

Framing pandemic management: New governance, science or culture?¹

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ABSTRACT: *Management of a pandemic engages multiple sites where previously settled or uncontroversial understandings may be transformed by global and domestic forces. This article examines the iconography of social distancing implicated in the discourses of 'quarantine' and 'risk control' in public health, and the tension between scientific and popular media readings of the contours of acceptable public health models for managing particular pandemics. The role of culture in shaping and reshaping borders at an operational level is explored as a basis for explaining the apparent paradoxes in the way historic and contemporary pandemics are actually managed, and the different ways particular pandemics are framed. The article argues that a rational-scientific approach to pandemic management is insufficient and that a more nuanced socio-political blend of science, culture and public perceptions offers a more substantial basis for public health policy.*

KEYWORDS: pandemics, management, public health, science and culture

Disease, as a socially interpreted physical and physiological process, is fundamentally shaped by prevailing political culture and practices. In this way, pandemic scares can be identified as polysemous, yet forceful, idioms of distress and anxiety (Aaltola, 2012, p. 3).

Public health has always been entangled in questions of authority, coercion and freedom, as well as of the governance of people, their movement and conduct. There is nothing new about that. But the ways in which these questions are addressed in different jurisdictions and at different times depend on particular confluences of human movement and infectious disease and also on historically rooted practices and perceptions – whether or not we choose to acknowledge and analyse them (Bashford & Strange, 2007, pp. 91–92).

Pandemic infections have been feared over the course of history (Aaltola, 2012). There is thus a strong consensus of opinion that governments should adopt resolute public health and other protective measures to prevent pandemics developing and manage risks should a pandemic strike. However there is much less consensus about how risk should be framed (is it a scientific, social or political question?), what forms of governance should be deployed (e.g., quarantine or public

education?), what disciplinary perspectives should be favoured (medicine, law, politics, social sciences), and how that management is perceived or accepted by a culturally diverse public.

This paper reviews international literature from a range of disciplines to examine the role played by culture in shaping pandemic management. A wide range of databases were searched, including Sociological Abstracts, Medline, Web of Science, Informit (the Health, Law and Social Sciences collections), LexisNexis, Westlaw, Hein online and Google Advanced Scholar. This was supplemented by general insights gleaned from separate original legislative, policy and grey literature research on pandemic management in Asia. The primary focus here is the apparent paradoxes in the way historic and contemporary pandemics are actually managed, the different ways particular pandemics are framed, and the implications of cultural difference at the *operational* level of pandemic management.

As Bashford and Strange (2007) relevantly observe regarding the intersection of perspectives the focus of this review, the *entanglement* of issues of coercion, individual rights, community welfare, governance forms, and the science of public health – has long been a feature of management responses to pandemic infections. What has changed in recent times is that old models and approaches have been replaced by new, more complex, and more varied responses. Disciplinary perspectives too are challenged

¹ Research for this paper is supported by Discovery Grant DP0987239 from the Australian Research Council.

by contemporary governance of pandemic response planning. For instance the restrictions on individual rights under public health controls associated with pandemic management are traditionally thought to be a domain for law and lawyers; or as a scientific realm of governance informed by technocratic expert advice from the discipline of public medicine. But it may best be understood through a social science lens, as constituting a form of ‘social control’ (Parmet, 2010); or from a governance perspective, as a form of global or networked governance (Hein, Burris, & Shearing, 2009).

The choice of disciplinary perspective has implications for pandemic management. One consequence of a social science disciplinary lens for law would be to *broaden* the consideration from *formal legal powers/decisions* to include say behavioural modification impacts (sometimes called ‘soft-law’), and ‘shadow of law’ (or indirect perceptual) effects of laws, as well as the subtle normative influences of wider social values and social conventions. For medicine it would extend the discourse from a purely scientific or bureaucratic-rationalist dialogue about clinical and epidemiological features of pandemic spread and control, to consider issues such as the way media constructs perceptions of public confidence in programmes, or the way it amplifies community fear and stigma in the face of a contagious disease.

This article explores several sites where previously settled or uncontroversial perspectives and understandings of pandemics have been challenged, rendered more permeable, or transformed, by new global and domestic governance structures and related cultural forces. Part B discusses the World Health Organisation (WHO) governance model for pandemic management. Part C examines the iconography of ‘social distancing,’ both in shaping Australian thinking about ‘quarantine’ in public health, and in transforming modern germ theory into hybrid forms of discredited policies of transmission due to bad air (miasmas), during the early history of public health in Hong Kong. In Part D we turn to a contemporary example, where the logics of national security ‘risk control’ have begun to enter (and transform the boundaries and purposes) of public

health models for managing pandemics. The following section (Part E) concentrates on the role of culture in shaping and reshaping *operational* level issues, not only thereby helping to explain the apparent paradoxes in the way historic and contemporary pandemics are actually managed, but informing the way decisions are (or ought ideally) be made in moving up or down the WHO management hierarchy of levels of intervention (the risk-related phases of ‘alert,’ delay, contain, protect, sustain and control phases: Further, Carney, Bailey, & Bennett, 2012), and designing more sensitive and inclusive planning processes (Bennett, Carney, & Bailey, 2012).

This leads into our final section (Part F), where we focus on one of the implications of this analysis – namely that a rational-scientific approach to pandemic management is insufficient: Cultural issues and public perceptions also need to be considered. Our conclusion draws together this argument in favour of more socio-politically nuanced response to pandemic management.

WHO PANDEMIC MANAGEMENT: GOVERNANCE AND SOCIAL SCIENCE PERSPECTIVES

From the regulatory perspective of the WHO’s *International Health Regulations* 2005 (operative since 2007 for nations across the world), pandemic management is constructed as principally a scientific challenge, while for law it is often seen as a straightforward regulatory challenge. As a form of governance the WHO model involves member states ceding ‘*a considerable part of their respective sovereignty in national public health policy to the international community*’ (Krause, 2010, pp. 70–72 [emphasis added]), though the WHO’s June 2013 interim guidance guidelines (replacing its original 2009 guidance) has expanded the scope for individual nations to manage pandemic crises more flexibly than was possible previously under the more rigid linkage to internationally promulgated ‘phases’ (WHO, 2013, p. 1). The planning protocols laid down by the WHO for national governments to follow as part of a global response to a pandemic now decouple the relationship between WHO declared pandemic phases and national risk

assessment (and associated risk management), but they nevertheless remain underpinned by epidemiological public health mathematical models about the spread of a virus. Purely scientific (or even superficially 'legal') analyses have their place, but as shown in this article, they are arguably insufficient in themselves.

From a purely legal or governance perspective, the WHO model is a radical departure from the so-called Westphalian theory of international relations, based around harnessing autonomous sovereign states into collaboration through 'treaties.' This has been transformed as globalisation has increased the links and networks between cities and disease has become 'globalised' (Fidler, 2004) or 'networked' (Ali & Keil, 2008), requiring new surveillance programmes at the global and/or regional level to facilitate sharing of information. As David Fidler notes 'the process of globalisation ha[s] rendered a state-centric governance focus questionable' (Fidler, 2004, p. 47), though this remains a challenge for global health and governance (Gostin & Taylor, 2008, p. 56). Global and national pandemic governance systems now involve more distributed and complex arrangements. They are increasingly characterised by hybridity (sharing responsibilities across international, national and civil society organisations) creating 'poly-centric, distributed structure[s],' as the increasing number of stakeholders in global health adds new layers of complexity (Hill, 2011). Labelled 'networked' governance (Hein et al., 2009) or 'nodal' governance (Burris, Drahos, & Shearing, 2005) nation states and international institutions are 'increasingly seen as complex assemblages in and of themselves, comprised of more or less well-networked nodes operating somewhere on the spectrum between cooperation and competition' (Hein et al., 2009, p. 115). For example global partnerships in health often comprise many actors (including health departments, multi- and bilateral international organisations, pharmaceutical companies and civil society organisations) tailored to specific tasks and social and political environments, where '*flexible forms of cooperation have become possible*' (Hein & Kickbusch, 2010, p. 2 [emphasis added]).

The same complex characteristics are observed at national and local levels, leading Hein et al. (2009, p. 116) to commend the application of new theories of 'nodal governance' – seen as 'build[ing] on network theories to describe distributed governance and the ways in which institutions project power across networks to govern the systems they inhabit' – along with a second concept, that of the 'interface,' or 'specific space': One where 'two different social systems or fields of social order interact,' such as global and national systems or institutional modes of regulation, 'which are characterised by specific institutions and specific backgrounds' (Hein et al., 2009, p. 116). In a federation such as Australia (Carney et al., 2012), such new governance, with its broad and nuanced forms of distributed, hybrid governance networks and its variety of 'fields of social order,' is an important analytical perspective. Recent Australian research for example has demonstrated a tendency for management of pandemic influenza to devote insufficient attention to the role of the 'public' (Davis, Stephenson, & Flowers, 2011).

Sociological, political and cultural perspectives reveal some of the shortcomings of a purely governance or scientific approach. From a sociological standpoint pandemic management might be characterised as the medicalisation of insecurity (such as stockpiling anti-virals: Elbe, 2011, p. 856), while political science has characterised it as a political ('politico-somatic') construct (Aaltola, 2012). This choice of a perspective or frame is important. A social control perspective for example reaches well outside the traditional medico-legal domain to engage the way social phenomena (and social responses) are socially 'constructed.' Or as Davis et al. (2011, p. 913) put the question for their recent study of Australian pandemic planning documents and key informant interviews: '... How "the public" is brought into planning as an object of control.' Pandemics, then, are also a social construction (Abeyasinghe & White, 2011) arguably one best understood as based around contested constructions of risk (Hinote & Wasserman, 2013, pp. 218–224; Chamberlain, 2013, pp. 177–180), the management of which calls

for more nuanced and sophisticated regulatory approaches. While medical sociology was initially characterised as an atheoretical field, and is said still to have its share of so-called ‘zombie theories’ (theories which are already dead or dying: Cockerham, 2013, pp. 1, 3), ‘risk society’ analyses have a cross-disciplinary resonance beyond reflexive rationality approaches of health sociology (Hinote & Wasserman, 2013), rendering risk especially attractive for present purposes.

However responses to pandemics also reflect other influences, including the contribution of culture and politics, as Aaltola (2012) suggests in the opening quote to this paper. Among the interesting political tropes or contexts which Aaltola identifies for past pandemics, is the way in which Mad Cow Disease (bovine spongiform encephalopathy, ‘BSE’) became a ‘British’ disease (with UK trade interests clashing with the science of EU public health management: Aaltola, 2012, pp. 92–96), while SARS was identified as a by-product of globalisation shrinking the world and exposing citizens to the ‘risks’ of Chinese secrecy and Asian practices of proximity between agriculture and high urban densities (Aaltola, 2012, pp. 114–115) – tropes encountered again with avian and swine flu (Aaltola, 2012, pp. 142, 163, Chapter 6 generally). Old historical memories of the ‘plague’ (Aaltola, 2012, pp. 146–147), and the risk and destabilisation of the world order by avian flu, he suggested, generated a different frame than that of economic markets, embargoes and consumer concerns which were associated with BSE (Aaltola, 2012, p. 172).

Cultural factors, for their part, contribute in various ways, as discussed later. Recognition of the importance of cultural dimensions *within* pandemic disease management responses has for example also risen in recent years. Thus in Australia, special priority was given to resourcing and managing H1N1 risk among remote indigenous communities such as northern Queensland (Appuhamy et al., 2010, p. 95), in recognition that indigenous peoples such as Aborigines, Maori, and Pacific Islanders experience elevated risk of and higher critical care hospitalisation for such conditions (Baker et al., 2009; Webb et al., 2009).

But first we need to consider the place of the historical social distancing measure of ‘quarantine.’

‘BORDERS’ AND THE HISTORICAL RECORD OF QUARANTINE

Bashford (1998), in her earlier analysis of the place of quarantine in Australian culture in the early 20th century, was intrigued by the way Australia appeared to swim against the tide. While quarantine policies were declining in importance internationally, Australia *elevated* quarantine as one of the specific powers of the national government on federation, and it was one of the earliest priorities for Commonwealth action (Bashford, 1998, p. 387).

Bashford’s analysis both implicated quarantine in the production and reinforcement of a ‘pure national self’ and drew attention to the sense in which it ‘is literally central to the knowledge/discipline and the institutional bureaucracy of public health in this country’ (Bashford, 1998, p. 388). In this she locates quarantine as part of the forces responsible for the then White Australia immigration policy (‘the production of a national “healthiness” figured racially’: Bashford, 1998); a force perhaps now being reprised through the resurgence in recent years of strong ‘border control’ policies against refugees seeking to enter Australia illegally by boat. Quarantine control of potentially diseased people is portrayed by such commentators as operating in the same way animal and plant quarantine is currently explained as keeping Australia free of certain pests or diseases (Bashford, 1998, p. 393). Of course the tyranny of distance was a very effective protection against pandemics in the days of sea travel, with Australia remaining cholera free for instance. So quarantine did have some valid evidence-base as well, as shown for Spanish flu in 1918–1919 (McLeod et al., 2008).

Later work on diphtheria traced the relationship between emergent germ theory and the prevailing (or in some countries) entrenched but out-dated disease control strategies (Hooker & Bashford, 2002). In other words, in the messy process of policy making, scientific paradigms (or break-throughs) may not be the only (or even the main) driving force. Popular culture and

government culture both have a strong presence, as illustrated in international studies. Thus Hong Kong's history reveals that the early response to the emergence of modern germ theory was not that this presaged new approaches to public health, but rather that it would help fine-tune *existing* (already superseded) models, by better targetting the old-fashioned 'sanitary' approaches to control, through revealing where illness was concentrated (Hooker & Bashford, 2002, p. 43).

For diphtheria (as also in the plague example above), in the lead up to the turn of the 20th century, 'vaccination' treatments (with 'antitoxins') and notification of illness as a basis for measures of cleansing and isolation, were still the main public health strategies in Hong Kong. By the end of WW1, however, this switched to mass swabbing campaigns where *carriers* were 'the prime, almost exclusive, consideration,' and from 1922, with the failure of these campaigns, switched again to a policy of mass immunisation. However as Hooker and Bashford conclude, 'its piecemeal implementation meant that immunisation only gradually superseded carrier control and cleansing practices as the major preventive measure' (Hooker & Bashford, 2002, pp. 43–44).

In this these authors see the laying down of several historical planks of Australian public health policy, such as reconceptualising a condition from a treatable individual disease into one that may be prevented (or indeed eradicated) at population level; in the rise of laboratory-science as a management tool; in the focus on identification and management of health 'carriers' (including the liability to be quarantined); in provision for public immunisation; and in the significant role of public education as an adjunct of policy (Hooker & Bashford, 2002, p. 45). New paradigms and frames of understanding were thus constructed, even if quarantine had been a mainstay since at least 14th century Europe (Aaltola, 2012, p. 42). Quarantine and contemporary measures of border screening such as thermal imaging at airports, remain prominent tools for pandemic flu management for example, even though screening at national borders drew a total blank for Canada in its management of SARS (Aaltola, 2012, pp. 119, 131), and

despite mathematical modelling demonstrating that even an effective total border closure delays spread only by a few weeks (Kretzschmar & Wallinga, 2010, pp. 212–213).

As has been shown, policies such as social distancing (border control through quarantine, or domestic equivalents like closing schools) and hybrid forms (germ theory targetted 'sanitary' policies instead of immediate adoption of inoculation) have been shown to have a strong *cultural* foundation, slowing or transforming the emergence of contemporary understandings and public health approaches. A contemporary Australian example of the blurring of boundaries between (and rationales regarding) national security and public health adds weight to this (Davis et al., 2011, 916–917), presaging the significance of 'risk' as potentially a more relevant theoretical lens than science in understanding pandemic management.

GOVERNANCE: PUBLIC HEALTH OR 'RISK' MANAGEMENT?

Mika Aaltola argues that there is a constant tension between public health's scientific message of rational management and the capacity of a pandemic to conjure powerfully reinforcing images whereby 'different worst case scenarios lend mutual support to each other' and rope in the amplification of risk associated with 'the articulation ... of more generalised fears and anxieties,' such as those regarding greater permeability of national borders (Aaltola, 2012, p. 187). This is evidenced by the prominence of discourses of risk, contagion and blame in the Australian narrative analysis of media and government documentation on pandemic management as reported by Abeysinghe and White (2011).

Governance models too are fluid, and are responsive to shifts in values and perceptions with regard to the management of risk, such as in Beck's (1992, 1999) thesis of the emergence of the 'risk society,' as recently applied to the Australian H1N1 flu experience (Abeysinghe & White, 2011, pp. 312–313), and internationally by the prominence given to national and local risk assessment as the foundation of WHO's June 2013 guidance on influenza pandemic

management at national level (WHO, 2013, pp. 19–33). Thus Wraith and Stephenson (2009) describe a shift in the rationale for Australian pandemic management from ‘insurance-driven’ assumptions about mitigating known population or community risk levels to instead framing it as a component of a larger task of ensuring national security ‘preparedness’ against *incommensurate*, catastrophic and ‘global’ risks (Wraith & Stephenson, 2009, pp. 222–224). This risk management approach to the dangers posed by the ‘Other’ – as was found for Australia’s H1N1 experience with its characterisation of it as a ‘Third World’ threat (Abeyasinghe & White, 2011, pp. 314–316) – is a perspective which Aaltola traces back to the legacy of the 400 year experience of the Black Death in Europe, and the militaristic ‘quarantine and *cordon sanitaire* regulations’ then generated (Aaltola, 2012, p. 21, also pp. 146–148); a perspective which many see echoed more generally in the contemporary ‘securitisation’ of global health (such as the recent H1N1 swine flu episode: Abraham, 2011).

This is an approach which Wraith and Stephenson see as emphasising measures which secure functioning state services and government authority, including preservation of basic community infrastructure or services and maintenance of political and economic order. Or in other words, shifting the focus from interventions directed at known manageable infections which can be controlled or even eliminated, to instead prepare for dealing with exceptional and potentially unmanageable or uncontrolled events (Wraith & Stephenson, 2009, pp. 224–225). Under such an approach more reliance is placed on ‘discontinuous, temporal and localised expert responses’ (Wraith & Stephenson, 2009, p. 226), where the underlying logic is ensuring the adequacy of the *response* to health risks, rather than a government concentration on *mitigating* risk (as through the health, income or services interventions of the welfare state). This means, among other things, that less attention is paid to identifying or tackling systemic inequities (Wraith & Stephenson, 2009, pp. 227–228), despite the importance of SES inequalities to public health outcomes, as exemplified by ‘fundamental cause theory’ scholarship

concentrating on unearthing the underlying basic causes of such *persistent* social inequalities (Phelan & Link, 2013, p. 106). Established public health paradigms and traditional welfare state protections of equity, then, are infiltrated (and diluted) by the discourse of risk.

Consistent with Ulrich Beck’s conception of the ‘risk society,’ popular Australian media coverage is said to feed into perceptions of preservation of national security and critical infrastructure against the ‘risks’ posed by weak systems and health standards in Asia (Stephenson & Jamieson, 2009). The mobilisation in the media of the rhetoric of fear (and of blame of Asian governments for ‘allowing’ the virus ‘out’) has also been observed in international media coverage of the previous avian flu crisis (Brigitte & Christopher, 2007). Thus Aaltola identifies a December 1997 *New York Times* article as the tipping point, when economic implications of avian flu (such as for food production) or its potential to mutate, were replaced by the language of a ‘Biohazard,’ repositioned as necessitating global containment of a ‘risk’ emanating from China (Aaltola, 2012, pp. 162–164) – unlike the 2003 lower-key coverage of SARS ‘as an ordinary animal disease.’ ‘Risk’ has been demonstrated internationally to be quite culture-bound in other contexts, however, resulting in differing timings or public priorities about responding to issues such as AIDS and smoking; or earlier, in dealing with tuberculosis (further, Aaltola, 2012, pp. 152–154).

The fact that there have been so few ‘serious’ pandemics, and that such difficulties were encountered by jurisdictions in ‘adapting’ their pandemic plans rapidly enough in the ways required by the more benign unfolding of the recent swine flu pandemic, suggests other difficulties in a purely *scientific* discourse (Carney & Bennett, 2012). That discourse centres on *rational* management of flu pandemics, applying mathematical epidemiological models of virus spread (further: Krämer, Kretzschmar, & Krickeberg, 2010) or what Davis et al. (2011, p. 916) term applying the ‘virological gaze.’ However, as MacKellar (2007) suggests, false alarms are generated under a strict adherence to this model, due

to *medical* uncertainties both about the evolving pathogenesis of a novel virus, and its ‘age-attack’ curve. While application of the precautionary principle certainly has much to commend it in this field of public health, the high number of ‘false positives’ (viruses that cease to spread or be associated with high death and morbidity figures) rather undermines public confidence in measures such as the containment (‘ring fencing’) of groups, or the targetted deployment of agents such as Tamiflu to achieve control.

For his part, Aaltola (2012, pp. 58–59) advances a different – and non-medical – explanation, in noting that HIV/AIDS is not characterised as a pandemic. To Aaltola this suggests that the pandemic *label* (and its successful management) serves to reinforce the legitimacy and power of national governments and global agencies such as WHO, and of the underlying ‘scientific’ methods deployed in accord with WHO planning protocols (Aaltola, 2012, pp. 42–44, 58). This characterisation receives further support from studies of media portrayal of official government responses to H1N1 in both China (Heffernan, Misturelli, & Thomson, 2011) and Australia (Abeyasinghe & White, 2011, p. 317), which have found that preservation of confidence in government responses and underlying scientific planning assumptions were the dominant tropes.

Of course meta-level theories such as those of the risk society are notoriously difficult to ‘test,’ other than by pointing to evidence of what may be no more than a subjective interpretation or coincidence. However the ‘preparedness approach’ to risk certainly advocates core techniques of risk society governance, including ‘detection and early warning systems; coordinated response plans; simulation exercises and other methods to assess the current state of readiness; and, public communication strategies to assuage panic’ (Wraith & Stephenson, 2009, p. 226). As Wraith and Stephenson (2009) and others observe, Australian pandemic plans now conform to this architecture (Abeyasinghe & White, 2011; Carney et al., 2012). This is unsurprisingly perhaps, in light of the approach taken by the WHO template. However the H1N1 experience suggests that one consequence is that

it constructs the public, and vulnerable members of that public, as *passive* subjects for management and control, rather than as active citizens (Davis et al., 2011, p. 914).

But such an approach raises very challenging issues regarding the form of and weight given to the individual ‘rights’ built into the latest International Health Regulations. In a provocative paper, Therese Murphy and Whitty (2009) therefore suggest two alternative analytical schemas to the standard balancing of ‘public health vs. rights’ (where health as *security-risk* may swamp rights), by instead reframing it as a dialogue either about *rights as risk*, or as one about *risk within rights* (Murphy & Whitty, 2009, pp. 232–244). Apart from the issues of declining attention to social equity and the transfer to individuals of risks previously borne by government (in accordance with community-rating risk spreading principles) as mitigated by government through preventive interventions grounded in the precautionary principle – there are also critical questions of public participation and public confidence in these policies. Once again, what we may term our ‘frames of understanding’ are being remoulded.

Culture is an important factor in its own right in pandemic planning however.

CULTURAL BORDERS OF PANDEMIC PLANNING

Culture is a common issue across public health generally of course, especially in the social construction of illness (Olafsdottir, 2013, pp. 43–44). As an example of the rising prominence of cultural issues and sensitivities in the management of public health crises, Plant (2008) gives the example of the changed composition of the response teams assembled by the WHO under its ‘global outbreak and alert response network.’ Previously mainly comprised of an epidemiologist supported by some clinicians and perhaps laboratory analysts, the teams now reportedly more commonly comprise a couple of epidemiologists, a ‘mobiliser’ (a professionally qualified communications expert) and two medical anthropologists. The addition of medical anthropologists is important. As explained (Bennett & Carney, 2010), this is because other countries or

sub-cultures may not share the western scientific concept of a 'disease' (and disease trajectory) and because local cultural practices may require to be addressed. Thus a local funeral rite (such as washing the gut of a deceased person) may risk spreading blood/infection (Plant, 2008, p. 46), but be crucial to maintaining public support for pandemic management.

Not only is culture significant between countries, it also shapes local responses. The outbreak of bubonic plague in San Francisco's Chinatown in 1900 is a case in point internationally (McClain, 1988). Rather crude blanket responses of lock-downs of the whole of the vast Chinatown area, compulsory inoculation with a vaccine of dubious efficacy (Haffkine, an anti-cholera vaccine), and bans on travel for people not holding vaccination certificates (incl. Japanese), were imposed by public health authorities. This was mainly attributed to ill-feeling towards the Chinese diaspora, as manifested in widespread passage of *Chinese Exclusion Acts* and other discriminatory legislation and practices at the time (McClain; also Bashford & Strange, 2007, p. 89). Authorities also explored mass evacuation (exile) of residents to island camps, and the razing of the whole area (which had occurred naturally in Honolulu when a fire got out of control).

The US Federal courts soon quashed these measures on equal rights grounds and their lack of reasonable proportionality. But in a telling comparison, despite contemporary anti-Chinese sentiment in both the US and Australia, neither a later outbreak in the Caucasian community of San Francisco, nor the contemporaneous (and equally as severe) outbreak in Sydney Australia (Bashford & Strange, 2007, p. 463, N 68) attracted other than mainly 'rights sensitive' surgically targeted *individual* quarantining and efforts to control rats (whose fleas were being recognised as the real culprit). While other forces were undoubtedly in play (including mistaken notions that the plague was highly contagious, that fumigation worked, or worries about damaging trade), the strong anti-Chinese sentiment allied with an outbreak in a locality with high Chinese representation, resulted in policy initiatives where, after the first lock-down was

dissolved and replaced by travel bans, serious policy contradictions and irrationalities multiplied.

Bubonic plague was supposed by all to be an easily communicable disease, but the Asian inhabitants of San Francisco, while barred from leaving the city unless inoculated, were, under the first set of measures decided on by the health authorities, allowed to move about freely within the city and to intermingle with other residents. Under the second set of measures, the Chinese, sick and healthy alike, were confined within a small urban quarter, presumably thus greatly enhancing their chances of contracting the disease (Bashford & Strange, 2007, p. 510). As Bashford and Strange (2007, p. 89) observe more generally with regard to those marginalised on the basis of race, class, gender or religion, such groups have been treated 'historically more *as risks* than as being *at risk*, with the result that governing authorities have managed them primarily as "sources" instead of sufferers' (emphasis added). Or as Aaltola (2012, p. 1) asserts at the outset of his book, unlike other global emergencies such as hunger and natural disasters, the 'momentum' in pandemic emergencies 'is towards *disengagement* with the suffering distant other,' and on 'containment, rather than compassion' (emphasis added). Instead of the compassion engendered by other humanitarian emergencies, the 'hyperbole of contagion in pandemic scares produces a sense of complex *entanglement*' (Aaltola, 2012, p. 76 [emphasis added]).

Australasian experience bears out the way victims/patients can be reclassified as objects of blame. For instance Aboriginal communities were singled out in Australia in the management of leprosy, with 1956 policies of isolation confined to 'so-called full-blooded natives,' following on from a 'generation of elaborate legal requirements to prove infection and to enforce detention ... according to distinct racial categories,' and the legacy of a 'leper line' as a preventive measure against north-south movement of Aboriginal people in Western Australia (Aaltola, 2012, p. 89). Victim blaming of vulnerable populations is not inevitable, however. In New Zealand by contrast, the Health Department set up at the beginning of the 20th century in

anticipation of bubonic plague (which did not eventuate), recruited the first Maori doctor into a leadership role, which helped to develop partnerships with local Iwi communities and generally to address other socio-economic and cultural components of health (Durie, 2000).

There are many implications of the analysis which has unfolded so far in this article; indeed too many to be accommodated in the available space. We will content ourselves with just one final matter: The implications for pandemic governance plans which are grounded in clinical medical science, epidemiological public health models, or rational/expert forms of governance.

BEYOND SCIENTIFIC-RATIONALIST FRAMES?

In a discourse analysis of the content of 37 pandemic flu planning documents, it has been concluded that the 'scientific, political and legal' discourses have been dominant over the 'social, cultural and ethical' discourses (Garoon & Duggan, 2008).

Historians such as Bashford and Strange (2007, p. 88) warn that medical science (or organisational logistics) alone is too narrow a frame for a public health response, and that it is 'difficult and even misconceived to explain past health policy decisions or practices purely in medical or epidemiological terms.' Instead it is argued that the history of public health shows that 'past practices inhere in current perceptions and policies, which, like their antecedents, unfold amidst shifting amalgams of politics, culture, law and economics, in addition to increasingly sophisticated medical expertise' (Bashford & Strange, 2007). Of course there are some constants in the historical record so far as the main elements of management are concerned, including 'restrictions on movement and contact, ... medico-legal authority, and the constitution of national borders and identities' (Bashford & Strange, 2007, p. 88). But any assessment of pandemic preparedness plans needs to take a wider, interdisciplinary view.

Information about a disease threat does not 'behave' in the public arena in the way that the scientific community may desire. Thus in the San Francisco bubonic plague outbreak in the early 1900s, some major newspapers maintained

throughout that there was no plague, but rather a *conspiracy* to damage the commercial interests of the city (McClain, 1988, pp. 454–455). More recently the SARS episode in Canada brought home the 'risks and benefits arising from open information associated with a public health threat' (O'Malley, Rainford, & Thompson, 2009, p. 614), with the authors going on to argue that an initial reluctance to acknowledge or discuss the potential threat contributed to its rapid initial spread, while its control 'was rooted in public awareness, community surveillance and behaviour modification ... supported by a massive international public health information effort' (O'Malley, Rainford, & Thompson, 2009).

While favouring informational 'transparency' in public information programmes because of its importance in building public trust and accountability (O'Malley, Rainford, & Thompson, p. 615), these authors therefore support withholding of information which might 'lead to undue stigmatisation of individuals or groups within society' or information which 'might lead to behaviours that would result in increased spread of the disease' (O'Malley, Rainford, & Thompson, p. 616). Two injunctions which the Chinese and Japanese communities in San Francisco would no doubt heartily have endorsed.

Equally, not all citizens react to information in the same way as may be desired, as a secondary analysis of studies shows (Bish & Michie, 2010). Messages about desired behaviours are found to be more likely to be adopted by older than younger people, by females rather than males, by those with greater education levels, and by non-whites. Of course this is mediated by the fact that people are more receptive to a behavioural change the more they perceive themselves to be at personal risk, the greater the perceived seriousness of that risk, and the more confidence they have in the protective efficacy of the behaviour.

Personal levels of anxiety and of 'trust' in authorities are also shown to be significant. Shifts over time in levels of community concern about possible epidemic or pandemic disease risk also plays a part, as suggested by the unwarranted complacency that major infective diseases had

been brought under control a few decades ago (Fidler, Heymann, Ostroff, & O'Brien, 1997). And as the H1N1 pandemic demonstrated, complacency (due to a perception of 'crying wolf') and loss of confidence and trust in peak bodies such as the WHO (the allegation of being too close to 'big pharma') can rapidly grow, as illustrated by debate in the Social Health and Family Affairs Committee of the Parliamentary Assembly of Council of Europe about transparency and possible WHO conflicts of interest (Flynn, 2010, paras 17–21).

One poignant example of the importance of a social or cultural perspective in the management of pandemics is the rather underwhelming take-up of vaccination (even by at risk groups), as witnessed in many countries in the wake of the massive effort to provide (usually free of cost) specific inoculation against H1N1 in the wake of the most recent 'swine flu' pandemic (Osterhaus & Vanlangendonck, 2009). This public discourse is not necessarily seen as a health discourse, however. Health consumers and the public at large have been rather neglected in pandemic planning. From the perspective of the general public likely to be impacted by public health measures to deal with a pandemic, or those of health consumers (people screened into assessment and reporting streams due to displaying risk factors), there appears to have been less attention devoted by government to their interests, especially the disadvantaged, for whom special provision is often required (Truman et al., 2009).

In short, a scientific-rationalist model of pandemic planning is dubious and arguably insufficient basis for an effective pandemic planning response.

CONCLUSION

The challenges posed by planning for pandemics are not simply technical ones. As suggested in this article, they are intrinsically socio-political questions about the proper role of government (as neoliberal governance threatens the welfare state principle of collective responsibility for risk management), and the media and public projection of the issue (as national protection paradigms are elevated over more sober public health models).

The political and public relations dimensions to the construction of pandemics and their management are critical, as Mika Aaltola explains (Aaltola, 2012). Thus, while 'science-based public health language was attention-catching,' Aaltola suggests that for public consumption or from a political science perspective it was 'ambiguous and required interpretation.' His thesis is that, as public alarm and anxiety rises, this 'result[s] in more leeway for political concerns in formulating public health policies.' A politicisation of pandemics which he argues is 'reinforced by the merging of ideological, normative and ethical controversies in dealing with national, regional and global public health issues' (Aaltola, 2012, p. 100).

Overlaying this politicisation, especially at the operational level of pandemic plan management, however, is the impact of cultural difference (Carney & Bennett, 2012). While this paper is not the place for detailing how cultures is best accommodated, measures for consideration include injecting cultural expertise into media communications and educative measures, appreciation of cultural sensitivities to exercise of state power or policing, respecting cultural values about death and funerals, understanding cultural patterns regarding exercise of informal authority or the cultural significance of authority figures (such as indigenous elders, or Confucian respect for elders), and an overall appreciation of the need to integrate cultural expertise into pandemic planning and operational roll out of levels of pandemic response.

As demonstrated in this article, a rational-scientific approach to pandemic management misreads both the global forces and new inter-nodal or 'glocal' forms of nodal governance, and the cultural and public perceptual issues which shape contemporary forms of disciplinary and other theoretical perspectives which need to be taken into account in Australia when constructing a socio-politically nuanced response to the challenges of pandemic management.

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Received xx Month 20xx

Accepted xx Month 20xx

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