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# Meanings of blood, bleeding and blood donations in Pakistan: implications for national vs global safe blood supply policies

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Contemporary public policy, supported by international arbitrators of blood policy such as the World Health Organization and the International Federation of the Red Cross, asserts that the safest blood is that donated by voluntary, non-remunerated donors from low-risk groups of the population. These policies promote anonymous donation and discourage kin-based or replacement donation. However, there is reason to question whether these policies, based largely on Western research and beliefs, are the most appropriate for ensuring an adequate safe blood supply in many other parts of the world.

This research explored the various and complex meanings embedded in blood using empirical ethnographic data from Pakistan, with the intent of informing development of a national blood policy in that country. Using a focused ethnographic approach, data were collected in 26 in-depth interviews, 6 focus group discussions, 12 key informant interviews and 25 hours of observations in blood banks and maternity and surgical wards.

The key finding was that notions of caste-based purity of blood, together with the belief that donors and recipients are symbolically knitted in a kin relationship, place a preference on kin-blood. The anonymity inherent in current systems of blood extraction, storage and use as embedded in contemporary policy discourse and practice was problematic as it blurred distinctions that were important within this society.

The article highlights the importance—to ensuring a safe blood supply—of basing blood procurement policies on local, context-specific belief systems rather than relying on uniform, one-size-fits-all global policies. Drawing on our empirical findings and the literature, it is argued that the practice of kin-donated blood remains a feasible alternative to the global ideal of voluntary, anonymous donations. There is a need to focus on developing context-sensitive strategies for promoting blood safety, and critically revisit the assumptions underlying contemporary global blood procurement policies.

**Keywords** Pakistan, blood supply policy, blood donations, voluntary blood donation, kin blood donation, evidence-based policy making

## KEY MESSAGES

- While contemporary policy asserts that blood donation by voluntary, non-remunerated donors from low-risk population groups is safest, this may not be the most appropriate policy for ensuring an adequate safe blood supply in many other parts of the world.
- Local belief systems in Pakistan, such as notions of caste-based purity of blood and that donors and recipients get symbolically knitted in a kin relationship, do not align well with the anonymity inherent in the haemato-global assemblages regarding the collection storage and use of blood.
- In order to ensure a safe blood supply, it is important to base blood procurement policies on local, context-specific belief systems rather than relying on uniform, one-size-fits-all global policies.

## Introduction

A secure, safe blood supply system is a cornerstone of an effective high quality health care system. Like most developing countries, Pakistan is characterized by the lack of a safe and effective blood services system (WHO 2010). In response, the National AIDS Control Program, Government of Pakistan, with support from Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ), is engaged in developing a national safe blood policy. In order to formulate an evidence-informed policy, the lead author (ZM) was requested to undertake an ethnographic study to document local ethno-cultural understandings of the many and complex meanings of blood, bleeding and blood exchange held by Pakistani women and men, with the intent of providing direction in developing policy that would help ensure a safe blood supply.

Contemporary public policy, supported by the World Health Organization (WHO) and other international arbitrators of blood policy such as the International Federation of the Red Cross, asserts that blood donated by voluntary, non-remunerated donors based on low-risk groups of the population is the safest (WHO 2000; Copeman 2009a). Family or replacement donations are discouraged because it is believed that family members may be donating under obligation or pressure and be forced to hide any high-risk behaviours and diseases (Contreras 1994). This policy grew out of the recommendations of the influential British policy analyst Richard Titmuss (1970) and is underpinned by an extensive, though largely Western, literature. The main thrust of this literature has been to understand what motivates people to donate blood voluntarily, with a focus on the concepts of altruism, empathy and social responsibility (Sandborg 2000; Dovidio and Penner 2004; Penner *et al*. 2005; Marantidou *et al*. 2007; Steel *et al*. 2008). It has also sought to identify the factors that prevent people from donating blood, largely in terms of gender, socio-economic class, ethnicity or lack of information (Gillespie and Hillyer 2002; Ray *et al*. 2005; Shaz *et al*. 2009). Specific factors studied include a fear of blood extraction, risk of disease transmission, lack of time, distrust of the final destination of blood, and a belief that blood donation harms the body (Mikkelsen 2004; McVittie *et al*. 2006; Sojka and Sojka 2008; Lemmens *et al*. 2009).

This body of literature has been influential both in guiding blood policy and in the enculturation of blood banks and health professionals worldwide. A critical rereading of the literature, however, suggests that the discourse is rooted in Euro-American understandings and enactments of blood and tissue exchange, altruism and rationales for behaviour (Copeman 2009a). This lens views blood as a 'de-cultured' and 'de-socialized' substance, devoid of social markers of gender, ethnicity and religion, 'the subject of technical competence' that must be carefully regulated and controlled (Simpson 2009: 103). Blood donation is portrayed as a 'depoliticised', universal act of solidarity (Weston 2001: 165).

More recent literature from different parts of the world indicates that there exists a vast constellation of blood knowledge and practices; that blood donations are associated with complex meanings and emotions; and that there is large heterogeneity in the act of donating blood and other body tissues (Ohnuki-Tierney 1994; Lock 2002; Copeman 2009a). More importantly, these studies document the stark divergence between the various local understandings of blood and blood donations and the official global voluntary blood donation doctrine (Erwin 2006). In India, for example, blood is understood as a repository of strength and its loss associated with weakness (Starr 1998: 186; Copeman 2009b). Blood is also associated with semen. The perceived links between blood, semen and strength mean blood loss is perceived to lead to impotence in men (Copeman 2009b). In China, blood is understood as an essential life force, and its loss diminishes one's vitality *(yuanqi),* potentially leading to loss of life itself (Holroyd and Molassiotis 2000; Shan *et al*. 2002). Far from considering donated blood as a 'circulatable, universal substance' (Valentine 2005: p. 114), the Navajo in the USA worry about the possibility of being transfused with contaminating non-Navajo blood, which may be considered the blood of enemies. So serious are the implications that special cleaning ceremonies need to be held (Schwarz 2009). In Bahia, Brazil, blood donation is based on notions of blood-letting to reduce to reduce the 'swelling, itching, and body-aches' that result from excess blood. In the process, somebody gets much-needed blood (Sanabria 2009). In Sri Lanka, blood donations by the majority Sinhalese have merged Buddhist notions of 'merit, social service, kinship and higher orders of cultural unity' with nationalistic sentiments to render it a form of covert participation in the war against the Liberation Tigers of Tamil Eelam (LTTE) (Simpson 2009).

### A need for conceptual clarity

A reading of the literature also highlights a lack of conceptual clarity in the central concepts of the blood donation discourse. There is confusion about the understanding and use of the term 'voluntary, non-remunerated' blood donation and how it differs

from 'replacement', 'altruistic', 'remunerated 'and 'directed' vs 'non-directed' donations. Most official policy documents appear to use the term 'voluntary, non-remunerated' blood donation to describe a voluntary donation, intended for an unknown recipient that does not provide any direct financial benefit to the donor (WHO 2010). Fraser (2005), however, uses the terms 'altruistic donors' to differentiate them from 'replacement' donors (p. 559). De Zoysa (1994) divides the donors into 'voluntary' and 'replacement' donors. The emphasis on separating 'altruistic' and 'voluntary' from replacement donors suggests replacement donors are neither voluntary nor altruistic. This is a problematic differentiation: Street (2009) shows that in Papua New Guinea, replacement donations can be voluntary and altruistic. Further confusion is added by Erwin's description of blood donation in China (Erwin *et al*. 2009). The Chinese donors describe their donation as both 'voluntary' and 'as meeting a social obligation'. However, their donation practices are structured by meeting work-unit quotas and compensation with money, food and paid time off. Similar confusion characterizes Sri Lanka's adoption of two strategies for creating what Simpson describes as a 'national fully non-remunerated blood supply system': aggressive 'donor' recruitment and simultaneous encouragement of replacement donation (Simpson 2009). Clearly, the meanings of the terms 'voluntary', 'remunerated', 'replacement' and 'altruistic' donations are context-specific and understood differently in different countries worldwide.

The wide scope of belief systems surrounding blood and blood donation, the lack of clarity around central concepts and the confusion about types of donors leads us to question the discursive salience of the dominant policies promoted by WHO and other international arbitrators around the need for 'voluntary, non-remunerated' blood donations as the *only* way to ensure a safe and secure supply of blood. The potent and symbolically loaded ideas of local communities, condensed within blood and the act of blood donations, do not always align with the global policy recommendations and the 'haemato-global assemblages' (Simpson 2009) regarding the collection, storage and use of donated blood. These disjunctions in values, meanings and aspirations can potentially have serious implications for the sustainability of blood policies and development of blood programmes.

Using Pakistan as a case study, this paper presents empirical ethnographic data that illustrates the implications of the various and complex meanings embedded in blood for the development of a national safe blood supply policy. Drawing on the work by Behague *et al*. (2009), Street (2009) and Erwin (2006), elaboration of this specific case study will illustrate the importance of ensuring that blood procurement policies and practices reflect local beliefs and cultural context rather than relying only on uniform, one-size-fits-all global policies and strategies.

## Methods

Using a focused ethnographic approach, 26 in-depth interviews and 6 focus group discussions were conducted with 74 women and men in rural and urban areas of the district of Rawalpindi and the capital territory of Islamabad between July and September 2009. Twelve key informant interviews were conducted with five blood bank managers, three Islamic scholars and four physicians. To ensure maximal phenomena variation, we purposively selected both women and men, of all ages (between 18 and 65), socio-economic classes and levels of education. In addition, a total of 25 hours of participant-observation were conducted in two blood banks, two maternity wards and one surgical ward. Both rural and urban hospitals were included. Ethical approval was obtained from the National AIDS Control Program.

Interviews and focus groups were conducted in Punjabi and Urdu, digitally recorded and later translated and transcribed by native Punjabi and Urdu speakers under the close supervision of ZM. All transcripts were double-checked by ZM to verify the translation and its conceptual equivalence. Observation notes were recorded as field-notes either in journals or directly in Microsoft Word. A database of the transcribed interviews, focus groups and observation notes was created. The data were coded using a social constructivist, interpretative approach. Domains were developed and queried for patterns and insights to identify themes. Interpretive accuracy was assessed using triangulation of findings, peer debriefing within the research team and with other colleagues, and through respondent validation.

While our results are specific to both urban and rural areas of Rawalpindi/Islamabad, our respondents came from all over Pakistan, particularly Punjab. We believe, therefore, that many of our insights may have applicability to large areas of Punjab and even of Pakistan generally.

### Contextual background

Before we describe the findings, it will be helpful to be familiar with a few elements of the Pakistani social order relevant to the present research. The pivotal social institution in Pakistan is a kin-group called a *biradari*. A *biradari* is based on lineage endogamy, with a preference for patrilineal parallel cousin marriage (marrying one's father's brother's daughter). Consequently, two out of three marriages in Pakistan are marriages between cousins (National Institute of Population Studies and Macro International Inc. 2008). More importantly, the *biradari* constitutes the social, economic and political unit in this context, acting as a collective corporate that mediates not only social and livelihood opportunities for its members, but also ensures their wellbeing through a set of institutionalized economic exchanges and support mechanisms (Mumtaz 2002). A *biradari* is not, however, an uncontested structure. Loyalties, solidarity and animosity can all exist within the same *biradari* at different times. While the close relationships provide the basis for mutual support and protection (e.g. cousins are natural allies against any external threat), bitter disputes over land inheritance or indifference to the plight of poorer relatives are also common (Alavi 2001; Mohmand and Ghazdar 2007).

The second level of the social order is the *zaat* or caste system (Mumtaz 2002). Whilst there is a paucity of research in this sphere in Pakistan, a small body of literature shows that when the Hindus converted to Islam, the comprehensive social, economic, political and even personal identity constraints (the hierarchy, notions of pollution) of the Hindu caste system remained intact (Ahsan 2005; Mohmand and Ghazdar 2007).

Like the Indian caste system, the *zaat* system in Pakistan is hierarchical, with notions of blood purity playing a important role in defining group boundaries (Alavi 2001).

### The Pakistan blood banking system

The current blood banking system is Pakistan is designed to function both as a *replacement* and *directed* donation system. If a patient requires blood, the family is responsible for arranging the donor. The blood bank obtains blood from the donor, irrespective of the blood group match between the donor and recipient. If the donor–recipient blood groups match, the donation is directly transfused into the patient. If the blood groups are incompatible, the donated blood is banked and replaced with an appropriate unit. If the patient does not need the arranged blood, it is banked for cases in which replacement donations are not available (author observations).

## Findings

### Institutionalization of kinship relationships in blood exchange processes

Blood, not unexpectedly, emerged as an idiom through which kinship ties are conceptualized in Pakistan. Members of a *biradari* are described as having '*aik khoon*' (one blood), and this oneness of blood is seen to constitute the basis of *biradari* solidarity and connection. By extension, exchange of blood between two people symbolically knits them together in the *biradari* network. This creation of new relationships, however, is fraught with issues in the context of sharp *biradari* boundaries and *zaat* (caste) hierarchies. The blood donor occupies a higher moral status than the recipient, for the greatest sacrifice is to give one's blood (*khoon se bar kar koi cheez nahi hai*). He/she must be honoured accordingly. While this is doable and acceptable between two equal status *biradari* members, it becomes problematic with non-*biradari* members. Members of high status *zaats* are, in particular, very careful regarding the people with whom their blood is exchanged. If the donor or recipient belongs to a lower status caste, the person would then become eligible for their *biradari* membership, a highly undesirable situation.

Blood is also associated with moral character and personality. It is believed that the blood donor's moral values, personality and behavioural characteristics are transmitted to the recipient. Often cited are the behaviours of drinking alcohol and eating pork. This belief in the 'oneness' of *biradari* blood is extended to the notion that all members of a *biradari* have a common moral character. Everybody, of course, assumes that their *biradari* members have good moral character.

These two belief systems require that blood exchange be limited between members of a *biradari*. The ideal is a brother donating blood to his sibling. This preference for *biradari* blood is rooted in ensuring that *saaf khoon* (directly translated as 'clean', but conceptually translated as 'pure' blood) is transfused into the recipient and that the purity of the family/*biradari* blood is maintained. More-educated respondents refer to the importance of '*saf*' ('clean' blood) in terms of blood-borne illnesses and of their confidence in the 'cleanliness' of the blood of *biradari*-members. The preference for *biradari* blood is also couched in the language of affective ties: only your family/*biradari* members love you enough to give their blood.

> ''*Apna khoon apna honda ai; Apne khoon wich begaar nahi andha*.'' (conceptually translated as 'the best blood is from within the family/*biradari*; your blood will not get soiled by the blood of an unknown stranger') (man, 55 years, rural area)

> ''We are Sayyeds[1]...we do not take '*paraya khoon*'.'' (non-*biradari* blood or blood of a person from a different caste) (woman, 50 years, rural area)

These beliefs, in the context of *biradari* kinship rules that confer mutual claims and obligations, mean that if a person requires blood, he/she can draw upon his/her right to request *biradari* members for blood and the *biradari* members are obliged to give it. Blood donation is but one dimension of the social support mechanisms that underlie the *biradari* system in Pakistan.

### Gender and blood donation

Emerging from our data were a set of belief systems around gender values and blood exchange that may have important implications for any blood policy in Pakistan. Gender norms in this context demarcate only men as blood donors. The question of women donating blood was met with vehement responses such as:

> ''*Are our men dead that women have to start donating blood?*'' (woman, 55 years, urban area)

> ''*We have not yet become so baigharat* [without honour] *that we start taking blood from our women*.'' (woman, 45 years, rural area)

A deeper analysis of the data, however, suggests that the primary reason women are not expected to donate blood is that their blood is considered '*napak*' (impure). Men's blood is '*pak*' (pure). In women, the '*napak*' (impure) blood collects for a whole month, is discharged during menstruation, after which the woman becomes '*pak*'. If a woman donates blood during her '*napak*' time of the month, the impure blood can harm the recipient, especially a man. Women's blood should also not be transfused into men lest they develop feminine characteristics. Another reason women are not expected or even allowed to donate blood is that their fertility, especially their ability to give birth to sons, is believed to be linked to the amount of blood in their bodies. In a context of son-preference, this belief assumes crucial importance.

Women may donate blood, but only in the case of a '*majboori*' (necessity) when there is no male donor available and the relationship with recipient is extremely close such as sister to a brother or wife to a husband. There is no expectation that women should donate blood for wider *biradari* members: ''*aik aurat se khaise khoon manghen ghain*?'' (how can we ask a woman to donate blood?).

### Importance of donor–recipient relationships

The importance of limiting blood exchange to within *biradari* members was further highlighted by the differences in

willingness to donate blood for different recipients. A common explanation given for low rates of 'voluntary blood donations' in Pakistan is that Pakistanis are simply unwilling to donate blood, that they lack altruism. A small body of empirical research supports this assertion. For example, a survey of doctors and paramedics showed that only 3.4% of doctors and 0% of paramedics were regular, voluntary, non-remunerated blood donors (Gilani *et al*. 2007). Voluntary, non-remunerated donations constitute only 13% of the total blood donations in Pakistan (WHO 2010).

However, our research indicates that the act of blood donation in Pakistan is layered in complex nuances not captured by the simple notion of 'voluntary, non-remunerated' donations or by surveys embedded in this discourse. First, the belief that Pakistani people are unwilling to donate blood is not completely supported by our empirical findings. Blood donation is considered a morally superior act since blood is understood to be life itself (*wo zindagi hai*). The saying 'I have given you blood' is a powerful statement that implies having given all that was possible to give. On the whole, Pakistani women and men viewed blood donation as a doable act despite emic understandings that blood loss causes *kamzori* (weakness), a state manifested by sense of weakness, dizziness and an inability to work.

However, most of our respondents viewed blood donation only within the context of giving blood to *biradari* members, and occasionally to friends. The donors amongst our respondents had most often donated blood only for *biradari* members and the non-donors had not donated because ''*none of my relatives ever needed blood*'' (young man, 23 years, urban area). In fact the donors were very insistent that *the actual* unit of blood they donated should be transfused into their patient. If the patient did not need the blood, the family and donors viewed that blood as a serious waste. We observed heated exchanges in which donors argued with blood bank personnel that their donated blood, which was not used for their patient, should be transfused into another *patient of their choice*. In one extreme case, a donor successfully insisted that his blood be transfused back into him. A key distrust people have of blood banks is that they exchange their '*saaf suthera khoon*' ('clean' or 'pure' blood) with '*ghanda khoon*' (dirty blood—a term that implies blood that is conceptually impure as well as infected with diseases). Their '*saaf suthera khoon*' (clean blood) is believed to be sold at high prices.

In-depth analysis of the data collected suggests that it was the notion of *anonymous* blood donation that was uncommon and unacceptable. The idea of donating blood for an unknown recipient was puzzling—does everybody not have relatives who can give them blood? Blood donors we interviewed in blood banks were quick to describe their social relationship with the recipient to *justify* their blood-donating behaviour. When asked to become anonymous donors, they were hesitant. A common reason cited was that their family or *biradari* might need blood in the future and they might not be ready to make the replacement donation expected of them. This appears to be a not unreasonable concern. We identified one case in which a man who had acted as a voluntary, anonymous donor could not get blood from the same blood bank when his wife needed it a few weeks later.

> ''*I had donated to* [name of organization] *and two weeks later my wife required blood.* [Name of organization] *refused to give us blood . . . so my brother donated. These organizations have very lengthy procedures . . . bohat chakkar lagwate hain* [they make to run hither and dither].'' [said in a low and hopeless voice] (man, 35 years, urban area)

A key element in the 'voluntary, non-remunerated blood donation' discourse is that both the donor and recipient are anonymous. This anonymity, however, blurs distinctions that were important for our respondents. Blood banks act as a barrier between the donors and the recipients. Their processes, particularly plasma pooling, eliminate any evidence of the *source* of the blood. This anonymity is, however, implicit and never openly articulated in any policy or programme planning document, although it is commonly commented upon in the research literature (Copeman 2009b; Street 2009). It is this anonymity that emerged as *the most crucial barrier* to donating blood among our respondents. A vast majority of our respondents had donated blood, voluntarily and without remuneration, but for their *biradari* members only.

## Disadvantages of kin-based blood procurement systems

Despite the idealization of the notion of Pakistani kinship and *biradari* systems as the ideal source of blood, these ideas are not without their disadvantages. The first disadvantage is that requesting and accepting blood from a *biradari* member obligates the recipient towards the donor. This face-to-face giving has built-in expectations of reciprocity. Gift-giving and social networking are resource-intensive activities, easily transacted between members of equal status, but difficult for poorer members of the *biradari*. It appears that, for all the lip-service given to notions of love and affective ties between *biradari* members, the poorer members of a *biradari* may not be able to request blood from their *biradari* members and the richer members may not be willing to donate for poorer relatives. There was also ample evidence that some people donate blood just to score points with the recipient.

''*I have just donated blood for my boss . . . I cannot donate for my wife now*'' (police officer, 32 years, urban area, who had donated blood for his boss 2 years earlier).

A second disadvantage is the potential that more altruistic *biradari* members may be taken advantage of. It appears that most *biradari* networks have members altruistic enough to donate blood or, by virtue of *biradari* social obligations, members who cannot refuse. These donors are taken advantage of, a fact recognized and resented by the donors.

> ''*My aunt was involved in a car accident and needed blood. My brothers and I donated blood, but her two sons—they are older than us—just made a lot of noise . . . crying and banging their heads on the wall . . . but disappeared when blood was requested.*'' (young man, 22 years, urban area)

A third—and perhaps most important—disadvantage is that, as for any resource based on social networks, people with wide *biradari* networks have access to a large number of

donors, while those with smaller networks do not. In addition, some *biradari* members may also be geographically dispersed, leaving certain *biradaris* more vulnerable. This may be an issue of increasing importance as a society becomes more mobile.

> ''*It is the people with a lot of jaan pehchaan (wide social networks) who get the blood when they need it, while the poor do not*.'' (woman, aged 55, urban area)

Women are another group disadvantaged in this system. Daughters-in-law, particularly those in exogamous marriages (non-relative marriages), are often not considered worthy enough to receive blood from a member of the marital family. This has serious implications, as post-partum haemorrhage is the number one cause of maternal death in Pakistan, a country with a maternal mortality rate of 278/100 000 live births. A graphic illustration was provided in one observation.

> ''*My son's blood is not healthy . . . his blood is hot . . . he cannot donate . . . the baby is already dead . . . try to save her life without using blood . . . if you cannot, then it's Allah's will . . .*'' (mother-in-law responding to a request for blood for her daughter-in-law during a serious pregnancy complication with an intrauterine death)

### Variability and flexibility

The belief systems that give preference to *biradari* members' blood are not absolute or immutable. They are amenable to alternatives under the doctrine of *majboori* (necessity).

*Majboori* is understood as set of circumstances that force people to act in ways that go against norms or expected behaviours in order to save life. If *biradari* blood is not available, for whatever reason, an unknown person's blood can be used. This doctrine of necessity provided our respondents with an avenue through which they allowed themselves to buy blood: it allowed people in powerful positions (such as senior members of the police and armed forces caught in the current militant violence) to receive blood donated by their junior staff; it allowed parents of children with chronic blood diseases (thallassemia major, haemophilia, etc.) to allow their children be regularly transfused with the blood of anonymous donors.

There were, however, very clear criteria under which anonymous blood could be used. The current militant violence in Pakistan has meant that people injured in suicide bombings and other attacks need large volumes of blood that cannot be supplied from *biradari* sources alone. *Biradari* members also cannot meet the continuous blood requirement of children with chronic blood diseases. Notwithstanding these unusual situations, acceptance of anonymous blood, whether donated voluntarily or purchased, was often indicative of the low social status of the recipient. In general, anonymous or purchased blood was deemed acceptable only for the socially excluded and unimportant people: the poor, people with small social networks (a form of poverty in Pakistan) and young women in exogamous marriages.

## Discussion and policy implications

So what are we to make of these donation practices and the narratives of a preference for kin-blood that pervaded our interviews and research? And what implications do they have for the safe blood supply policy that the government of Pakistan is in the process of developing?

The key empirical finding of this research is the centrality of kin relationships between the donor and recipient, and the undesirability of anonymity in the exchange of blood. The sentiment that blood should only be exchanged between people who know one another is always located in specific histories of transactions, obligations and their particular dynamics of influence and power (Street 2009). Social life in Pakistan is organized around a *biradari*. Within this sociality, a Pakistani person understands herself/himself to be constituted through kinship networks of nurture and exchange (Mumtaz and Salway 2009). Individual action is possible only in relationship to a specific other person. From this perspective, a transaction such as blood exchange includes the agency of both donor and recipient, and involves a certain amount of productive coercion. The concepts of pure self-interest or pure (anonymous) altruism are not helpful or valid in this context (Street 2009).

This mode of giving/taking also puts distinct limits on the kinds of national community that can be imagined through blood exchange. As Copeman (2009c) shows in India, attempts to construct a diffuse and abstract notion of gift giving to anonymous recipients often tend to revert to understandings of personal relationships. These cultural specificities have, however, been ignored in favour of dominant traditions of Europe and North America that view blood as a 'de-cultured' and 'de-socialized' substance (Simpson 2009). Since Pakistan is in the process of developing a blood policy, the differences in the ontology of blood donation in Pakistan (and other parts of the world) from those in the global discourse invite an urgent examination of the ways in which contemporary and future policies should be framed.

A crucial decision for Pakistani policy makers is whether they want to eliminate kin-donations altogether or develop a 'mixed' system which incorporates this as one option along with voluntary anonymous blood donation. This is a key decision for policy makers who are faced with a set of contradictory findings. On one hand is the preference for kin-blood and the perceived unacceptability of anonymity in blood exchange. On the other hand, kin donations are inherently unequal in terms of access for the vulnerable which includes young women in exogamous marriages, poorer members of *biradaris*, people with small *biradari* networks, migrant workers and those with chronic blood disorders.

As a first step, it is suggested policy makers in Pakistan critically revisit the WHO ideal of voluntary, *anonymous* blood donation. Few countries have attained this ideal and the practice of kin-donated blood remains a feasible alternative in many settings (Strathern 2009; Street 2009). Nearly a decade after implementing the policy of voluntary, anonymous blood donations as the sole source of blood in India, replacement donation still accounts for more than 50% of all donated blood (Copeman 2009c). Whilst contradictions are rife in notions of *biradari* unity, it makes eminent sense that any future blood policy in Pakistan should harness the benefits of the deeply

embedded values of mutual support and reciprocity inherent in *biradari* networks, whilst simultaneously ensuring that social inequalities are redressed.

Moreover, elimination of a kin-based donation system will require a re-engineering of social values in Pakistan regarding the purity of *biradari* blood—a long term proposition if it is possible at all. There is also the question of whether it is even desirable to dismantle a system that appears to functioning well for a certain proportion of the population. This is particularly crucial for Pakistan, which has a history of poor governance and unresponsiveness to the needs of the people (World Bank 2010). Until progress is made in this area, *biradari* networks constitute the only social safety nets available to Pakistanis; their resilience has been repeatedly demonstrated in the various natural disasters Pakistan has faced in the recent past (UNOCHD 2009; IDMC 2010). Any blood policy will have to take this reality into account.

The issue of ensuring a supply of safe blood for those members of society excluded from the benefits of *biradari* blood donation systems remains, however. There are no simple strategies to address the needs of these populations, and more research is required to explore ways to procure blood. Sri Lanka, for example, has adopted a two-pronged strategy: an aggressive 'donor' recruitment and simultaneous encouragement of replacement donation to create what Simpson (2009) calls a voluntary blood donation system. New forms of social organizations that replicate *biradari* networks among those excluded from the traditional networks may be explored as sources of social support, which may include blood donations.

The question of the safety of kin-donated blood also remains. There is a large body of literature comparing prevalence rates of blood-borne infections in voluntary and replacement donations in Pakistan (Mujeeb *et al*. 2000; Akhtar *et al*. 2004; Asif *et al*. 2004; Khokhar *et al*. 2004). A scan of this literature suggests that whilst voluntarily donated blood has, on average, lower rates of blood-borne infections, significant heterogeneity is noted amongst the studies. For example, the prevalence rate of Hepatitis C in anonymous volunteer blood donors has been found to range from 1.87% (Ali *et al*. 2003) to 5.3% (Khokhar *et al*. 2004), while other studies document rates of 1.23% to 3.29% in family replacement donors (Sultan *et al*. 2007). We also know that the 'safe' model of voluntary, anonymous blood donation is susceptible to blood-borne infections (Feldman and Bayer 1999; Erwin 2006; Shao 2006). In several European nations, in North America, in Japan and elsewhere, thousands of transfusion recipients were infected with HIV (Shao 2006; Strong 2009). We suggest that it may be more fruitful to focus on the development of more precise technologies for testing possible blood pathogens, and to develop locally effective strategies for donor recruitment, education and screening than assume that policies discouraging kin donors will ensure blood safety.

Importantly, this research has illuminated the ways in which global policy interests may override national evidence-informed policy-making when there are divergences between the two (Behague *et al*. 2009). Driven largely by donors and global organizations, the notion of evidence-informed policy-making is gradually being transferred to developing countries (Mykhalovskiy and Weir 2004). However, as Behague *et al*. (2009) elegantly demonstrates, evidence-based policy-making has, thus far, had limited impact on context-specific programmatic policy development and implementation at the national level in developing countries. One explanation is that donors and global institutions push their own policy agendas because they have both the 'evidence' (defined as research conducted in largely western countries but assumed to have universal applicability) and the funds to implement their preferred policy. Local policies, even if based on context-specific evidence, are often given little weight if they do not align with global donor-driven policy interests. As a result, national policy makers are forced to shift the focus to what the international institutions want (Behague *et al*. 2009). This strategy does not reflect the emerging 'knowledge translation' literature that highlights the importance of including local evidence (including local traditions and values, context-specific research and evaluation, resource considerations and patient preferences) into policy and planning activities (Lomas *et al*. 2005).

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## Endnote

[1] Sayyeds is a caste in Pakistan that believes they are descended directly from the Prophet Muhammed.

## References

Ahsan A. 2005. *The Indus Saga – From Pataliputra to Partition*. New Delhi: Rollibooks.

Akhtar S, Younus M, Adil S, Jafri SH, Hassan F. 2004. Hepatitis C virus infection in asymptomatic male volunteer blood donors in Karachi, Pakistan. *Journal of Viral Hepatitis* **11**: 527–35.

Alavi H. 2001. The two biradiris: kinship in rural West Punjab. In: Madan TN (ed.). *Muslim Communities of South Asia: Culture, Society and Power*. 3rd edition. New Delhi: Manohar.

Ali N, Nadeem M, Qamar A, Qureshi AH, Ejaz A. 2003. Frequency of hepatitis C virus antibodies in blood donors in Combined Military Hospital, Quetta. *Pakistan Journal of Medical Sciences* **9**: 41–4.

Asif N, Khokhar N, Ilahi F. 2004. Seroprevalence of HBV, HCV and HIV infection among voluntary non remunerated and replacement

donors in northern Pakistan. *Pakistan Journal of Medical Sciences* **20**: 24–8.

Behague D, Tawiah C, Rosato M, Telesphore S, Morrison J. 2009. Evidence-based policymaking: the implications of globally applicable research for context-specific problem solving in developing countries. *Social Science & Medicine* **69**: 1539–46.

Contreras M. 1994. Is unpaid/paid donation debate for better or worse? Advantages of unpaid donations. *Blood Coagulation and Fibrinolysis* **5**(Suppl. 4): S27–28.

Copeman J. 2009a. Introduction: Blood donation, bioeconomy, culture. *Body and Society* **15**: 1–28.

Copeman J. 2009b. *Veins of Devotion*. Piscataway, NJ: Rutgers University Press.

Copeman J. 2009c. Gathering points: blood donation and the scenography of 'national integration' in India. *Body and Society* **15**: 71–99.

De Zoysa NS. 1994. National blood transfusion services Sri-Lanka. *Japanese Journal of Transfusion Medicine* **40**: 780–3.

Dovidio JF, Penner LA. 2004. Helping and altruism. In: Brewer MB, Hewston M (eds). *Emotions and Motivation*. Oxford: Blackwell, pp. 247–80.

Erwin K. 2006. The circulatory system: blood procurement, AIDS and the social body in China. *Medical Anthropology Quarterly* **20**: 139–59.

Erwin K, Adams V, Phuoc L. 2009. Glorious deeds: work unit blood donation and postsocialist desires in Urban China. *Body and Society* **15**: 51–70.

Feldman E, Bayer R (eds). 1999. *Blood Feuds: AIDS, Blood and the Politics of Medical Disaster*. Oxford: Oxford University Press.

Fraser B. 2005. Seeking a safer blood supply. *The Lancet* **365**: 559–60.

Gilani I, Kayani ZA, Muhammad A. 2007. Knowledge, attitude and practices regarding blood donation prevalent in medical and paramedical personnel. *Journal of the College of Physicians and Surgeons Pakistan* **17**: 473–6.

Gillespie TW, Hillyer CD. 2002. Blood donors and factors impacting the blood donation decision. *Transfusion Medicine Review* **16**: 115–30.

Holroyd E, Molassiotis A. 2000. Hong Kong Chinese perceptions of the experience of unrelated bone marrow donation. *Social Science & Medicine* **51**: 29–40.

Internal Displacement Monitoring Centre (IDMC). 2010. Pakistan: Flooding worsens situation for people displaced by conflict in north-west. Pakistan country page, IDMC website. Online at: http://www.internal-displacement.org/8025708F004CE90B/%28httpCountries%29/D927619B0A8659BB802570A7004BDA56?OpenDocument, accessed on 21 February 2011.

Khokhar N, Gill ML, Malik GJ. 2004. General seroprevalence of hepatitis C and hepatitis B virus infections in population. *Journal of the College of Physicians and Surgeons Pakistan* **14**: 534–6.

Lemmens KP, Abraham C, Ruiter RA *et al.* 2009. Modelling antecedents of blood donation motivation among non-donors of varying age and education. *British Journal of Psychology* **100**: 71–90.

Lock M. 2002. *Twice Dead: Organ Transplant and the Reinvention of Death*. Berkeley, CA: University of California Press.

Lomas J, Culyer T, McCutcheon C, McAuley L, Law S. 2005. Conceptualizing and Combining Evidence for Health System Guidance. Final Report. Ottawa: Canadian Health Services Research Foundation. Online at: http://www.chsrf.ca/kte_docs/Conceptualizing and combining evidence.pdf.

Marantidou O, Loukopoulou L, Zervou E *et al.* 2007. Factors that motivate and hinder blood donation in Greece. *Transfusion Medicine* **17**: 443–50.

McVittie C, Harris L, Tiliopoulos N. 2006. ''I intend to donate but . . . '': non donors' views of blood donation in the UK. *Psychology, Health & Medicine* **11**: 1–6.

Mikkelsen N. 2004. Who are the donors in 2003? *Transfusion Clinique et Biologique* **11**: 47–52.

Mohmand S, Ghazdar H. 2007. Social structures in rural Pakistan. Islamabad: Asian Development Bank, Pakistan Resident Mission. Online at: http://www.adb.org/Documents/Reports/Consultant/37711-PAK/Social-Structures-Rural-Pak.pdf, accessed on 21 February 2011.

Mujeeb SA, Aamir K, Mehmood K. 2000. Seroprevalence of HBV, HCV and HIV infections among college going first time voluntary blood donors. *Journal of Pakistan Medical Association* **50**: 269–70.

Mumtaz Z. 2002. Gender and reproductive health: a need for reconceptualization. Unpublished Ph.D. thesis submitted to the London School of Hygiene and Tropical Medicine, UK.

Mumtaz Z, Salway S. 2009. Understanding gendered influences on women's reproductive health in Pakistan: moving beyond the autonomy paradigm. *Social Science & Medicine* **68**: 1349–56.

Mykhalovskiy E, Weir L. 2004. The problem of evidence-based medicine: directions for social science. *Social Science & Medicine* **59**: 1059–69.

National Institute of Population Studies [Pakistan], and Macro International Inc. 2008. Pakistan Demographic and Health Survey 2006–07. Islamabad, Pakistan: National Institute of Population Studies and Macro International Inc.

Ohnuki-Tierney E. 1994. Brain death and organ transplantation: cultural bases of medical technology. *Current Anthropology* **35**: 233–54.

Penner LA, Dovidio JF, Piliavin JA, Schroeder DA. 2005. Prosocial behaviour: multi-level perspectives. *Annual Review of Psychology* **56**: 365–92.

Ray S, Singh Z, Banerjee A. 2005. Psychosocial variables of voluntary blood donors at the blood bank of a medical college. *Medical Journal Armed Forces India* **61**: 130–2.

Sanabria E. 2009. Alleviate bleeding: bloodletting, menstruation and the politics of ignorance in a Brazilian Blood Donation Centre. *Body and Society* **15**: 123–44.

Sandborg E. 2000. Getting people to give blood. *Vox Sanguinis* **78**(Suppl. 2): 297–301.

Schwarz MT. 2009. Emplacement and contamination: mediation of Navajo identity through excorporated blood. *Body and Society* **15**: 145–68.

Shao J. 2006. Fluid labor and blood money: the economy of HIV/AIDS in rural central China. *Cultural Anthropology* **21**: 535–69.

Shan H, Wang JX, Ren FR *et al.* 2002. Blood banking in China. *The Lancet* **360**: 1770–5.

Shaz B, Demmons D, Hillyer K, Jones R. 2009. Racial differences in motivators and barriers to blood donation among blood donors. *Archives of Pathology & Laboratory Medicine* **133**: 1444–7.

Simpson B. 2009. 'Please give a drop of blood': blood donation, conflict and the haemato-global assemblage in contemporary Sri-Lanka. *Body and Society* **15**: 101–22.

Sojka BN, Sojka P. 2008. The blood donation experience: self-reported motives and obstacles for donating blood. *Vox Sanguinis* **94**: 56–63.

Starr D. 1998. *Blood: An Epic History of Medicine and Commerce*. London: Warner Books.

Steel WR, Schreiber GB, Guiltinan A *et al.* 2008. The role of altruistic behaviour, emphatic concern and social responsibility motivation in blood donation behaviour. *Transfusion* **48**: 43–54.

Strathern M. 2009. Afterword. *Body Society* **15**: 217–22.

Street A. 2009. Failed recipients: biomedical and relational technologies of blood extraction in a Papua New Guinean hospital. *Body and Society* **15**: 193–215.

Strong T. 2009. Vital publics of pure blood. *Body and Society* **15**: 169–91.

Sultan F, Mehmood T, Mahmood MT. 2007. Infectious pathogens in volunteer and replacement blood donors in Pakistan: a ten-year experience. *International Journal of Infectious Diseases* **11**: 407–12.

Titmuss R. 1970. *The Gift Relationship: From Human Blood to Social Policy*. London: LSE Books.

United Nations Office for the Coordination of Humanitarian Disasters (UNOCHD). 2009. Internally displaced people in Pakistan. Key documents. Online at: http://pakistanidps.wordpress.com/key-documents/, accessed on 15th October 2010.

Valentine K. 2005. Citizenship, identity, blood donation. *Body and Society* **11**: 113–28.

Weston K. 2001. Kinship, controversy and the sharing of substance: the race/class politics of blood transfusion. In: Franklin S, McKinnon S (eds). *Relative Values: Reconfiguring Kinship Studies*. Durham, NC: Duke University Press.

WHO. 2000. World Health Day 2000. Strategy for safe blood transfusion. Online at: http://www.searo.who.int/EN/Section260/Section600/Section605_2708.htm, accessed on 17 February 2010.

WHO. 2010. Blood transfusion safety. Voluntary blood donation. Online at: http://www.who.int/bloodsafety/voluntary_donation/en/, accessed on 4 January 2010.

World Bank. 2010. The Worldwide Governance Indicators project. Online at: http://info.worldbank.org/governance/wgi/index.asp, accessed on 23 October 2010.