application by the Queensland Rural Women's Network for funding of the BridgIT rural Internet training project (<http://www.qrwn.org.au/bridgit.html>), discussed earlier. Electronic networks have also facilitated the coordination, work and collective action of the Regional Women's Alliance, which has actively taken up a political challenge to reprioritise urban-centric government thinking via grassroots consciousness-raising and the use of new technology (Rothwell 1999). The Regional Women's Alliance has designed a web page, begun teleconferencing and its members have started using email.

As individuals work together for their community, therefore, valuable but non-quantifiable relationships are developed across the diverse interest lines that exist within communities. These relationships contribute to the growth of social capital, in the form of information sources, reciprocal obligations and expectations, increased trust, and perhaps shared norms (Bridger & Luloff 1997).

Finding the funds

One ongoing challenge to rural communities is that of obtaining funding for community initiatives. The following example shows how the list was used to assist in one such case. On October 12 1997, the this request was transmitted to *welink*:

Dear Everyone,

I am after advice - a friend who was visiting today is the Treasurer of what they hope will be the Longreach Kindergarten. This was closed about 4 years ago, due to lack of numbers, but now there is a demand to reopen it, as the population is thriving. They are looking for money to do this - cake stalls only go so far. They have applied to the Gaming fund and also the Kindergarten and Creche group, but felt there may be some more appropriate place to turn for some funding that they have

overlooked, or do not know about. Does anyone have any suggestions? (rural woman, *welink* message, 1997)

The assistance of one member who had provided information about funding sources more than once previously was particularly solicited. This member, who was employed in the development office of a tertiary institution, responded promptly with details of a range of possible funding bodies. Similar information about funding sources, and publications to assist with obtaining funding, have been circulated from time to time by list members in government departments and similar positions where they have access to such information.

VIEWING WOMEN'S PARTICIPATION IN ELECTRONIC NETWORKS THROUGH A LENS OF SOCIAL CAPITAL

Social capital cannot be generated by individuals acting in isolation, but depends on a propensity for sociability, a capacity to form new associations and networks:

Creative action by government organisations can foster social capital: linking mobilised citizens to public agencies can enhance the efficacy of government . . . Citizens contribute local knowledge and experience that would be prohibitively costly for outsiders to acquire (Evans, 1996: 204).

Social capital, in the form of social networks, takes on particular importance in rural communities. Rural communities that lack a relatively diversified economy often do not have an extensive economic or social base from which they can draw monetary and social resources. They do, however, benefit from the presence and leadership of motivated individuals, as well as other unrecognised internal assets and resources. On these foundations, rural communities have the potential to build trust, norms of reciprocity, and facilitate coordination and cooperation for mutual benefit between local communities and formal institutions such as business and government. Successful community development outcomes, based on the growth of social capital in a community, are attained when:

. . . people are willing and able to draw on nurturing social ties i) within their local communities ii) between local communities and groups with external and more extensive social connections to civil society iii) between civil society and macro-level institutions and iv) within corporate sector institutions (Woolcock, 1998:186).

Woolcock argues that all four of these dimensions must be present for optimal community development outcomes. Thus, for organisations — and for communities — social capital is a critical component of the development equation because it can enhance, maintain, or damage, physical and human capital. The challenge, says Woolcock, lies in 'identifying mechanisms that will create, nurture and sustain the types and combinations of social relationships conducive to building dynamic participatory economies, sustainable equitable economies and accountable developmental states' (p. 186). Such tools may include ways of building strong links within community through consultation processes — physical and/or electronic — that encourage participation and community involvement.

REASSESSING SOCIAL CAPITAL

Research into the social capital of rural Australia is emerging which challenges the economic rationalist views of rural decline. In a parallel but separate debate, the deployment of ICT infrastructure in rural centres is championed as an antidote to the rural social and economic crisis. In essence, our research incorporates both these debates to make an assessment of the impact of ICT's on rural social capital. This necessitates a reconceptualisation both of social capital and the role of technology in rural social development.

The social capital literature is dominated by an American rural sociologist perspective. Further, national and international analysis of social capital has been dominated by empiricist evaluation, and lacks an in-depth qualitative contribution. Existing social capital indicators have endeavoured to empirically measure intangible elements (Onyx & Bullen, 1997) of *participation in networks*, *reciprocity*, *trust*, *social norms*, *the commons* (as in a 'pooled' community resource) and *proactivity* (personal and collective efficacy). Other research has considered empirical measures of social capital that focus on the prevalence, type and extent of social exchanges (Hofferth & Iceland, 1997). In agreement with Onyx and Bullen (1997: 27), we argue that existing social capital scale[s], like all empirically developed scales, are simplistic, and therefore have both strengths and weaknesses. 'Its weakness lies in the fact that no scale can deal adequately with the subtleties and complexities of human life, and what basically refers to the quality of life. It is nonsense to try and reduce the value of connectedness in the life of a community to a number!' (1997: 27). There is therefore a need to flesh out social capital scales with other, more qualitative, methods such as case studies and 'thick descriptions'.

Furthermore, the interaction between social capital and technology has not been included to date within the indicators adopted by other researchers. The research reported here aims to reassess social capital indicators to include the influence of communication technology on social capital in rural communities. This will enable the study to describe key *intangible* elements of social capital and the social construction of technology, such as trustworthiness and confidentiality, community values, social networking, ideas of effective information channels and the existence of effective norms and sanctions. Such an analysis will broaden the evaluation of communication technology applications in rural communities to include indicators of community well being, development, and sustainability. Reconceptualising social capital in this way will make a significant contribution to the theoretical understanding of social capital in the literature. Equally, a more effective profile of social capital indicators will facilitate the identification and 'thick description' of social capital in rural communities, and provide a richer, more holistic picture of social capital.

The preliminary findings presented in this paper begin to describe social capital in qualitative terms. The analysis focuses on the element of social networks, and explores the iterative relationship between networks, interactive communication technologies and rural women. The project facilitated the formation of strong and weak tie linkages that formed the basis of powerful formal and informal networks between the researchers, industry partners and women in rural and remote communities.

Our arguments, then, are based on the premise that the future of rural communities depends not only on economic development, but also on the extent to which people are able to deal with problems and anticipate change. This ability depends on a community's social capital. That is, the extent of social networks within a community, trust between community members, and norms that move people to participate and cooperate. In short, social capital is important to local people managing change and keeping their community vital.

BUILDING RURAL SOCIAL CAPITAL

Communication is often a key to prosperity. The unique potential of new communication technologies is the richness of interactive communication, horizontal and vertical, that they make possible: 'Social capital accumulators work best as open systems . . . [such] informal networks fit Putnam's models of democratic, egalitarian web-like structures which offer shared positive experiences through collaboration' (Cox, 1995: 22).

Such broad-spectrum participation can empower individuals, inspire collaboration and facilitate learning (Morino Institute, 1995). People and their relationships, insights, spirit and expertise, are the heart of interactive communications as the ultimate source of knowledge — not the physical mass of wires, or the complex networks, or the best databases of information: '. . . [A] very civil society involves social connections with political life. Politics must combine the valuing of difference, intertwined rights and responsibilities, and collective and democratic involvement in decisions which affect us' (Cox, 1995: 69).

Electronic networks bring to rural communities new information sources and open new communication channels. As *welink* demonstrates, this technology can bridge the gaps between development professionals and rural people through initiating interaction and dialogue, new alliances, inter-personal networks, and cross-sectoral links between organisations. Development of new communication channels enables bottom-up articulation and sharing of local knowledge that can attribute benefits such as increased efficiency in the use of development resources, less duplication of activities, reduced communication costs and global access to information and human resources.

Women's contributions to community development are especially valuable because they represent a different and more holistic approach that integrates social, economic and environmental issues. It is increasingly recognised that a holistic perspective is necessary for the management of change as rural communities move into the twenty-first century. It is important, therefore, to enable women to participate in rural and remote community development initiatives that utilise communication technologies in ways which empower them to make their distinctive contributions to building stocks of social capital in rural communities. Rural communities in Australia will thus be able to benefit from modern communication technologies as tools to underpin their capacity to stimulate both economic and social change.

WHOSE INFORMATION SOCIETY IS IT?

Rural and remote users of ICTs in Australia face significant infrastructure problems. These include cost, lack of reliability, service provision, limited capacity and slow rates of digital transmission:

. . . [the] burning issue in our area is the poor phone . . . on the digital radio concentrator system, and its very congested. Even with regular phone calls apart from connecting [to the Internet]. We have a lot of problems. Drop-outs and just on-going problems. And then I've got a big problem with the speed of my line (rural woman, quoted in The Rural Women and ICTs Research Team, 1999: 80).

For many rural and remote women, including many on *welink*, full technological equity with urban users remains impossible; they continue to feel that their communication technology needs are neither understood nor taken into account by policy makers: 'Policies created without the input of women reinforce . . . stereotypes and perpetuate discrimination against rural women' (Wells and Tanner, 1994: 250).

Traditionally, 'rural and remote Australia has been a long suffering recipient of inappropriate urban services and urban modes of delivery' (Barlow 1997: 4). Significantly, this planning regime continues its momentum with the development and delivery of new telecommunications services and new communication and information technologies. This is more than apparent in decisions concerning the Universal Service Obligation, which only applies to basic rather than advanced telecommunications services. However, awareness of these issues and political sensitivity to them has been reflected in more recent federal and state government policies and in the policies of Telstra, the main service provider. For example, Telstra has advanced the progress of its Future Mode of Operations by three years; the Department of Communication and the Arts has established a special Rural Telecommunications Infrastructure Fund; and the Universal Service Obligation is being redefined to include transmission of digital services as well as basic voice transmission.

What is also central to this argument is an acceptance that decisions regarding technological infrastructure are based on recognition that there is interdependence amongst political, social, cultural and economic systems in the introduction of new technologies. Thus, the potential for future uptake should incorporate the supply and consumption of interactive communication technologies relevant to the 'way people are most likely to work, communicate, play, buy and pay for things, rather than of the technological possibilities in the development of interactive communication technologies' (Singh et al. 1996: 4). This also includes the reconsideration of 'demand' in the context of 'use' rather than industry's understanding of demand as 'price' (Singh et al. 1996). Adopting community development as a method to inform service delivery models and telecommunications policy is a way forward in establishing appropriate telecommunications for rural and remote communities. Encompassing community development facilitates the participation of rural communities, enabling them to increasingly play a role in determining the nature and extent of the telecommunications resources available to them.

The 'Enhancing Rural Women's Access to Interactive Communication Technologies' research (The Rural Women and ICTs Research Team, 1999) indicates that given appropriate opportunities both to raise their awareness of the positive potential of new technologies, and to become familiar with their use, many rural and remote women will be quick to take advantage of whatever technology they can access. Further, there are indications that once they can see the relevance of the technologies to their lives, many will persist through the very considerable obstacles currently undermining their efforts to gain access.

Access to reliable and affordable communication technologies is a critical issue for the rural women in *welink*. The more remote the women are, the more critical becomes the availability of reliable telecommunications. The high per capita cost of providing and servicing the technical infrastructure means, however, that those furthest from the main centres of population concentration are likely to have the most limited and costly telecommunications services. Paradoxically, those who have the most critical need often have the least access. The outcomes of the vertical and horizontal networking and cooperation exemplified by *welink* challenges economically driven policies that commonly underpin the delivery of telecommunications services to rural communities.

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