The Distribution and Impacts of HIV/AIDS NGOs in Sub-Saharan Africa

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Rachel Sullivan Robinson
Assistant Professor
School of International Service
American University
Washington, DC
robinson@american.edu

Abstract Sub-Saharan African countries are differentially resourced in terms of the numbers and types of HIV-related organizations that exist in each country. These organizations are a form of social capital that should be able to mitigate the effects, and spread, of the epidemic, yet very little is systematically known about them. In this paper, I document the variation in HIV-related organizations across all sub-Saharan African countries, as well as examine its causes and effects using a unique data set I have built from information contained in directories of non-governmental organizations (NGOs). I show that while some countries have many NGOs that target HIV/AIDS—for example, Botswana, Cameroon, and Senegal—other countries do not—for example, Angola and Rwanda. Similarly, local organization around HIV/AIDS dates from the 1980s in some countries, such as Cameroon, Nigeria, and Uganda, but did not start until much later in many other countries. Finally, some countries, such as the Central African Republic, Kenya, and Senegal, have a plethora of organizations to provide support to people living with HIV/AIDS, while others, such as Tanzania and Zambia, do not. Some of these outcomes result from differential access to financial resources, as I find that foreign aid is an excellent predictor of when and where NGOs come into existence. Countries with more NGOs that target HIV/AIDS and that have had these organizations for longer experienced greater declines in HIV prevalence between 2001 and 2007. Countries with more HIV/AIDS NGOs also do a better job of providing antiretroviral therapy to their populations. Overall, I show that countries have differential capabilities to build and maintain social capital in the form of organizations, which then influences the progression of the epidemic both in terms of changes in HIV prevalence and provision of antiretroviral therapy. Understanding the causes of the differential distribution of social capital across countries is thus one key to crafting effective responses to the epidemic.
INTRODUCTION

Non-governmental organizations (NGOs) are a form of social capital that should help countries to mitigate the effects, and spread, of HIV/AIDS. They distribute information to people about how to avoid contracting HIV, supply technology to prevent infection, provide care to those who have HIV, and advocate on behalf of those with HIV, or who are at risk of HIV. Not all countries are equally rich in terms of this resource, however, and little is systematically known about the extent to which NGOs can deliver hoped-for positive impacts. I address both these issues in the analysis below, examining why some countries in sub-Saharan Africa have more HIV-related NGOs than others, and then looking at the effects of these NGOs on HIV prevalence rates and antiretroviral coverage.

NGOs that target HIV/AIDS facilitate resilience to the epidemic in three important ways: 1) they provide local legitimacy for prevention messages related to a complex disease that require discussing intimate behaviors; 2) they often advocate to the national government as well as foreign governments on behalf of their members and those generally at risk; and 3) they serve as an important conduit for donor funds, which can then be used for a variety of productive ends.

The rest of the paper is organized as follows. First I provide the logic of the argument that NGOs matter to combating HIV/AIDS. Next I present the relevant literature, which includes some brief background on NGOs in sub-Saharan Africa, a discussion of how NGOs relate to the concepts of social capital and civil society, and a description of the role of NGOs in successful efforts to combat HIV in Senegal and Uganda. Then I present the results of two different data analyses. The first explores why some countries have more HIV NGOs than others, and the second explores the effects of those NGOs on outcomes related to HIV, including changes in prevalence and coverage of antiretroviral therapy.
THE ARGUMENT

There are three reasons why we should expect NGOs to play a beneficial role vis-à-vis HIV/AIDS. The first reason is that most NGOs operating in sub-Saharan African countries are local, in the sense that they were started by Africans and are staffed by Africans. As a result, their interests should be focused on the needs of the populations they serve, which they should presumably be able to reach because of shared economic and cultural ties. NGOs are, however, overwhelmingly funded by foreign money. By 2002, 57% of donor expenditures for population assistance to sub-Saharan Africa, the category into which HIV/AIDS funding is grouped, were channeled through NGOs (UNFPA 2004). And at this point in time, the globe is awash in funding for HIV-related activities: approximately nine billion dollars are spent per year for HIV/AIDS research, interventions, and care (England 2008). Donors do not, of course, always promote the most effective programs. Scholars have found that NGOs will frequently shift their actions to match donor objectives (e.g., Berkovitch and Gordon 2008), something which I have found in my own research in Senegal (Sullivan 2006). To the extent that NGOs can act in the full interest of the populations they serve, and to the extent that donor emphases are the most effective means for addressing HIV, NGOs can play a positive role in preventing HIV. To the extent that African NGOs are bound to ineffective donor priorities, or caught up in donor requirements for reporting on, and requesting, funding that inhibit the NGOs’ activities, their impact will be limited.

The second reason NGOs should have a positive impact on HIV/AIDS is because some of them have been willing to take on activist roles, promoting the rights of their target communities, and criticizing political and social lapses in acknowledging, preventing, and treating HIV. Of NGOs operating in the health sector, those that target HIV/AIDS are usually
the most activist, specifically those that assist people living with HIV/AIDS (PLWHA) (Putzel 2006). Treatment Action Campaign (TAC) in South Africa is a good example of such an organization, and has vocally advocated particularly for treatment for PLWHAs but also done a great deal of work on prevention as well. Lironga Eparu, the core association for PLWHA in Namibia, is a similar organization that has successfully pushed for legal changes related to HIV while simultaneously becoming a clearinghouse for information on HIV. This sort of activism is not frequently exhibited by health-related NGOs in Africa.

The third reason NGOs should have a positive impact on HIV is because they are funding magnets. NGOs have become one of the best ways for African countries to get funding from donors. Specifically, as donors’ trust in African governments lessened throughout the eighties and early nineties, they turned their eye towards NGOs as a supposedly safer (i.e., less corrupt) destination for their money. Although the marginal returns to an extra dollar for HIV may decrease as spending increases, it is difficult to argue that more money is bad.

These three reasons suggest that there should be a correlation between the number of HIV NGOs in a country and some measure of its “success” in addressing HIV/AIDS – the level of prevalence, the change in prevalence, or the proportion of the HIV-positive population receiving anti-retroviral therapy. The literature, which I discuss next, provides support for this association.

BACKGROUND

NGOs in Africa

The proliferation of local NGOs in Africa in the 1980s resulted from three trends that began in the 1970s and solidified in the 1980s: 1) an increase in international humanitarian concern, itself the result of better media technologies, 2) the fault placed by Bretton Woods institutions on African states for their negatively-perceived role in development, and the associated search for
other aid recipients, and 3) the demand for services in countries plunged into crisis because of structural adjustment policies (Nugent 2004). In other words, the changes in donor perceptions of African states that led to structural adjustment policies also helped donors form a preference for NGOs as aid-recipients, which simultaneously made their donations look less political (Clapham 1996). NGOs are particularly important to the health sector (Robinson 1997), and serve as a major conduit for donor funding in health-related areas (UNFPA 2004). In addition to acting as alternatives to the state for donors, donors also prefer NGOs as service providers because they are perceived as better-equipped than governments to work with populations in need and because they are familiar with, and have access to, marginalized groups (Benotsch et al. 2004; Clark 1993). Donors also generally see NGOs as representing the needs of the oppressed and as being capable of fostering attitudinal and behavioral change (Clark 1993).

African governments have not, however, always welcomed NGOs, mainly because their existence is frequently associated with political pluralization and, in many cases, indicates the presence of organizations representing foreign interests that could encroach on state sovereignty (Bratton 1989; Luke and Watkins 2002). In particular, their presence and rhetoric can be very threatening to a government whose grasp on power is weak (Bratton 1989; Nugent 2004). NGOs have also taken over some of the roles traditionally occupied by the state, such as service provision (Hulme and Edwards 1997). As such, they have been criticized for becoming service-providers whose priorities are set by donors rather than emancipatory agents (Clark 1997; Hulme and Edwards 1997; Manji and O’Coill 2002; Mayhew 2002).

Social Capital, Civil Society, and NGOs

Both sociologists and political scientists have come to use the term “social capital,” but they use it to mean different things. To sociologists, it refers to both the social network to which an
individual has access, as well as the resources conferred through access to that network (Portes 1998, 2000). To political scientists, it refers to the connectedness of communities (Putnam 2000). The key distinction is whether the benefits of social capital accrue to individuals (the sociological view) or societies (the political science view). Bourdieu is usually credited with coining the term, which he defined specifically as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu 1985: 248).

In this analysis, I use the term social capital in the political science sense, but carefully. To say that a country with more NGOs has a greater level of social capital than a country with fewer NGOs means that in the first country there are a greater number of connections between people, which lead to greater levels of trust, and ultimately better outcomes. As Portes points out (1998, 2000), using social capital in the political science sense to understand differences between places can quickly lead to a tautology: countries that have better governance and more effective policies have high levels of “civicness” (social capital), but the measures for both governance and “civicness” can frequently be the same. Even if social capital and its effects are measured with different instruments, the risk of presenting a truism remains: better-governed countries have higher levels of social capital because high social capital is one of the definitions of good governance. These issues raise the concern that there are unobserved factors that drive both levels of social capital and levels of economic and political wellbeing. Because of this issue, in the analysis below I examine the factors that are associated with large numbers of NGOs in a country before trying to look at the impact of those NGOs.

A final issue remains, which is whether NGOs are a form of social capital in the political science sense of the term. The collective organizations to which Putnam refers in his work
include associations and organizations such as the Lions Club, Parent Teachers Association, and volunteer firefighters (Putnam 2000). It is open to discussion, however, whether the average NGO in sub-Saharan Africa fulfils the same functions of connecting people and lobbying on their behalf. This uncertainty about what an NGO is and does extends to larger discussions of civil society, and the relationship between the two.

Many donors and development professionals have come to see NGOs as a core component of civil society, a positive force that is expected to check and make up for the failings of the state. Social capital helps to make this link. For example, a recent article by Brown et al. (2008) tests the hypothesis that “activities associated with NGOs increase social capital and strengthen civil society, producing political change” (25). Civil society is generally treated as one third of a triumvirate, reflected in the synonymous British term “third sector.” The triumvirate always has the state as the second member, but the third member has varied over time from the private sphere to the market. Because of its conceptualization relative to other macro social entities, however, civil society is difficult to define and easily becomes a residual category. For example, the Centre for Civil Society at the London School of Economics defines civil society as “an arena of uncoerced collective action . . . [whose] institutional forms are distinct from those of the state, family and market” (CSS 2004). Although it is residually defined, most scholars of civil society see a dynamic relationship between the state and civil society, with both cooperative and competitive elements.

The idea of civil society first emerged in response to the development of states in Europe (Lewis 1992). Locke and Hegel viewed civil society as the counterbalance to the state, checking and legitimating the state’s authority. Following the enlightenment, however, intellectual concern with civil society was largely muted until the 1980s, when the fall of the Soviet Union,
flagging confidence in the third world state’s ability to induce development, and a focus on
democratization gave the concept new life. Importantly, the 1980s also mark Bourdieu’s work
on social capital, and Bellah et al.’s (1985) work on the relationship between the individual and
the community, the latter of which was fundamentally concerned with the ebbing of community.

What of civil society in Africa? Civil society did play a prominent role in nationalism at
the time of decolonization, but its full blooming was squashed by the authoritarian regimes that
followed (Bratton 1994; Lewis 1992; Young 1994). Thus it was not until the late 1980s that civil
society reemerged as a topic in comparative studies of Africa (Young 1994). Africa has, of
course, had long had a rich associational life at the local level consisting of, among many others,
women’s and student’s groups, labor unions, and groups based on ethnicity, location, and kin
(Bratton 1989; Chazan 1994; Lewis 1992; Nugent 2004). Africanists who study civil society,
however, have been quick to point out that civil society is more than organized humans, and
more than the sum of its parts (Chazan 1994; Lewis 1992). It is not synonymous with “society,”
(Migdal 1994), and it does not necessarily imply political opposition (Lewis 1992). It is instead
humans organized with an idea of themselves as something different than, and potentially
opposed to, the state (Lund 2006). In other words, groups that are part of civil society “are
separate from but address the state” (Chazan 1994: 278). It is thus not always clear that such a
thing as civil society exists in many African countries. The existence of civil society also
presumes that there is some sort of consensus cutting across all groups about norms of behavior
(Migdal 1994). Clearly, then, civil society is not the sum of all social organizations within
society, nor is it just the organizations that legitimately can be included under the banner of civil
society. It is a set of organizations that share an idea of their position relative to the state.
Several challenges to the coalescence of civil society in Africa are worth noting. First, colonial authorities certainly did not want to facilitate, and in many cases actively prevented, the creation of civil society for fear that it would endanger their own (tenuous) positions (Lewis 1992). Despite nationalist movements, this tendency left new African states without the framework of civil society that had, for example, co-evolved with the state in Europe. Second, the general “weakness” of African states leaves civil society without a key point of reference. Third, just as persistent war impedes states, it also hinders the development of civil society (Lewis 1992).

The rebirth of the concept of civil society happens to have coincided with the rise of the NGO and the two have become linked in important ways. The development community has come to strongly believe that both civil society and NGOs have the potential to fix two of their target problems: under-development and autocracy (Bratton 1989). For the development community, “civil society” refers to the organizational sector of society (local or global), specifically that part made up by NGOs. The development literature discusses civil society in prophetic terms: civil society will save poor countries from poverty and inept, authoritarian governance by providing services and demanding that the state change. From this perspective, civil society is good, and the state is bad.

Two prominent development organizations that work in Africa, the World Bank and the United States Agency for International Development (USAID), both make frequent use of the term civil society. Not surprisingly, each defines civil society in reference to key organizational mandates: development for the World Bank and democracy for USAID. Both also define civil society in terms of the organizations that comprise it. The World Bank defines civil society as the “wide array of non-governmental and not-for-profit organizations that have a presence in
public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations” (World Bank undated). For the Bank, civil society organizations are a “complement” to government, particularly in places where governments are “weak” (ibid.), and “play an important role in giving voice to the disenfranchised, promoting transparency and good governance, and providing community services” (World Bank 2006: 25). Civil society is essentially the organizations that comprise it, which the Bank treats as the representatives of society. Indeed, most development agencies, and by default African governments, see civil society organizations as the representatives of the people, who therefore must be consulted in order to legitimate development projects. Although it is arguably better to involve these types of organizations in development projects than not, their existence does not mean that civil society exists. I will return to this point shortly.

USAID’s civil society division is part of their Office of Democracy and Governance. For them, “‘Civil society’ is an increasingly accepted term which best describes the non-governmental, not-for-profit [part of society and] . . .is the political ‘space’ where citizens can debate, join groups, and mobilize for change without being threatened or intimidated” (USAID 2005). Furthermore, “Legitimate governments can extend their legitimacy by being accountable to civil society, which is often the ultimate check on the abuse of power” (ibid.). Although USAID’s definition goes slightly deeper than that of the World Bank, for USAID civil society still is a gloss for a set of organizations of which much is expected. USAID’s and the Bank’s definitions of civil society suggest that the best way to strengthen it is to fund organizations, a strategy both agencies employ.

While the development community’s focus on the composition of civil society is warranted given that they are ultimately looking for groups that they can fund, organizations
alone clearly do not make civil society. Civil society as the implementer of development programs is not the same as civil society the counterpart to the state, yet the two are conflated in the donor community’s definition of the concept. To move from one to the other, somehow they must join together with a common set of ideas about who they are, and how they are positioned as a community of organizations relative to the state, the market, and other macro social interests. The inability of African states to provide fundamental services has complicated this shift. Specifically, funding from foreign donors has spurred the creation of service-delivery NGOs, and although African organizations have historically attended to the needs of their members, these new organizations blur the boundaries between state and civil society. It is not clear whose interests they represent: the people, the donors, or the state. As a result, although their presence may ultimately be beneficial to the population, at the same time, funding these organizations may not lead to the formation or strengthening of civil society.

In the end, however, even if the political science use of social capital is tautological, and/or NGOs should not be considered a measure of social capital or civil society, we would still hope to see positive effects of NGOs on HIV-related outcomes because of the role they play in service delivery.

The Role of NGOs in Successful HIV/AIDS Responses

There is no general explanation of why some countries have been more successful than others in addressing HIV/AIDS (de Waal 2006), largely because systematic data on interventions and outcomes across a wide set of countries are not readily available. As a result, most of the high quality research that has been conducted has been in the form of case studies, either of individual countries, or of individual programs. Although the findings from these individual cases illuminate the causes of success and failure within the context of that particular case, it remains
to be determined whether the findings generalize. The scholarship based on case studies of countries has overwhelmingly focused on two countries: Senegal and Uganda. The case study-based research has identified two main factors that determine country-level success: political leadership and commitment, and government coordination with NGOs and other civil society organizations (e.g., Barnett and Whiteside 2006; Moran 2004; Parkhurst and Lush 2004; Putzel 2004; WHO 2000). Both factors are black boxes to some extent, and in the case of government coordination with NGOs, such coordination could mean dividing up the labor of service delivery, seeking input from community leaders at annual meetings, creating a ministry tasked with NGO affairs, or something else entirely. Regardless, international governmental organizations such as the World Health Organization, the United Nations, and the Economic Commission for Africa see NGOs as playing an important role in AIDS interventions (ECA 2004; UN 2003; WHO 2000).

In both Senegal and Uganda, the government, particularly the ministry of health, is credited with working with NGOs, organizing and motivating such social organizations to take action, and for providing the “space” for those organizations (Putzel 2004; 2006: 179). Both countries set up national AIDS commissions in 1986 that included representatives of NGOs (Moran 2004; Putzel 2004). The literature on these two countries credits the success of these countries vis-à-vis HIV (keeping prevalence at 1% in Senegal, and decreasing it from about 20% to 10% in Uganda) in part to such interactions with NGOs.

In Senegal, there is ample evidence for NGOs playing an important role in health care prior to the emergence of HIV, facilitating the involvement of religious leaders in HIV prevention efforts, and disseminating prevention messages. Several authors cite the experience of NGOs with health interventions and care, such as related to vaccination and malaria, as
translating into effective HIV/AIDS work (Meda et al. 1999; Pisani 1999). The existence of such NGOs was important when currency devaluation and hard economic times emerged in the 1980s, just as HIV became an issue (Pisani 1999). In terms of NGOs working on religious aspects of HIV, Jamra, a Muslim NGO, lobbied Islamic officials on HIV matters, initiated contact with the government (Pisani 1999), and co-authored a report with the National AIDS Commission and the association of religious leaders (Association Nationale des Imams et Oulémas du Sénégal) that presented basic information on HIV/AIDS as well as promoted a position that Islamic practices could help prevent HIV (Putzel 2006). On the Christian side, a Catholic NGO, Sida Service, lobbied churches to orient their stance on HIV towards prevention (Pisani 1999). An early survey of religious leaders’ knowledge of HIV, conducted by an NGO and supported by the government, found such knowledge to be lacking, which played a key role in future strategies (Putzel 2006).

But NGOs beyond those associated with religion played an important role in Senegal. ENDA, an environmental NGO, first started work on HIV/AIDS in 1986, Senegal’s branch of the Society for Women and AIDS in Africa (SWAA) was established in 1989, and the first association for PLWHA was founded in 1991 (Association Sénégalaise d’Aide et de Soutien aux Séropositifs et à leurs Familles) (Desclaux et al. 2004). Pisani (1999) reports that by 1995 there were 200 NGOs and 400+ women’s organizations working on HIV in some way.

NGOs are also generally credited with playing an important role in Uganda’s success, including coordinating, educating, providing testing and counseling, and supplying condoms (Benotsch et al. 2004; Gow 2002; Kalipeni and Mbugua 2005; UN 2003). In Uganda, following the end of the civil war, Museveni saw NGOs in a positive light because they could help with reconstruction (Putzel 2006) and provide services the state could not (Parkhurst and Lush 2004).
The AIDS Support Organization (TASO), an organization for PLWHAs was founded in 1987 (Putzel 2004), which was certainly one of the earliest, if not the earliest, of such organizations in Africa. Elected bodies, the local councils, which played a key role in HIV intervention, worked with local NGOs (Allen and Heald 2004). And local NGOs created their own HIV interventions, which were shaped by local context and at an often interpersonal level, and therefore, more effective (Green et al. 2006; Parkhurst and Lush 2004). Furthermore, women’s organizations actively promoted Museveni’s “no grazing” policy to reduce multiple concurrent sexual partners (Green et al. 2006).

The literature on Senegal and Uganda thus indicate that NGOs played an important part in each country’s success in combating HIV/AIDS.

**DATA**

Most of the readily available information on NGOs in Africa comes from organizational directories, which are usually published by foundations and organizations in the First World, but are sometimes put together by African NGO umbrella organizations. The prologues of these directories advertise the directories as ways for organizations to network, people to find services, and donors to find recipients for their funding. These directories will usually have a page of information for each NGO that includes the organization’s mission and/or target population. Organizational founding date is usually available, and example projects are sometimes described. Information on organizational size (number of staff, membership size, or number of people served), budget, and source of budget is usually not available.

The data on NGOs for all African countries that I analyze below comes from a 2003 publication compiled by the United Nations entitled, *Networking: A Directory of African NGOs*. (There was also an edition in 1999.) The data were gathered by sending questionnaires to NGOs
in African countries, working closely through UN ties in those countries. The total number of NGOs per country is a simple count of the organizations listed for each country, and the proportion of NGOs that target HIV/AIDS is the number of NGOs that mention HIV as an “action area” divided by the total number of NGOs for that country. Thus I include an organization as one that targets AIDS even if HIV/AIDS is not its primary mission – HIV just has to be listed as a key area of work. This directory does not, of course, capture all of the NGOs that exist in sub-Saharan Africa, so the absolute levels should be interpreted carefully. The relative numbers of NGOs per country should be roughly accurate, however, assuming that the technique used for gathering data on NGOs was equally successful (or unsuccessful) across countries. Similarly, I use the proportion of NGOs that target HIV/AIDS rather than the total number to take into account that while total numbers may not be accurate, the distribution of NGOs by type across a country should be comparable. The more detailed data that I present for Cameroon, Nigeria, Senegal, and Tanzania are compiled from multiple different directories of the same sort as the UN directory (see Robinson 2008 for more details). The data on organizations for PLWHA comes from a USAID directory of those organizations (2004). I used a combination of information from the UN directory and the USAID directory to identify the founding date of the earliest HIV NGO in each country, if such an organization existed.

Information on HIV prevalence rates comes from UNAIDS (2006, 2008). Data on antiretroviral therapy coverage come from the UNAIDS/WHO Global HIV/AIDS Online Database. Data on wars, which I use as a proxy for stability, come from the International Peace Research Institute’s (PRI0) data set, as described in Gleditsch et al. (2004). Data on foreign aid, urban population size, and GDP per capita are from the World Bank’s World Development Indicators database (World Bank 2008).
ANALYSIS

Distribution of NGOs

The distribution of NGOs across African countries is quite uneven. Figure 1 shows how African countries vary in terms of their total number of NGOs, weighted for the size of the (human) population in 2003. The countries that have the fewest NGOs tend to have experienced significant conflict in the past 20 years (Angola, Burundi, Democratic Republic of the Congo, Ethiopia, Somalia, and Sudan). The countries with the most NGOs are either islands, which are generally wealthier, and/or countries that tend to be the favorites of international donors, such as Botswana and Swaziland. But there are also some cases, like Cameroon, which has an exceptionally high number of NGOs but for which there is not a ready explanation.

Figure 2 shows the corresponding information for HIV/AIDS NGOs, looking at the proportion of a country’s NGOs that target HIV/AIDS across sub-Saharan Africa. Here we might expect to see that the countries with the highest HIV infection rates (primarily in southern Africa) would have the highest proportion of their NGOs targeting HIV/AIDS. Instead, Burkina Faso, with an adult HIV-prevalence rate of 2.1% in 2003 (UNAIDS 2006), had almost three quarters of its NGOs devoting their work to HIV/AIDS. Similarly perplexing, Guinea-Bissau and Burundi both had prevalence rates of between three and four percent in 2003 (ibid.), yet are on opposite ends of the distribution.

Before examining these intriguing findings further, I present one further piece of information on HIV/AIDS organizations, which relates to those that directly serve people living with HIV/AIDS (PLWHA). Table 1 shows those countries having no organizations supporting PLWHA, as well as those having five or more such organizations. Among those countries without organizations for PLWHA, Cape Verde is the most striking, given that over 80% of its

1 Nigeria’s presence in this group is best explained as the result of weighting by population size.
NGOs target HIV/AIDS. In terms of those countries with an above-average number of organizations for PLWHA, we do see some of the countries most affected by HIV/AIDS—Mozambique, South Africa, Uganda, and Zambia—but again see countries with relatively low prevalence rates—Burkina Faso (2.1%), Ghana (2.1%), and Senegal (0.9%) (UNAIDS 2006). These data raise interesting questions about the particular strategies used in different countries to address HIV/AIDS (support groups vs. prevention efforts, for example), as well as about whether some cultures might be more likely to support stigmatized groups than others.

Predicting NGOs

There are a number of factors we might be associated with the number of NGOs in a country. These include the amount of foreign aid (because donors like to give money to NGOs), the percentage of the population that is urban (it should be easier to form NGOs in places with densely populated areas), the wealth of the country (richer countries should have more NGOs because they have better infrastructure for organizations), and the number of years at war (war-free countries should have more NGOs because they are more stable). In terms of the proportion of a country’s NGOs that work on HIV/AIDS, the factors just listed might matter, as should the earliest date of founding for an HIV/AIDS NGO in the country, as well as the HIV prevalence rate.

Table 2 shows the relationships between these variables and the two measures of NGOs: 1) the overall number of NGOs, and 2) the proportion of a country’s NGOs that target HIV/AIDS. It shows statistically significant, positive correlations between foreign aid, the proportion of the population that is urban, and GDP per capita and the overall number of NGOs. There is a statistically significant, negative correlation with the number of wars. All of these relationships are in the predicted direction. The strongest relationship is between foreign aid and
the number of NGOs, a relationship which Figure 3 explores further. Figure 3 shows that there is a steep gradient among countries that receive less than $20 per capita in aid per year such that among these countries, as aid increases, the number of NGOs sharply increases. Among countries that receive much more aid per capita, the relationship does not appear to be as strong, suggesting that there may be threshold effects.

In terms of HIV/AIDS NGOs, there is a strong correlation between the number of NGOs in a country and the number of HIV/AIDS NGOs (Pearson’s r = 0.88, results not shown). Not surprisingly, countries that have lots of NGOs have lots of HIV/AIDS NGOs. For the proportion of NGOs that target HIV/AIDS, the only statistically significant relationship in Table 2 is with the HIV prevalence rates – countries with higher HIV prevalence have a greater proportion of their NGOs working on HIV/AIDS. Figure 4 explores this relationship further with a scatter plot of the proportion of HIV/AIDS NGOs against the country-level HIV prevalence rate. Although the relationship is moderately strong, there is still a good deal of scatter around the line of best fit, which indicates that even at the same level of prevalence, countries may be very differently resources in terms of HIV NGOs. Many of the countries with above-average proportions of NGOs are the countries in southern Africa that are among the worst affected by HIV.

Next I present results from a multivariate regression analysis (ordinary least squares) of the factors that predict the overall number of NGOs, as well as the proportion of HIV/AIDS NGOs in a country. Table 3 shows that foreign aid per capita and GDP per capita remain robust predictors of the overall number of NGOs in a country, even after controlling for other factors. In terms of predicting the proportion of NGOs in a country that target HIV/AIDS, both foreign aid and HIV prevalence are statistically significant predictors, but the sign on the coefficient for foreign aid is the reverse of what we would expect. Indeed, after controlling for a country’s
HIV-prevalence level, this analysis indicates that countries that receive more aid have fewer NGOs. It is not clear how best to interpret this somewhat counterintuitive finding.

Given the importance of foreign aid in predicting NGO levels, I present additional results from detailed data on NGOs that work in the reproductive health care field (which includes HIV/AIDS, but also family planning and population more generally) in Cameroon, Nigeria, Senegal, and Tanzania (see Robinson 2008 for more details). Table 4 and Figure 5 show that foreign aid per capita predicts (very well) the timing of when some NGOs emerge. Specifically, Table 4 gives the correlation coefficients (Pearson’s r) for the relationship between foreign aid per capita received in a given year and the organizational birth rate in these four countries. The relationship is strongest in Nigeria and Senegal, and weaker in Cameroon and Tanzania. Figure 5 depicts this relationship graphically for Nigeria, showing that NGOs emerged when levels of foreign aid were at their highest, and that the two variables track one another quite closely.

**Impacts of NGOs**

Finally, what are the effects, if any, of the number of HIV/AIDS NGOs in a country? I consider two possible impacts of NGOs. The first is on the change in the level of prevalence between 2001 and 2007 – negative numbers in this case are good. The second is in the proportion of people in need of antiretroviral therapy who are receiving it. I also measure NGOs two ways: 1) the proportion of a country’s NGOs that target HIV/AIDS (broken in to three groups), and 2) the earliest founding date of an HIV-oriented NGO in a country, as based on the UN directory, and the USAID directory of organizations assisting PLWHAs (also broken in to three groups).

Figures 6a and 6b show that both measures of NGOs have an impact on HIV. Countries with the lowest proportion of HIV/AIDS NGOs experienced a 1.7% increase in prevalence, on average, between 2001 and 2007, while those countries with the greatest proportion of NGOs
experienced an 8.7% decrease in HIV prevalence during the same time period. Similarly, countries with an HIV/AIDS NGO experienced the greatest declines in HIV prevalence between 2001 and 2007 (approximately 7%), while those countries without an obviously-identifiable HIV/AIDS NGO experienced a 3% increase in prevalence.

Figures 7a and 7b show the relationship between HIV/AIDS NGOs and ARV coverage. In terms of the proportion of a country’s NGOs that target HIV, the effect does not vary: countries are achieving approximately 25% coverage. A clear effect can be seen, however, when looking at the date of founding of the earliest HIV/AIDS NGO. Those countries with an HIV/AIDS NGO that dates from before 1994 have almost 35% coverage, while those without such an organization have only 18% coverage.

CONCLUSION

There are both theoretical and practical reasons why one would expect a relationship between the characteristics of a country’s NGOs and markers of success in addressing HIV/AIDS. The data analysis presented above provides evidence that countries with more HIV/AIDS NGOs and older HIV/AIDS NGOs have done better at reducing HIV prevalence and at providing care for those with HIV. The distribution of NGOs, and of HIV/AIDS NGOs, across Africa remains uneven. It appears that this is due in no small part to differences in trends in foreign aid.

What do these findings tell us about social capital? The fact that NGO numbers are closely associated with foreign aid suggests that NGOs are not as “local” as many people might hope, and that they are probably very dependent on foreign resource streams that may not be reliable. Thus they may not be the sort of organic social capital/civil society that many people hope. Even if not that, however, it seems that NGOs do have beneficial impacts on mitigating the HIV epidemic in Africa, which is a good thing.
### Table 1. Presence of Organizations for People Living with HIV/AIDS,

#### Sub-Saharan Africa, 2004

<table>
<thead>
<tr>
<th>Countries with No Orgs.</th>
<th>Countries with 5+ Orgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>Cape Verde</td>
<td>Burkina Faso</td>
</tr>
<tr>
<td>Comoros</td>
<td>Cameroon</td>
</tr>
<tr>
<td>Djibouti</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>Congo</td>
</tr>
<tr>
<td>Madagascar</td>
<td>Ghana</td>
</tr>
<tr>
<td>Rwanda</td>
<td>Kenya</td>
</tr>
<tr>
<td>Sao Tome et Principe</td>
<td>Mozambique</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>Nigeria</td>
</tr>
<tr>
<td>Somalia</td>
<td>Senegal</td>
</tr>
<tr>
<td>Sudan</td>
<td>South Africa</td>
</tr>
<tr>
<td></td>
<td>Tanzania</td>
</tr>
<tr>
<td></td>
<td>Togo</td>
</tr>
<tr>
<td></td>
<td>Uganda</td>
</tr>
<tr>
<td></td>
<td>Zambia</td>
</tr>
</tbody>
</table>

Source: USAID 2004

### Table 2. Correlations between Key Variables and NGO Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>NGOs per Million, 2003</th>
<th>Proportion of NGOs that Target HIV, 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGOs per Million, 2003</td>
<td>Pearson’s r</td>
<td>1.000</td>
<td>.227</td>
</tr>
<tr>
<td>Average Annual Foreign Aid per Capita, 1995-99</td>
<td>Pearson’s r</td>
<td>.618***</td>
<td>-.090</td>
</tr>
<tr>
<td>Average Proportion Population Urban, 1995-99</td>
<td>Pearson’s r</td>
<td>.249*</td>
<td>.010</td>
</tr>
<tr>
<td>Average GDP per Capita, 1995-99</td>
<td>Pearson’s r</td>
<td>.275*</td>
<td>.097</td>
</tr>
<tr>
<td>Number of Years with War, 1995-99</td>
<td>Pearson’s r</td>
<td>-.263*</td>
<td>-.078</td>
</tr>
<tr>
<td>Year of First HIV NGO</td>
<td>Pearson’s r</td>
<td></td>
<td>.199</td>
</tr>
<tr>
<td>HIV Prevalence, 2001</td>
<td>Pearson’s r</td>
<td></td>
<td>.306**</td>
</tr>
</tbody>
</table>

Source: Gleditsch et al. 2002; UN 2003; USAID 2004; World Bank 2008

Note: significant at the * p < 0.10 level, ** p < 0.05 level, *** p < 0.01 level
Table 3. Results from Ordinary Least Squares Regressions Predicting NGO Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Coefficients</th>
<th>Proportion of NGOs that Target HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Foreign Aid per Capita, 1995-99</td>
<td>0.61***</td>
<td>-0.32*</td>
</tr>
<tr>
<td>Average Proportion Population Urban, 1995-99</td>
<td>-0.10</td>
<td>0.07</td>
</tr>
<tr>
<td>Average GDP per Capita, 1995-99</td>
<td>0.28*</td>
<td>-0.05</td>
</tr>
<tr>
<td>Number of Years with War, 1995-99</td>
<td>-0.07</td>
<td>-0.05</td>
</tr>
<tr>
<td>HIV Prevalence, 2001</td>
<td></td>
<td>0.31*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.39</td>
<td>0.06</td>
</tr>
<tr>
<td>N</td>
<td>45</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Gleditsch et al. 2002; UN 2003; UNAIDS 2008; USAID 2004; World Bank 2008
Note: significant at the * p < 0.10 level, ** p < 0.05 level, *** p < 0.01 level

Table 4. Correlation between Foreign Aid Per Capita and the Crude Organizational Birth Rate*, Cameroon, Nigeria, Senegal, and Tanzania, 1980-2003

<table>
<thead>
<tr>
<th>Country</th>
<th>Pearson’s r</th>
<th>Percentage of Variation in Crude Organizational Birth Rate* Explained by Foreign Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude Organizational Birth Rate* &amp; Foreign Aid Per Capita</td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td>0.35</td>
<td>12.4%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.65</td>
<td>42.0%</td>
</tr>
<tr>
<td>Senegal</td>
<td>0.51</td>
<td>26.1%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0.31</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Source: Robinson 2008
* Number of new reproductive health NGOs in a given year, divided by the total number of existing reproductive health NGOs
Figure 1. African Countries by Number of NGOs per 1,000,000 People, 2003

Source: UN 2003

Figure 2. Number of Countries by Proportion of Their NGOs that Target HIV/AIDS, Sub-Saharan Africa, 2003

Source: UN 2003
Figure 3. Foreign Aid Per Capita vs. Number of NGOs per 1,000,000 People, Sub-Saharan Africa, 1999-2003

Figure 4. Scatter Plot of Proportion of Country’s NGOs that Target HIV vs. HIV Prevalence Rate, Sub-Saharan Africa, 2003
Figure 5. Comparison of Crude Organizational Birth Rate*, Reproductive Health Care NGOs, and Foreign Aid Per Capita, Nigeria, 1980-2003

Aid Per Capita
Crude Organizational Birth Rate

Source: Robinson 2008

*Number of new reproductive health NGOs in a given year divided by the total number of existing reproductive health NGOs
Figure 6a. Average Change in HIV Prevalence between 2001 and 2007, by Proportion of NGOs that Target HIV

Proportion of NGOs that Target HIV
Source: UN 2003; UNAIDS 2008
Note: Mauritius & Senegal excluded; difference in means not significant

Figure 6b. Average Change in HIV Prevalence between 2001 and 2007, by Date of Earliest HIV NGO

Date of Founding of Earliest HIV NGO
Source: UN 2003; UNAIDS 2008; USAID 2004
Note: Mauritius & Senegal excluded; difference in means not significant

Figure 7a. Average Proportion of People Needing ARVs Receiving Them, by Proportion of NGOs that Target HIV

Proportion of NGOs that Target HIV
Source: UN 2003; UNAIDS & WHO 2009
Note: Difference in means not significant

Figure 7b. Average Proportion of People Needing ARVs Receiving Them, by Date of Earliest HIV NGO

Date of Founding of Earliest HIV NGO
Source: UN 2003; UNAIDS & WHO 2009; USAID 2004
Note: Difference in means significant at the p < 0.10 level
REFERENCES


