Media and Communication Capacities in the Pacific region

Abstract

Realities of limited telecommunications and Internet service delivery are putting a restraint on expectations of major impact from new media in Pacific nations. This paper argues that, for development tasks at least, a leap forward based on new technology is as yet rather much to expect. The widest range of considerations has to be kept in mind – all forms of mass communication media that are available to use and adapt, other opportunity factors, and obstacles to communication.

The paper will examine two cases: the Highlands region of Papua New Guinea, and the island nation of Tuvalu. In Papua New Guinea, there is currently little access to the Internet, and what there is tends to be slow and limited. More traditional forms of media, such as radio broadcasting, stand to deliver good returns if developed well. In Tuvalu, online participation is restricted due to limited Internet access, slow or congested bandwidth speeds, and lack of access to computer services and repairs.

The method of investigation for the two case studies is principally direct observation by the researcher in each case. During extended visits to the two developing regions in question, the researchers participated in local media production or assisted with training. In each case, extensive preparatory work was undertaken, including a review of relevant scholarly literature on regional issues and mass media.

Dr Lee DUFFIELD,
Amanda H A WATSON and
Dr Mark HAYES

Introduction

We are concerned that much of the world stands to be left behind; that the spread of convergent new media is not penetrating to the mass of people in developing countries at anything like a comparable rate; that research and policy development to date, to assess and accommodate changes associated with new media, is focused mostly on the needs of the major users, not the Third World "periphery"; that material conditions in many countries work strongly against any easy or rapid uptake of new media on a mass scale; and that while use of new media will be inevitable and advantageous, the application and adaptation of traditional media of mass communication, like radio especially, should be persisted with, forming a part of sound strategies for development. Problems of information poverty – illiteracy, lack of access, inability to use the Internet, lack of money for facilities, software and training – will have to be negotiated.

The argument is assisted by referring to actual economic and social circumstances in developing countries of the Pacific region, and in particular two case studies based on field work in Papua New Guinea (contributed by Amanda Watson), and Tuvalu (by Mark Hayes). The principal method used is observation on location, a qualitative approach which will back up repeated instances, some of which will be quoted here, where other investigators in the field have expressed reservations about the immediate usefulness of new media in similar circumstances.

The Internet is the prime common carrier for convergent technologies, playing a part already, in all countries as at least a key link to the outside world. Yet the explosion of the capacity of information and communication technology (ICT) in the developed world threatens to open further the information gap between rich and poor, centre and periphery, developed and underdeveloped societies. A main purpose of this paper is to support the suggestion that for these "other" societies to keep pace, while immediately seizing any advantages to be had from the use of new media, the best option is also to persist with known strategies for basic economic and social development. Such strategies will include use of the most accessible and effective media tools – as often as not the "traditional" media formats.

Expectations, economics and projections are those of the "developed" world

Great expectations about the uses and directions of new media in advanced economies are realistic, considering experience of the Internet so far, with its constant uptake by millions of new users. New media are able to keep on rapidly expanding because, in these regions, they can draw on great underlying wealth in material and human resources. Furthermore, users with the capacity and means to participate are doing so not only as consumers but also as contributors.

Bruns (2006) is able to track a heavy trade in information through specialised private news and commentary services, with plentiful resources, often operating collaboratively. In the field of policy development, the European Commission provides a leading example. Always mindful of potential threats or opportunities for its 500-million citizens, the commission has initiated a sophisticated review in the context of an already-gazetted new European law, a Directive titled "Audiovisual Media Services Without Frontiers" (European Commission, 2007). Following an extensive public survey, the commission produced the first of an intended series of policy documents, its Communication on Media Literacy (European Commission, 2007a). Its concerns about new media were expressed by Viviane Reding, the European Commissioner for the single and specialised portfolio created under the designation of Information Society and Media:

"The media are changing, and so is citizens' use of such media. New information and communication technologies make it much easier for anybody to retrieve and disseminate information, communicate, publish or even broadcast. … Everyone (old and young) needs to get to grips with the new digital world." (European Commission, 2007b)

Such inclusive rhetoric is less applicable to the interests of people in poorer, small and isolated communities. The examples above, representative of the thrust of research towards an extension of pluralistic media and civil society, highlight the widely-held assumption that resources are great and will expand. The question remains, however, as to what extent citizens in developing countries can expect to share in the benefits of the ICT revolution.

New media in developing countries of the Pacific region

Recent, separate research reports by Anderson (2007) and Foster (2007) together provide a useful survey of the current status of new media in the South Pacific islands. Anderson's investigation of online resources for education about politics in twelve Pacific islands states, listed in Appendix 1, is indicative of resources available for new media. All of the countries have some government presence online. However, the services are not "participatory". In every case, Internet costs are high, especially in terms of local earnings, and "literacy" issues (conventional literacy, computer and Internet literacy and research literacy) are very problematic. Access to the Internet is principally located in towns and cities.

The underdevelopment of infrastructure and the existence of telecommunications monopolies are maintaining high Internet access costs. Literacy problems are complicated by the predominance of English on websites. ICT education is being integrated into some school curricula, but remains hampered by infrastructure and costs (Anderson, 2007:103).

"The percentage of users throughout the Pacific Island region is variable and ranges from approximately 60% of the population in Niue [where a free service is available] to just over 16.5% in the Cook Islands, about 11% in Tuvalu, and 7% in Fiji. For the other selected countries the percentage of people using the Internet is still well under 5%." (Anderson, 2007:105)

New media usage tends to be restricted to well-educated, urban elites, bypassing traditional elites and leaving out the great majority of the population. While democracy "essentially relates to the majority" (Anderson, 2007:107), majority interests are not yet directly being served.

"With the current status of technology accessibility in the region in general, a 'back to basics' approach for political education and participation may still be the most conducive to an egalitarian rather than elitist democracy. Traditional forms of media, such as radio and newspaper are still among the most reliable for Pacific populations." (Anderson, 2007:106-7).

Foster documents the recent history of anonymous web logs ("blogs") used in Fiji in 2007 to evade restrictions imposed on traditional mass media by the military government. These blogs have created impact, being credited with providing a balance to the limited range of news stories permitted by the armed forces, and giving an airing to specifically proscribed information or ideas.

Bloggers have had to move to new hosts as military agents sought to track them down and block their output. Anti-military sites were necessarily anonymous, hence avoiding accountability, and in some dramatic cases were factually incorrect. Some of the sites also became known for carrying racial invective and blasphemy. Journalists and management in traditional media, having begun to use the dissident sites for tip-offs, after nearly a year were withdrawing from that practice.

"If the press is the watchdog of the people, perhaps blogs need to be seen not as the mongrel brother but the bulldog ready to be let loose at a moment's notice." (Foster, 2007:58).

Often enough constraints on the use of new media will be less sinister and yet equally difficult. In regions not well serviced by an infrastructure of electricity, transport, and trade, tools of new media are worth less than in the developed world, because productivity and return on investment will be less. The value of digital devices, including personal computers, is diminished because their functionality is impaired, particularly in tropical climates. Maintenance of digital equipment is difficult due to lack of service support and distance from suppliers.

Case study: Patience and success with radio in Papua New Guinea

The radio station under study is in the Papua New Guinean Highlands. It is a religious station and is still in its infancy, having opened in 2003. The following observations arise from visits to this station in 2005 and 2006. The station provides a good example of the phenomena discussed above, concerning the availability, possibilities, and shortcomings of digital ICT. It demonstrates the difficulties to be endured when producing mass media in remote parts of a developing country, including funding, technology, equipment, and mobilisation of human resources. The case study indicates the efficacy of radio as a branch of conventional media in achieving development goals.

The researcher visited the station for one week late in 2005 and for another week in mid 2006. A detailed assessment of the radio station was provided to the management, and broadcasting staff were given training. Literature reviewed included a church report on broadcasting policy, AusAID (Australian Agency for International Development) Media for Development Initiative research, and an earlier observation study made by a student from Divine Word University.

Audiences in Papua New Guinean towns and nearby districts can receive Radio Australia and/or the BBC World Service. Commercial radio stations concentrate on younger listeners, primarily broadcasting popular music. Audiences otherwise rely on the government-operated National Broadcasting Service (NBC) or the community sector for local coverage. The Highlands station seeks to stimulate community life, and make up for an information gap, given the very irregular standard of service from the cash-strapped NBC. Most of the station's programming is in the Melanesian pigeon language, offering talk and gospel music. There is local news daily. Regular programs are produced by the clergy or church organisations, and other local groups such as the Provincial AIDS Committee. The station broadcasts 24 hours a day and handles the consequent heavy demand for program fare by repeating some programs, and relaying overnight broadcast hours from a church network and the BBC.

The program philosophy concentrates on community contact. Use of Melanesian pigeon extends the audience range. Presenters reported a growing response, on evidence such as increased music requests and dedications. The station sees itself contributing to the community, through its interview sessions, recording and broadcast of community events, religious services, singing competitions, and toksaves (meaning 'messages', usually about community events or opportunities). Regular program materials include the HIV/AIDS program, and a church family life program. "Grassroots reporters" are co-opted where possible – volunteers who tell about goings-on in surrounding villages.

"New media" technologies in Papua New Guinea

The affordability of technology is relative to the average income base in an area. In Australia, user friendly technology is available off the shelf to set up and run small operations at an affordable cost. However, equipment that is affordable to an individual setting up as a media producer in Australia will be expensive for a small company or partnership in a developing country like Papua New Guinea (PNG). The Highlands station nevertheless was set up with an installation of new equipment for broadcast production, and is able to collect and rebroadcast satellite feeds. The equipment, computer software, and computer network are all working well.

Nonetheless, the Internet situation in PNG is substandard, with limited, low-speed download capacity in most cases. Frequent electricity outages exacerbate these problems. Combined with the low levels of people's

accessibility to computers, especially in rural areas, this situation with poor connectivity is a crucial barrier to the development of new media services. Facilities may be obtained to construct excellent media artifacts, be they for sound, visual, or mixed-media, but they cannot be effectively distributed. Further, an improvement of this situation, through construction of supporting infrastructure such as satellite stations, cabling, servers and exchanges, must be some long time away, given the country's struggling economy, topography and population distribution.

PNG - Radio as a conventional media solution

Radio receivers are a strategic element in meeting mass communication needs in the Papua New Guinean Highlands, being cheap, portable and simple to use and maintain. Receivers are able to pick up signals over a wide area and do not require any installation work. Groups can share one receiver (no passwords or log-ins are required) and several people can listen at once. Because they are familiar, no special educational work is needed. Adult literacy in PNG is 57.3% and only 1-2% of adults speak English (CIA World Factbook). These statistics reduce the immediate advantages to this population of the Internet, where the bulk of content in that country is text in English. The advantages of broadcasting overshadow the great disadvantage, that radio broadcasting is not inter-active. Feedback using telephones is an excellent supplement to broadcasts, but cannot match the multi-faceted exchange of information, sharing among multiple users and concurrent sessions that exist with new media formats.

The fact remains however that such new media cannot be rated a plausible option for tackling mass communication needs in the Highlands situation, when the underlying economy is taken into account. In PNG 85% of people live off subsistence agriculture and per capita Gross Domestic Product (GDP), 2006 estimate, is K8150 ($US2700, Yahoo currency converter, 31.12.07), (CIA World Factbook). Money is needed for roads, schools, health services and justice, so inevitably any community media service has to run on shoestring budgets.

The Highlands radio station is a sound outcome of thinking about communication needs and a decision by church authorities that the radio medium is the soundest option. In order to thrive, the station must deal with two main problems identified by the researcher: the search for reliable funding, and the related problem of recruiting adequate staff. In 2005 the station had 5.6 full-time staff positions with some personnel doubling up as

managers and broadcasters, and in 2006 it added an administrative position. The salaries are low, with staff attesting that they find it hard to make ends meet. In addition, the twenty-four hour broadcasting commits them to long hours of work. Broadcasting being not only labour intensive but also skilled work, there has been pressure for these staff members, and volunteers who come forward to help them, to get training and upgrade their abilities.

Prior to the researcher's visits in 2005 and 2006, no staff member at the radio station had ever received any training in radio broadcasting techniques. Initial training was conducted during these visits in basic radio scripting techniques, media ethics, interviewing, program branding and the production of promotional messages. An experienced Australian radio producer was undertaking a three-month volunteer placement at the radio station from November 2007 to February 2008 through Australian Volunteers International, hopefully adding to the capacity of the existing station staff. While the station has an adequate building and the modern equipment set-up mentioned above, it faces capital outlays for necessary studio sound-proofing, eventual equipment upgrades and future expansion of its operations. In addition, the management and board of the station struggle to provide adequate housing to staff members, and this impedes the ability to employ additional staff.

PNG - Community development

In a short time, the Highlands radio station has made substantial progress, in commencing as a broadcaster and capturing the interest of an audience which feeds back its interests. It has put some focus on staff training, to make more effective use of its limited resources. Observation at the station has established that staff have taken on board the obligations of professional broadcasters. Despite having only one full free day per week, presenters are routinely arriving on time for shifts. Certain cultural factors have been noted, specifically deep shyness about questioning others, or performing a "friendly sounding" broadcaster role, but the broadcasters have applied themselves to try to make the adjustment, in order to be effective interviewers or presenters.

In many respects the operation remains under construction, building up a skills base and ongoing efficiencies, orientated towards serving the regional community, the better to foster active community engagement. To that end, projects under internal discussion have been to do with streamlining the on-

air product and addressing immediate social needs, such as programs that discuss local issues, human rights, family violence and child abuse.

Consultant's recommendations placed before the station's community-based management board reflect its ongoing needs in regard to resources: a pay rise for staff, one extra full-time broadcaster and an office management team of three, to be free of on-air duties, and a further drive to find extra sources of secure funding. On balance this radio station has asserted a place for itself as a key element in efforts to spread information, generate a mass conversation in its district, and cultivate interest in the well-being of the community. It is confronting large problems, especially to do with inadequate funding, but has demonstrated that radio is a feasible medium for the task and perhaps the only feasible medium available for a long time to come.

Case study: Progress despite adversity in public communication in Tuvalu

People in tiny Tuvalu have lesser problems obtaining direct access to one another. The population is concentrated on the small atoll of Funafuti and population estimates do not exceed just 12,000 (CIA World Factbook). Most citizens claim to know most others, with abundant extended family links as well. That ease of access is qualified however by the fact that perhaps 3000 of the Tuvaluans live in other places – New Zealand, Hawaii, Australia and elsewhere - and outer islands are also rather inaccessible. The main application of mass media systems for small and isolated Tuvalu is then to maintain active links with the outside world, which begins 1200 kilometers away in Fiji, and here the familiar problem of stressed resources immediately arises. Per capita GDP is $A1100 (ADB, 2005), and costs of communication are a severe restraint on the potential for any new abundance that might arise through access to new media.

The researcher in this case has made extended visits to Tuvalu, conducting an ongoing sociological study of the country and its mass communication issues: three weeks in 2002, and again in 2004 and 2006, with a fourth working trip scheduled for 2008. The work has entailed extensive searches of literature exploring the islands' history, collaboration with others pursuing a specialised interest in the country and detailed exchanges, both in set-piece interviews and informal conversation with Tuvaluans. This contribution draws on the field work completed to date, and previous publication on Tuvalu (Hayes in Duffield and Cokley, 2006). The case study explores the

very finite size and remoteness of the population of the country, the battle to maintain communication links, and some problems with the "outside" world.

Settings, infrastructure and outside interventions

Funafuti Atoll is a 12 kilometre long, boomerang-shaped atoll roughly halfway between Australia and Hawaii. The atoll is very densely populated, with some 4,500 people squeezed on to its available land. The dynamics of tradition, modernity and even post- or 'liquid modernity' (Bauman, 2000) are vividly, obviously, in play. There are no mountains or hills, and no running streams or rivers, on any of Tuvalu's nine inhabited islands, hence global warming, poses a grave threat to Tuvalu's very existence.

The Tuvaluan Government Information Technology Office, part of the Communications Ministry, is responsible for the maintenance and operation of, among other things, Tuvalu's major Internet connection, routed through satellite (TraceRoutes & WhoIs to 202.2.96.4 run 1/1/2008). The entire national bandwidth is 1,028 kilobits per second down, and 512 kilobits up, about the same bandwidth as a premium home Broadband connection in Australia. There is only one website which originates from Tuvalu. Plans are afoot to deliver Internet access to all Outer Islands, but, as of early 2008, only Vaitupu, site of Tuvalu's main high school, at Motofoua on Vaitupu's south eastern end, was also online, with a tiny bandwidth.

Thanks to a decision made quite early in the history of the Internet, and later confirmed by the Internet Assigned Numbers Authority (IANA), Tuvalu was assigned the 'Internet country code' or Top Level Domain of . (dot) TV. This 'cyberspace address' only became hot property with the Dot Com Boom of the 1990s (Whittle, 2007). The Dot Com Boom overtook more cautious Internet governance, and Tuvalu initially found its 'country code' had simply been appropriated by Dot Com entrepreneurs, and passed around, for suitably inflated fees, until the Tuvaluan Government got it back. An auction was held for what had become the .TV Corporation and it was leased by the US-based Internet security and e-commerce corporation, Verisign, in 2001.

Some commentators have made ridiculous claims about the fantastic amounts of money the .TV lease supposedly could bring Tuvalu (Barham, 2005). The situation is described better by anthropologists Keith and Anne Chambers, whose Unity of Heart (2001) points to the changes greater individualism and

affluence are having (Chambers, 2001). For the record, the .TV lease with Verisign brings the Tuvaluan Government about $US 2 million annually, which some Tuvaluans suggest is insufficient (http://www.rnzi.com/pages/news.php?op=read&id=35416).

A related, erroneous tale is periodically made public, suggesting that a sizeable amount of 'net nastiness' like pornography, viruses, and phishing originates from sites with a .TV Internet domain. Such reports overlook the physical size, Internet penetration, available bandwidths, GDP, and generally very conservative, Christian, quasi-traditional culture of Tuvalu. To provide some relief to Tuvaluans exasperated by such activity, the Pacific Chapter of the Internet Society (PICISOC) uses the Internet to distribute media releases to refute the stories when they occur.

On-the-ground realities in Tuvalu

Consider instead the realities of media service, Internet and telecommunication use "on the ground", for citizens of this small state. Access to the Internet through the government IT centre or two private cafes is expensive by local standards at least, though service has improved with time. The failure of the INTELSAT 804 satellite in January 2005 dramatically highlighted the islands' dependence on satellite. Telephone contact, data feeds and direct satellite broadcasting channels were shut down until INTELSAT 701 could be reactivated to take the traffic, with consequent readjustment problems on the ground including realignment of large dishes. The country was again cut off in a similar, brief incident at the end of that year. Informal entertainment services are obtained through private users sharing downloads from satellite television, but again costs can be prohibitive. In the event of failure of a receiver used to rebroadcast the BBC it cannot be repaired on site, requiring air-freighting, prepaid, to Radio Australia workshops in Melbourne. Once more due to cost factors an information lifeline such as Radio Australia is rebroadcast from shortwave, with accompanying noise, as against a clean feed obtainable from the Internet. Uneven electricity supplies from an ageing Funafuti power plant, now replaced, impeded the digital flow in the first years.

Until November 2007, the Tuvalu Media Corporation (TMC) ran Radio Tuvalu and published a monthly A4 sized newspaper, Tuvalu Echoes, when the printer worked and there was both sufficient paper and ink. The TMC was set up as a government-owned corporation in 1999 to semi-privatise government media.

At the Princess Margaret Hospital in Fongafale village, central Funafuti, medical staff routinely use the Internet to send and receive medical information. However, for urgent consultations, or to arrange medical evacuations from the Outer Islands, they must reach for the telephone and the fax machine – for better speed and reliability. The University of the South Pacific's Centre for Tuvalu uses a downlink-only audio and video facility via InmarSat. At any given time, as many as 600 Tuvaluan men are crewing cargo boats around the world, bringing a vital source of remittance income to their families, but with long separations. The Internet serves as a vital communication channel between seafarers and their families. All use the Internet to varying degrees, given the available bandwidth, which seriously decreases as demand increases across the island, especially during weekdays.

The efficiencies of the "new" world economy, drawing on the benefits of ICT, are available to people of this place, but the benefits are qualified. Isolation, the very small population, and high costs in a poor economy are very material constraints on what can be attained.

Conclusion

The new media field is a growth area known to deliver high productivity. Nonetheless, it still requires money and it still assumes much preparedness on the part of users, as to their wealth, education, language capacities and cultural adaptability. In these ways the situation of developing countries is compromised because they are commencing on a weaker resource base and will encounter more practical difficulties. Entering the business will be more difficult for them and, initially at least, will be less rewarding in terms of pro rata returns on what is spent. It is not really feasible for the naturally poorer countries to climb onto the cyber "bandwagon" while it is traveling at speed. In terms of human life experience, especially in places where life expectancy is poor, some generations may yet pass in an "information poor" state, if it were left to the new media at this time.

The project of development already in train in countries such as the Pacific islands needs to continue, and might work towards a point where new media as a productive and rewarding resource can be picked up on a large scale and exploited most effectively.

Dramatic impacts might be expected from the high capacity, built-in efficiencies and universal familiarity of new media; becoming part of the "new economy" where information and communication figure as a key

element in all production. In another kind of discussion we might then consider two-way flows, where inputs from one side to the other can begin to cause positive cultural transformations, vis Flusser (2003). In the meantime, where there are tasks for development, of infrastructure and economic resources, of solidarity-making and building of civil society in communities, or of human resources including basic health care or literacy, the mobilisation of appropriate mass media is an open choice that more often than not should remain with traditional forms, not new media as yet.

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The information in the Tuvalu case study has been corroborated and authenticated by Pese Maatia, a government Information Technology officer from Tuvalu doing Higher Degree study in Australia, interviewed for this study on 6.1.08.

Appendix 1: Twelve countries listed in study by Anderson

Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Samoa, Tokelau, Tonga, Tuvalu, Vanuatu.

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