Conference Paper

Pride, conflict and complexity: Applying dynamical systems theory to understand local conflict in South Sudan ¹

By Stephen Gray and Josefine Roos







Abstract

South Sudan has experienced deadly conflict for much of the last five decades. While most attention has focused on South Sudan's civil war with the now Republic of Sudan to the north, in reality, interrelated conflicts persist in multiple layers of society. Paradoxically, the termination of the war of nationhood activated 'local conflicts', which have led to the killing of thousands of people since peace was brokered with the north in 2005. This paper presents an assessment of a 'typical local conflict' between two Dinka clans, based on field research in Jonglei State, using a systemic approach to conflict assessment adapted from dynamical systems theory. This approach not only captures the multiple sources and complex temporal dynamics of the conflict, but can also help identify patterns that are central to the conflict that are unrecognisable by other means (Coleman et al. 2007, 2011). The analysis reveals that typical explanations for local violence in post-civil war contexts such as

resource and political competition and insecurity are an over-simplification in this context. These factors undoubtedly influence the conflict, but can be better understood as elements of a dynamical system where the probability of violence is strongly influenced by the clans' competing desire to maximise group pride.

The conflict has resisted transformation because traditional 'pride-sensitive' conflict mechanisms have become ineffective, while most interventions by state institutions have exacerbated the conflict. These findings reveal an emotional dimension to conflict that might be overlooked in conventional approaches to conflict assessment and peacebuilding, although the case study is not to be generalised to all local conflict in South Sudan.

Introduction

The 2005 Comprehensive Peace Agreement (CPA) between the north and south regions of the former Sudan did not deliver comprehensive peace to South Sudan. While casualties inflicted by their traditional enemy, the north, declined rapidly following the agreement, the number of lives lost due to conflict between southerners has risen steadily since. After gaining independence in July 2011, the euphoria felt by southerners has been tempered somewhat by persistent deadly communal violence, particularly in the remote Jonglei State. Largely beyond the gaze of the international community, thousands died from local intergroup conflicts in 2011 and more than 100,000 were displaced from incidents of conflict in Jonglei alone (AFP 2011). Having fought so long to prevail over an external enemy, it is now time for southerners to confront the enemy within.

The need for this study stems from two important recognitions. First, local violence in post-civil war

An earlier version of this paper was presented at the International Association for Conflict Management (IACM) 25th Annual Conference which was held in Stellenbosch, South Africa, 11–14 July 2012, in partnership with ACCORD. The project discussed in this paper would not have been possible without the logistical support, advice and lodging provided by the staff of the Lutheran World Federation. The authors also acknowledge Andrzej Nowak and Marta Kacprzyk from Warzaw University for their invaluable advice on research design and their comments on drafts. Finally, warmest thanks and best wishes are extended to the kind people of Twic East County for their hospitality and participation in this project. The authors are especially indebted to the teachers from both the Dachuek and yual clans, the county administration and their excellent interpreter.

contexts is distinct from the broader, national level cleavages that beset these countries during the war and requires more attention from researchers and practitioners (Autesserre 2010 and United States Institute of Peace 2012). Second, there is a growing recognition that methods of conflict analysis adapted from systems thinking better enable us to make sense of the inherent complexity of social processes and to move beyond simplistic and potentially dangerous 'one size fits all' peacebuilding strategies (Burns 2007, Coleman et al. 2007, 2011 and Ricigliano 2011). An advantage of this approach is that it 'not only captures the multiple sources and complex temporal dynamics of such systems, but it can help identify central nodes and patterns that are unrecognisable by other means' (Coleman et al. 2011:49). Revealing these patterns helps explain why some conflicts resist transformation (intractability) and why some conflicts change rapidly or react unexpectedly to intervention. This study represents the first time a systemic analysis based on dynamical systems theory has been applied to investigate local violence in post-civil war contexts. The study did not begin with a hypothesis about what was causing the conflict, though resource competition had been implicated to some extent.

The paper is based on extensive interviews conducted in a remote region of Jonglei State in July and August 2011. This state has borne witness to some of the worst communal violence in South Sudan, particularly in 2011 when more than 3,000 people were reportedly killed (AFP 2011 and United Nations 2011). The paper presents a detailed case study of a particular intra-tribal conflict in Jonglei, testing whether a systemic approach to conflict analysis might provide new insight on the vexing problem of communal violence in South Sudan. The findings are not intended to be generalised to all conflict in Jonglei State or South Sudan, though it would be useful for further research to test the applicability of the findings elsewhere.

The paper begins by providing a brief history of conflict in South Sudan before describing the specific conflict assessed and the methodology used. The findings reveal factors typically associated with local conflicts in fragile states such as insecurity, competition for resources and political competition. The study highlights that these factors could be better understood as conduits through which a deeper competition between the two clans was fought - the desire to maximise group pride. The explanation of the systemic role of pride reveals how violence has historically taken place when events lead either clan to experience wounded pride. The paper then discusses implications for the way the community and external interlocutors respond to conflict and demonstrates why two conflict regulatory systems, an old system based on pride and the newly established legal system, have both

failed to contain the violence and in some cases have made it worse. The study reveals that the emotional dimension is highly important to understanding conflict in this context, though further research is required to establish whether the findings could be generalised to other examples of local conflict in South Sudan.

Brief history of conflict in South Sudan

The Republic of South Sudan gained independence on 9 July 2011, the long awaited culmination of the 2005 peace agreement between the Government of the Republic of the Sudan and the Sudan People's Liberation Army/Movement (SPLA/M). The preceding five decades of almost incessant, brutal conflict claimed the lives of an estimated 2.5 million citizens and long dashed southerners' hopes for economic development, political inclusion, service provision and social harmony. Then in July 2011, with some of the very worst human development indicators in the world, the Republic of South Sudan was born. Citizens and leaders alike recognise that translating peace into prosperity is a daunting challenge for the new nation.



South Sudanese celebrate as the Republic of South Sudan proclaims its independence

Social and political cohesion could provide a firm foundation for state- and nation-building, but they are far from assured in South Sudan. The country is a menagerie of more than 60 ethnic groups, many of which reside in largely homogeneous, geographically separated pockets.² Like many states on the African continent, the fact that such a diverse collection of people share a common fate owes much more to the historical legacy of colonialism than it does to any sense of shared identity, language, religion or cultural practice. The unity of southerners has always been tenuous, and in the post-independence era it is further threatened by the seemingly inevitable competition for resources, political power and other spoils of the state-building process.

2 Many of these ethnic groups share common origins, though even when ethnic sub-groups are aggregated the two largest – the Dinka and the Nuer – make up only 25% of the total population.

Violence during peacetime: National peace agreements obscure local conflict

Armed violence has quietly killed thousands in South Sudan in the seven years since the signing of the CPA. Intra-southern conflicts and deaths have been obscured, however, by the tendency of Sudanese and international observers between 2005 and 2011 to focus on the 'national-level' conflict between the north and south, or on Darfur. The threat that intra-southern communal violence poses to the country's future should not be underestimated. The cyclical, escalating nature of the killing and increasing targeting of noncombatants has been particularly troubling, leading the United Nations Mission in South Sudan (UNMISS) head, Hilde Johnson, to proclaim after 700 deaths in August 2011 that 'if it gets out of hand, we will be in a situation where the cycle of violence will escalate to unknown proportions in South Sudan' (AFP 2011). The deployment of United Nations (UN) peacekeepers and commencement of a reconciliation process in September 2011 did little to staunch the violence, as evidenced by repeated revenge attacks into 2012 that left hundreds more dead. Although exact figures are difficult to verify, the prolonged upsurge in such deaths since August 2011 emphasises that independence has not brought peace to South Sudan.

Paradoxically, the end of the 'national level' civil war may have actually activated some 'local level' conflicts.3 The end of the civil war left the new nation awash with automatic weapons⁴ and bereft of effective security or governance institutions, particularly in remote regions. Once peace was brokered in South Sudan, conflict ignited between rival groups in rural areas. Much of the conflict was between groups which already held grievances against each other due to injustices committed during the civil war. Furthermore, the always tenuous unity of southerners was tested after the united cause of southern emancipation from northern oppression was achieved. As Jok explains, 'The experience of the war, including Khartoum's counter-insurgency tactics against civilians in the south, convinced large swaths of the southern population that the north was a common enemy and that all southerners should

set aside their differences and unite' (Jok 2011:8). Unfortunately, southerners have yet to find a common identity to bind them during times of peace as common enmity did during the war.

Conventional explanations for local conflicts

The experience of ongoing, even escalating, local violence after civil wars formally end has been witnessed in various other contexts, most notably in the Democratic Republic of the Congo (DRC), where hundreds of thousands have died due to innumerable micro-scale conflicts since the civil war officially ended in 2003 (Autessere 2010). Such violence is commonly explained as 'micro-level rivalries over land, resources, and power' (Autesserre 2010:129). The same explanations are generally put forward for local violence in South Sudan, together with high rates of civilian gun ownership, inter-ethnic rivalry, migration, and violence associated with cattle raiding, a phenomenon that is increasing in frequency and impact as the number of cattle required to pay a bride price increases (Jok 2011). An analysis of UNMISS security reporting from 2005 to 2011 emphasises the primacy of these explanations for local violence in South Sudan (Table 1). Readers interested in conventional explanations for local violence in South Sudan should refer to studies by Schomerus and Allen (2010) and McEvoy and Lebrun (2010), though as later sections detail, they are insufficient to understand the conflict analysed in this study.

While they undoubtedly have a causal role, none of these conflict drivers alone can sufficiently explain why, when and where local violence occurs. In most cases many factors are implicated, which are often contingent upon environmental influences and the prism of history through which the actors involved view the issues and choose to act in response. Thus, attributing causality to only one or two factors often masks the complexity, non-linearity and temporality of the causal relationships between various factors that influence a conflict to varying degrees at different points in times. In other words, it is not just the factors themselves that cause destructive conflict; it is also the relationships between factors that influence the likelihood that the inevitable conflicts in the communities will turn violent over time.

Methodology: Assessing local conflict through a systemic lens

Systemic approaches to peace and conflict take concepts from complexity science and systems thinking and apply them to try and make sense of the complex social, political and environmental processes that give rise to conflict. Through the systemic lens, conflict arises in fragile states not because of linear cause and effect relationships like 'cattle raiding

³ Some conflicts were active during the North-South civil war and were re-contextualised as communal violence post-independence, while some conflicts are entirely disputes that are caused by factors associated with a postindependence environment.

⁴ The estimated firearms holding in South Sudan in 2009 was 923,200 weapons out of a population of nine million. These weapons are mostly automatic machine guns from the civil war, 78% of which are estimated to be in the hands of civilians (Human Security Baseline Assessment for Sudan and South Sudan. 2009).

Table 1: United Nations explanations for local violence: 2005-2011

Quote	Explanation
'dozens of civilians were killed in clashes between Zande and Bor Dinka Further clashes, this time between Dinka and Moru tribes, claimed the lives of 18 civiliansFifteen civilians were killed in fighting between Moro and Mbororo tribes in the first week of December' ⁵	ethnic rivalry/ causality not attributed
'the proliferation of small arms has contributed to the loss of hundreds of lives in communal clashes over land, water and grazing rights' ⁶	insecurity, resource competition
'most incidents appeared to be related to clashes over natural resources…armed members of the Toposa tribe attacked unarmed members of the Didinga tribe in Lauro, Eastern Equatoria, killing 54 people, mostly women, and stealing 800 head of cattle' ⁷	resources, ethnic rivalry, cattle-raiding
'inter-tribal violence linked to cattle disputes and exacerbated by the prevalence of civilian firearms continues to present a significant threat to civilians across southern Sudan'8	cattle-raiding, insecurity, land issues
'land rights, migration issues and peaceful tribal coexistence need to be addressed urgently' ⁹	
'heavy fighting between the Murle and the Lou Nuerresulting in an estimated 195 civilians killed' ¹⁰	ethnic rivalry/ causality not attributed
'inter-tribal tensions erupted when a group of Murle attacked Lou Nuer villages161 people were killed66 people were killed in a cattle raid between the Luac and Dinka tribesIn another cattle raid on 28 August, Lou Nuer tribesmen attacked a Dachuek village in Twic East County (Jonglei State), resulting in the deaths of 28 people1,000 Lou Nuer tribesmenattacked Duk Countyresulted in 72 people being killedDinka and Mundari tribesmen clashed near Jubakilling 23 people ¹¹¹	ethnic rivalry, cattle-raiding
'a confrontation over cattle between Mundari and Dinka Aliap in Awerial County (Lakes State) reportedly left 49 people dead'12	ethnicity rivalry, cattle-raiding
'significant security incidents occurred in southern Sudan, including in Lakes, Upper Nile, Warrab and Jonglei States. Cattle rustling, migration-related incidents and other inter-communal disputes remain conflict drivers in the south' ¹³	cattle-raiding, migration
'Murle fighters attacked a number of Lou Nuer towns in Jonglei Statelocal reports have estimated that as many as 600 were killedThese attacks have been beyond the scale and scope of the violence typically associated with traditional cattle raiding ¹¹⁴	inter-ethnic rivalry, cattle-raiding

causes violence' or 'resource competition and guns cause violence', but is rather seen as an emergent property of a complex system that evolves according to the dynamic interaction of these factors (and more) over time. Consequently, addressing an issue such as cattle raiding or governance reform by itself might have a positive impact on a conflict, but any of the remaining factors could still reignite it, and without understanding the dynamic relationships between these factors, even well-intentioned interventions could inadvertently make the situation worse (Coleman 2011). While enjoying a strong theoretical foundation, dynamical systems theory has never before been applied to assess a 'live' armed conflict in a fragile country. The current study is part of an ongoing processto adapt the constructs of this theory into

practical assessment tools and intervention strategies to support conflict assessment and transformation in real life settings. A case study approach based on a relatively simple intra-ethnic conflict that included only a few actors and issues over a small geographic area was selected. External influences were limited by very poor roads which left the community largely isolated from the outside world. This enabled the conflict to be characterised comprehensively by increasing the likelihood that all actors involved could be interviewed and all contributing factors could be considered.

The researchers spent one month conducting interviews in the South Sudanese capital, Juba, and one month conducting interviews at the site of the

- 5 United Nations 2005, p. 5.
- 6 United Nations 2006, p. 2.
- 7 United Nations 2007, pp. 1-2.
- 8 United Nations 2009a, pp. 12–13.
- 9 United Nations 2009a, p. 16.

- 10 United Nations 2009b, p. 1.
- 11 United Nations 2009c, pp. 1–2.
- 12 United Nations 2010a, p. 1.
- 13 United Nations 2010b, p. 8.
- 14 United Nations 2011, p. 6.

conflict. Thirty semi-structured group interviews with between three and 10 participants were conducted in the field with the use of a translator. Members of the three clans living in the conflict area were interviewed on multiple occasions, as were various government officials, civil society groups and representatives of non-governmental organisations.

Two data collection methods were used. With the first method, interviewers followed a standardised questionnaire where they asked what each actor's relationship was with other groups, what their primary goals were, which actions they undertook to achieve these goals, under which conditions they would take different actions, and what the likely consequences were of each action. To limit the likelihood of participants intentionally or unintentionally misrepresenting their behaviours and relationships, several interviews were conducted with different representatives from the key stakeholder groups, particularly the feuding clans. Validity was also checked by asking what key stakeholders thought of others' goals, behaviours and relationships. The goal of these questions was to enable a network analysis of the community that would allow the researchers to understand the interests of actors, the behavioural options available to them, their potential influence and the relationships between them.

With the second method participants were asked to share their version of the conflict, indicating who was involved and what was motivating them at particular junctions throughout the history of the conflict. Following the interviews, a feedback loop mapping analysis served to identify factors (events, motivations or conditions) that had an inhibiting, reinforcing or neutral effect on the conflict over time.¹⁵ Thus, this methodology might be considered a blend of social network analysis (Scott 1987) and the loop mapping processes commonly used in systemic approaches to make sense of complex conflicts (Coleman et al. 2007, 2011 and Körppen et al. 2008).

History of the Wanglei conflict

Wanglei is situated in Jonglei State and is one of the most conflict-prone and least developed states in the new republic (International Crisis Group 2009). It is about 85 kilometres from the state capital Bor and 250 kilometres north-east of the national capital of Juba. The Wanglei conflict is between two clans of the Dinka tribe, the Ayual and Dachuek. Along with a third clan not involved in the conflict, the Awulian, the three clans have lived largely in peaceful co-existence for generations. The clans share the same history, language and culture, and under normal circumstances have collaborative relationships.

Since the first recalled disagreement in the 1970s, the relationship between the Ayual and Dachuek has gradually soured, ostensibly due to disagreement over who is the rightful owner of Wanglei village. Both clans have historical claims to the area. The conflict culminated in fighting with automatic weapons that led to the death of 22 people in 2010. The timeline in Figure 1 depicts interviewees' combined recollections of how the conflict unfolded in relation to the oscillation of violence during the civil war. As of August 2012 this dispute is still before the state court and tension remains high in the community.

Conflict as a dynamical system

The following sections describe the results of the Wanglei conflict assessment. The systemic approach to conflict analysis explored the complex relationships between actors, their goals, actions and feelings and the events that influenced the evolution of the conflict, thus revealing otherwise hidden patterns that sustained the conflict. According to our methodology, dynamical systems are described as:

A set of interconnected elements that influence one another over time to promote the emergence of a global state (such as war or peace), which in turn provides common meaning for the elements. In social conflict, the elements are specific thoughts, actions and feelings relevant to the conflict, and the emergent higher-order state is a generalised negative (or positive) view of the relationship and a readiness for like action (Coleman et al. 2011:39).

The conflict drivers identified by the Wanglei conflict assessment illustrate the complex interdependence between elements characteristic of dynamical systems. Early responders to the violent incident in March 2011, where 22 people were killed, reported that the conflict arose from a dispute over the ownership of the land where a church was being renovated (Lutheran World Federation 2011). The assessment confirmed the close association between land disputes and violence during the conflict's history, yet also underscored the importance of additional factors at various stages during its lifecycle. These included competition for other natural resources such as watering holes and grazing land, competition for church congregants between the Episcopal and Anglican churches, and competition over positions of political power in the social hierarchy.

That these factors induced conflict can in part be explained by the network analysis, which illustrates that the clans share competing goals with respect to community life. Participants indicated that clans desire to have a large population (large families), to increase their ownership of land and other natural resources (cattle, grazing land, watering holes) and

Second Sudanese Civil War **South Sudanese** Independence **Comprehensive Peace Agreement** North-South Conflict 1972-1982 1983-2005 2005-2010 2011 Peace War Peace Wanglei Conflict 2009 2010 1970s 10. The Dachuek convert a 2. Dachuek minister 1. Conflict over ownership of 5. Court decides in favor of the 7. New 11. Case 3. Severe Wanglei erupts surveys the land as drought. Dacheuk on the water reservoirs, commissioner formerly Episcopal church elevated to while deciding that Wanglei center appointed to Anglican without Ayual Tension ignites state court consent. Conflict result in 22 statebuilding over ownership belongs to the government. Dachuek 8. Wanglei case dead, thousands displaced processes. Ayual get of water celebrate by singing songs. Are reopened reservoirs by the suspicious confronted by the Ayual who lose Nile where the clan's cattle 9. Court finds Ayual graze to be rightful 4. A customary arbitration court is owner of Wanglei convened to settle the matter of the 6. Competition over congregants erupts between Anglican and water reserviors. The issue of Wanglei Episcopal church. Congregants are largely drawn from the Dachuek village is to be determined in the and Avual clans respectively

Figure 1: Timeline: North-South conflict and the Wanglei conflict

to attain positions of tribal, religious or political authority in the community. These goals are consistent with anthropological accounts of Dinka life (Deng 1984). According to social interdependence theory (Deutsch 1949a, 1949b and 1973 and Johnson and Johnson 1989) conflict often arises in groups (i.e. the Wanglei community) when group members have conflicting goals insofar as the success of some in attainting the goal negatively affects the possibility of others attaining it, a phenomenon which is also known as contrient interdependence. This theoretical explanation is consistent with Autessere's assertion that local violence in post-civil war contexts occurs due to 'micro-level rivalries over land, resources and power' (Autesserre 2010:129), as well as the explanations most often put forward for post-CPA local violence in South Sudan.16

Yet, as Coleman et al. (2011:1) write, 'The proximate causes of intractable conflict (e.g. competition over scarce resources, ideological differences, protection of personal or group identity) mask a more fundamental tendency for the parties to the conflict to become locked into a destructive pattern of thought and action that resists change.' What was the underlying pattern in Wanglei? Given the ubiquity of these proximate causes virtually across the entirety of South Sudan, the identification of these conflict drivers was insufficient in itself to explain why conflict emerged

in this community and not others. Why in Wanglei in particular, and why now?

By revealing how and when distinct conflict drivers had emerged in Wanglei over time, the chronology of events conducted with each set of stakeholders went some way to answering this question. This methodology, summarised in the feedback loop diagram in Figure 2, illustrates how a tradition of competition between the clans, sometimes associated with non-deadly violence, increased in intensity as additional factors became embroiled in the clans' feud.¹⁷ After the first deadly incident in 2009, feelings of grievance further reinforced enmity between the two clans. This was compounded by feelings of injustice related to decisions of the customary arbitration court, a process that had been initiated to end the conflict but which actually appeared to be making it worse.¹⁸ The emergence of novel conflict drivers following episodes of violent confrontation had a reinforcing effect, creating a positive feedback loop, a 'non-linear dynamic' characteristic of dynamical systems (Coleman et al. 2011). This was summed up in the words of a respondent who stated that 'after the first deaths there was always going to be more killing' (Ayual interview, 7 August 2011). This phenomenon can be explained according to dynamical systems theory as an emerging negative 'attractor', whereby events, thoughts and emotions are

¹⁷ See Table 2

¹⁸ See section on Modern legal process: More harm than good?

Table 2: Causal factors implicated in the Wanglei conflict

Conflict driver	First recorded incident
Disputed ownership of Wanglei town	1970s
Competition for political power and grievance due to perceived political marginalisation	2006
Dispute over ownership of other natural resources	2009
Dissatisfaction with the judicial process	2009
Grievances associated with previous loss of life	2009
Competition between the Anglican and Episcopalian churches for congregants	2010

increasingly associated with (and reinforce) emerging dynamics cantered on enmity between the clans (Coleman et al. 2007, 2011).¹⁹

Rather than having individual cause and effect relationships with the conflict, the inclusion of additional separate but related disputes into the meta-conflict over time compounded the animosity felt by the clans. This additive effect was apparent when talking to clan members in 2011. The conflict was not merely about land, religion, political power, grievance or injustice; it was about all of these things added together. Each time a dispute arose, it was not viewed in isolation but, instead, through a prism of animosity and grievance in relation to past experiences. Thus, even innocuous, small-scale disputes between clan members could tap into this reservoir of grievance, engulfing the entire clan in feelings of enmity and prompting actions that were disproportionate to the scale of the dispute if it was viewed in isolation.

The conflict drivers were also contingent upon conditions of the broader social and natural environment. While the earliest traces of dispute over land in Wanglei can be found in the 1970s, it was not 'activated' until 2005, and did not result in deadly violence until 2009. The second Sudanese civil war (1983-2005) and its aftermath can largely explain the conflict's dormancy and later re-ignition. This war displaced more than half of the inhabitants of the area and rendered the dispute over the ownership of Wanglei town relatively insignificant. Once the civil war ended in 2005 the process of state-building could begin, which led to the land being surveyed in 2006, which was 'when the inner conflict started' (Ayual interview, 7 August 2011). Thus, a conflict driver (the dispute over Wanglei land) was activated by a broader social process (state-building) and, paradoxically, peace

The complexity, interdependency and non-linearity between factors that influence the Wanglei conflict confirm that it can be understood as a dynamical system. But as Coleman (2006:338) asserts, a systemic approach to conflict assessment 'not only captures the multiple sources and complex temporal dynamics of such systems, but it can help identify central nodes and patterns that are unrecognisable by other means.' The identification of such a pattern was the key finding of this study. This pattern is found in the relationship between the clan's competition over tangible resources and a powerful emotive motivation – the pervasive desire of each of the clans to maximise group pride.

Group pride and conflict in Wanglei

The Dinka is a socially conscious yet individualistic person, gentle and humorous, but sensitive, temperamental, and prone to violent reaction when his sense of pride and dignity is hurt (Deng 1984:6).

From an ethic, psychological perspective, pride is defined as 'a pleasant, sometimes exhilarating, emotion that results from a positive self-evaluation' (Lewis et al. 2010). The notion that maximising pride was an overarching motivation for inter-clan conflict first came to light during the network analysis, when one participant stated 'really, it's all about pride' when describing the clans' history of competition over material resources (Dachuek interview 27 July 2011). Subsequent interviews with both clans revealed that the goals hitherto associated with community liferaising large families and acquiring ownership of resources, additional congregants and political powercan also be understood as collective actions aimed at achieving the clans' primary goal - maximising group pride (Ayual interview 7 August 2011 and Dachuek interview 27 July 2011). The primacy of this goal matches anthropological accounts of Dinka life (Deng 1984). The chronology of events confirmed these

created the necessary conditions for violence. Similarly, the drought of 2009 activated the dispute over natural resources by limiting the water resources available to the Wanglei community, instigating competition between the clans.

¹⁹ In dynamical systems theory terminology, negative attractors are destructive, self-organising and selfperpetuating patterns of thinking, feeling and acting. Attractors can be manifest or latent, positive or negative. Strong negative attractors are associated with intractable conflicts (Coleman et al. 2007, 2011).

The combined land and conflict case is transferred to the high court 3 day peace conference Dachuek do not participa (April 2011) Peace committees established Reinforcing Feedback Loop Inhibiting Feedback Loop Youth association, Commissioner, and Awulian clan engage in mediation (April 2011) Fighting begins during church renovation. 23 killed and 19,000 displaced (3 March 2011) Dachuek decide to rennovate mixed church in Wanglei (2011) Commissioner deploys SPLM to stop the fighting (March 2011) Many locals convert from Episcopal to Anglican denomination Dachuek's appeal to the high court is dismissed (2010) Ayual appeal land decision Second arbitration court awards land to Ayual (2010) No compensation awarded Wounded pride Dachuek celebrate, Ayual attack with sticks, 3 Ayual killed (11 March 2010) New (Ayual) county commissioner appointed (June 2010) Arbitration court awards water resources to Dachuek and Wanglei land to government (9 March 2010) UNMIS and county commissioner conduct a security assessment (March 2010) Dachuek and Ayual wrestling matches lead to inter-clan fighting in 2002 and 2004 Dachuek and Ayual dans dispute ownership of Wanglei Dachuek and Ayual dispute ownership of water resources during drought year (2010) Perceived insecurity Government sends a
Dachuek minister to survey
Wanglei land for a Garang
memorial Awulian, Dachuek and Ayual form the new administrative payam of Nyuak (1973) Wanglei made the administrative centre of the new payam (1973) Veak rule of law institutions External threat from other tribes Second Sudanese civil war ends (2005) Second Sudanese civil war breaks out (1983) Increased concentration of light weapons First Sudanese civil ends (1972)

Figure 2: Loop mapping of Wanglei's conflict history

findings, illustrating how events in relation to each of the conflict drivers were also influenced by each clan's desire to maximise pride or restore wounded pride.²⁰

The finding that pride motivated group behaviour was unexpected, but it is not novel academically. Our findings are consistent with theories of group emotions, which posit that pride plays a strong role in motivating and regulating intra-group and inter-group behaviour (Mackie et al. 2004; Smith et al. 2007). Maximising collective pride was linked to the desire to achieve public recognition and social dominance and often resulted in violent behaviour between clans, a profile that matches the definition of hubristic pride (Tangney 1999 and Carver et al. 2010).

The issue of land ownership is illustrative. Land ownership is a source of great pride for the clans, as evidenced in the statement that 'people want to know that the land is owned by them, clans want towns named after them [and] they want their town to be the payam²¹ centre' (Ayual interview 7 August 2011). Yet the land itself is not a scarce resource – it is abundant in and around Wanglei. But importantly, there can only be one owner of the land and as such, the pride that accrues from land ownership is limited, a notion that is evident in the statement 'we don't mind sharing our land with them, we just want them to know that it's ours' (Dachuek interview 27 July 2011). The point is not that the clans were not fighting over the land, but rather that they were competing for the pride that comes from owning the land, in addition to any material value of the land in itself.

The underlying influence of pride is also evident in the competition for political power. The fact that the Ayual held the three top positions in the communitythe Paramount Chief (Wanglei tribal leader), Payam Administrator (Wanglei government representative) and County Commissioner (county level government representative) - left the Dachuek feeling aggrieved that they were being marginalised from power. Indeed, being marginalised from these positions leaves one clan at a material disadvantage relative to the other. Yet, when it is considered that, like land, occupying positions of power provides an important source of collective pride for the clan (Dachuek interview 27 July 2011, Ayual interview 7 August 2011 and Deng 1984), one can argue that what were desired were not merely the tangible benefits of power, but also potential sources of group pride.

The revelation that tangible assets are an important source of pride forces a reconceptualisation of why people are fighting in this community. It is not to say that the community's competition for these assets is not important in fostering conflict, but rather that a proportion of the tendency for this competition to induce conflict is because of its potential to alter the level of pride felt by each clan. It is as if group pride was a currency the clans were trading in, with each competition for tangible assets an opportunity to improve each clan's side of the ledger.

Thus, the causality of the conflict has both material and emotional dimensions. Through systemic analysis we can see how each of the material conflict drivers

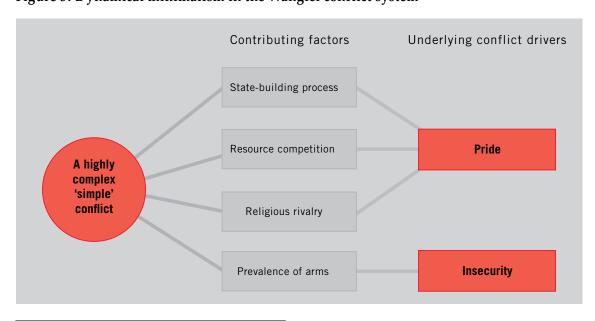


Figure 3: Dynamical minimalism in the Wanglei conflict system

²⁰ See Figure 2

²¹ A payam is the second smallest administrative unit of the Government of South Sudan after a boma (village).

is connected to the emotional dimension and, as we will see in the next section, how the emotional dimension regulates community behaviour with respect to conflict. This pattern by which the behaviour of a highly complex system can be explained using a minimal set of relatively influential variables is known as dynamical minimalism (Nowak 2004). This pattern has likely existed in this community for many generations, as it has in other Dinka communities, according to participants. However, in peacetime, combined with high rates of gun ownership and weak security institutions, the pattern has become very dangerous.

Violence in response to wounded pride

The interaction of the elements in Figure 2 helps us understand why violence occurs. To understand when violence occurs, it is necessary to articulate the system's control parameters. In dynamical systems terminology, these are system variables that induce a whole-of-system change when their value fluctuates. Our analysis suggests that the level of pride experienced by each clan represents a control parameter whereby the behaviour of the system changes dramatically when the level of pride felt by one clan drops below a certain threshold. When the threshold is passed the levee can break, inducing a new system 'state' with entirely different behavioural tendencies that markedly increase the risk of violence.

'Normal state'

Under normal conditions, the Dachuek and Ayual primarily seek to maximise pride by accruing social, economic and political wealth. The desire to maximise pride need not induce conflict under 'normal state' conditions, however, as most behaviours aimed at maximising pride do not significantly limit the ability of others to achieve the same goal. In most cases in Wanglei, the opportunity to grow a larger family, acquire more cattle or access natural resources need not come at the expense of others. Contrary to popular misconceptions, in this region of South Sudan, the basic necessities required to sustain people and livestock are not in short supply for most of the year. Drought periods are a notable exception and can induce competition and violence as previously discussed.

'At risk state'

In contrast, the chronology of events revealed that violence often ensued soon after incidents that significantly reduced one clan's collective pride, which occurs in zero-sum situations where maximising pride necessarily comes at the expense of the others. When this control parameter was altered, behavioural norms in the community changed and the risk

of violence increased markedly. The finding that wounded pride induced conflict was unexpected but not academically novel.²² Recent empirical studies by Williams and Denson (2012) also found that groups with high levels of pride are more likely to respond with aggression when faced with an out-group threat. As many participants noted during the study, conflict occurs when pride is wounded because violent confrontation is widely seen as the most effective behaviour to restore pride 'taken' by another group.

The 'at risk state' of the system is evident at various times in the community's history. Following the Ayual's defeat in the 2009 court case to decide ownership of local water resources, Dachuek participants claimed that 'the Ayual were humiliated by being defeated by the minority. There was no way to win back pride except to fight' (Dachuek interview 1 August 2011). Unfortunately, whereas in the past a show of force using traditional weapons would have been sufficient, the high presence of firearms in communities like Wanglei means that the death toll from violent confrontation is likely to be much higher.

The fact that the violence took place in response to singing is significant. Songs are ritually sung by Dinka to praise victory and criticise defeat in traditional wrestling matches, warfare and other forms of confrontation. Like rumour and other forms of communication, songs modulate the experience of pride felt by individuals and groups and transmit the reputations associated with them throughout the social network. Thus, the singing of a 'victory song' was a highly provocative act that wounded the clan's pride, shifting the system to an 'at risk state' and calling for a violent response. The singing of such songs has since been banned in the county where Wanglei is located.

The loss of three Ayual lives induced humiliation, thus reinforcing the community's 'at risk state'. Following the deaths in 2010, the community was in imminent danger of violent reprisal, which is evident in the Ayual statement that 'after the first deaths there was always going to be more killing' (Ayual interview 7 August 2011). Further, the Ayual refused to accept compensation for the deaths, which otherwise might have gone some way to restoring the sense of balance between the clans (Dachuek interview 27 July 2011 and Ayual interview 7 August 2011). Writing about the tendency for violent retaliation in Dinka society, Francis Deng notes that 'Even though the dead are compensated for with cattle, vengeance in future war with the enemy is the most honourable remedy. The cycle of war is thus renewed' (Deng 1984:77).

²² See for example Gilligan (1996) and Walker and Bright (2009).

Thus, the eruption of more conflict that claimed a further 22 lives in March 2012 might have been predicted.

The relationship between pride and conflict has implications for how peacebuilding is approached, suggesting that it may be insufficient to see such conflicts simply as 'land', 'resource' or 'political' disputes, without consideration of underlying affective dynamics. When conflicts are seen as a system of interconnected elements, addressing only the land or political issues, for example, ignores the possibility that violence might be triggered by other events that wound pride. Furthermore, interventions that seek to address the conflict might do more harm than good if they are not cognisant of the wounded pride-conflict relationship. With this in mind, the following section considers why local and external attempts to resolve the conflict were ineffective or made the conflict worse.

The failure of traditional conflict resolution mechanisms and state institutions

A range of traditional and faith-based conflict resolution mechanisms provide means of conflict resolution among South Sudan's various ethnic groups. This section illustrates how in the past these mechanisms have served to minimise conflict in Wanglei (and South Sudan more broadly), in part by dealing with proximate causes of conflict and in part by mitigating the risk associated with wounded pride. It then describes how these mechanisms have become ineffective in this community, partly because tribal authority has been undermined and partly because the mechanisms have not been able to contain the scale of violence that the community has experienced. The section then concludes by illustrating how emerging state institutions (particularly the judicial system) have also been ineffective and have actually served to exacerbate the conflict. As a result, the system has remained in an 'at risk state' where violence is likely to occur.

The traditional conflict mechanisms that function in this region of South Sudan can be distinguished from the emerging justice system of the state insofar as they work in harmony with the local social hierarchy, cultural norms and traditional practices. Traditional courts are comprised of tribal elders who arbitrate disputes based on customary law at the village or county level, or when convened to arbitrate extraordinary disputes. Customary laws are seldom codified and are flexible enough to allow elders the possibility of adjusting rulings in order to accommodate particular circumstances. One feature of this relatively flexible approach is that it provides elders with more space to promote reconciliation between parties to a dispute, rather than simply determining who is wrong

and who is right. The Dinka word for trial is 'luk', which also means 'to persuade' and as Francis Deng explains, 'Litigation among the Dinka is designed more to reconcile the adversaries than it is to find a right or wrong side' (Deng 1984:113). This approach has important implications for conflict management insofar as the potential of creating winners and losers is limited and, as such, the possibility of a court decision wounding pride is minimised. As discussed in the previous section, this is significant as it reduces the need for groups to resort to violence to restore wounded pride.

Traditional conflict resolution mechanisms also mitigate the risk associated with wounded pride by awarding compensation to victims' families. For example, when someone is murdered the killer's family must pay the victim's family 50 cattle for a man and 30 for a woman. Cattle are both a source of wealth and pride and the compensation in cattle therefore serves to offset both the economic cost of losing a family member, as well as part of the grievance that relates to the feeling of wounded pride experienced by the victim's family. As such, it appears that traditional conflict resolution mechanisms function at least in part in order to redress pride imbalances. Thus, when the system enters an 'at risk state', traditional conflict resolution mechanisms reduce the 'pride deficit' experienced by an individual or a group, thereby helping return the system to a 'normal state' and reducing the likelihood of violent confrontation. In this manner, traditional conflict resolution mechanisms provide an alternative to violence as a means of restoring pride equilibrium between two competing groups.

The collapse of traditional and faith-based conflict resolution mechanisms in Wanglei

During the field research in Wanglei, local communitybased traditional conflict resolution mechanisms were no longer functioning. The conflict had soured relationships in the community to such an extent that the Dachuek and Ayual elders who held positions on the Wanglei traditional court refused to cooperate and as such the court could not convene to adjudicate community disputes. Thus, the traditional court was not able to promote reconciliation between the Dachuek and Ayual clans. In reality, the traditional court may have lacked the authority to address a conflict of this magnitude anyway. As some participants pointed out during the study, compensation would be insufficient to make up for the lives that were lost during the first deadly incident in 2010 - it was simply too great a blow to the Ayual's pride for compensation to address (Ayual interview 7 July 2011). In any case, the dissolution of the local court likely impeded the positive transformation of the conflict because the community no longer had a mechanism to address new disputes. Thus, without

a means of resolving disputes in the community as they arose, the potential that these might reinforce grievances or trigger violence associated with the broader conflict increased.

The ability of traditional conflict resolution mechanisms to resolve the Wanglei dispute has also been undermined by the emergence of a modern judicial system in South Sudan. Since 2009, two temporary arbitration courts comprised of tribal elders from other communities have been convened to settle the dispute based on customary law. But with the establishment of a formal judicial system in South Sudan, comprised of national courts in Juba and high courts in the state capitals, the decisions of traditional courts could be overruled by appeal to the formal court system. This has negatively impacted the perceived authority of customary law in Wanglei, a trend which has been compounded by the heavy influx of returnees, most of whom have lived abroad and do not respect tribal institutions to the same extent as those who remained in their homeland during the civil war (Ayual interview 7 August 2011). Lack of respect for the decisions of traditional courts contributed to each clan's decision to appeal verdicts that were not in their favour, inspired as they were by the knowledge that an alternative verdict might be found in the high court. These delays allowed the system to remain in an 'at risk state' for longer, ultimately increasing the likelihood that violent means would be employed to address the pride imbalance. This sentiment is clear in the words of one participant who noted that 'without a resolution [to the dispute] it was automatically clear that there would be an escalation of killing' (Ayual interview 7 August 2011).

Christian churches provide a further means of resolving conflict in communities such as Wanglei and have been used successfully to settle small- and large-scale inter-group conflict in South Sudan since the end of the civil war.²³ This means of peaceful dispute resolution was not available in this region of Jonglei state, however, precisely because the Episcopal and Anglican denominations of the Christian Church were involved in a sometimes bitter competition for congregants. Nowhere was this conflict felt more acutely than in Wanglei, where the competition between the churches ultimately sparked the violent confrontation of March 2011. Because of the dispute between the denominations, the Anglican Church had not joined the pan-Christian movement known as the Twic East United Churches, which

had travelled around the county during the January 2011 independence referendum promoting solidarity and non-violence (Ayual interview 7 August 2011). But importantly for the Wanglei dispute, this also meant that the community could not benefit from intervention by an authoritative and legitimate pan-Christian intermediary that transcends clan boundaries and could otherwise promote reconciliation between the clans. In sum, neither traditional nor faith-based conflict resolution mechanisms could resolve the Wanglei dispute because the actors that these means depend on were themselves embroiled in the conflict. They were attracted to the conflict. As a result the community remained in an 'at risk state' for longer, thus increasing the possibility that violence would occur.

Modern legal process: More harm than good?

Since 2009 a series of court processes have been tasked with resolving the dispute. Not only has this process failed to provide resolution, but it also served to increase the risk of violence in the community by feeding the deeper conflict over pride. It did this firstly by bringing questions of the land into the most public of forums, coupling the disagreement between the two clans to the notion of ownership. More importantly, instead of employing a traditional approach aimed at reconciliation, the court favoured a modern judicial and adversarial approach. This can be dangerous in this context because winning or losing a court case leads to a pride transaction between the clans and leads to exactly the type of event that historically has caused violence in this context. Nowhere was this unintended outcome more evident than in the violence that followed the first court decision. Rather than resolving the Wanglei conflict, the approach currently favoured by the court actually serves to reinforce the conditions associated with the 'at risk state'. One lesson that might be drawn from this experience is that dispute resolution processes in this context should be 'pride-sensitive', by favouring reconciliation rather than zero-sum outcomes, allowing opportunities for face saving and seeking to reduce pride imbalances by such means as compensation. In Wanglei, the tragedy is that the traditional institutions that actually do embody these principles and process no longer have the authority to actually persuade and reconcile the parties concerned. While both clans have vowed to respect the decision and refrain from violence, it might still occur if the court continues to favour an adversarial approach, if no other means are found to address the pride imbalance between the clans, and/or the army presence in Wanglei is discontinued.

²³ See for example the work of the New Sudan Council of Churches in South Sudan (Murphy 2006) or the Sudan Council of Churches, which has also been involved in the Jonglei inter-ethnic peace process in 2011 and 2012.

Conclusion

The holistic, systemic conflict assessment methodology used in this study is a work in progress and part of an ongoing effort to develop dynamical systems applications for peacebuilding. Its use in Wanglei revealed an emotional dimension to the conflict that, combined with material factors, strongly influences the likelihood of violence in this community. Pride is a powerful regulator of conflict-related behaviour in Wanglei and while further research is required to assess whether it is implicated in other conflicts in Jonglei or South Sudan, in this context, interventions that ignore the emotional dimension are likely to be ineffective or harmful. With respect to pride-sensitivity, South Sudan's emerging institutions could learn much from their traditional counterparts, yet neither currently has the right blend of authority, enforcement capability or sensitivity to cultural norms to effectively address local violence.

Further research would be valuable to verify the findings of the current study, particularly by objectively measuring pride over the course of a similar protracted inter-group conflict. It would also be interesting to test whether it is wounded pride *per se* or discrepancy in pride between groups that induces conflict. Furthermore, the use of a systemic approach to making sense of Jonglei's broader, more complex, inter-ethnic conflicts would be highly valuable at a time when this violence continues to bring immeasurable suffering to the people of this region.

References

AFP. 2011. Cattle-raid violence threatens to engulf S. Sudan: UN. *AFP*. Available from: "[Accessed 05 October 2012].">AFP. 2011. Cattle-raid violence threatens to engulf S. Sudan: UN. AFP. Available from: "[Accessed 05 October 2012].">https://www.google.com/hostednews/afp/articleACQFCM9BCAQK9Lnm-eGraC_ROFemWcYeg?docId=CNG.a74b73b5ae6d1ed2253441687f7eeda4a1>"[Accessed 05 October 2012]."]

Autesserre, S. 2010. The trouble with the Congo: Local violence and the failure of international peacebuilding. Cambridge, Cambridge Studies in International Relations.

Burns, D. 2007. Systemic action research: A strategy for whole system change. Bristol, University of Bristol: The Policy Press.

Carver, C.S., Scheier, M.F. and Segerstrom, S.C. 2010. Optimism. *Clinical Psychology Review*, 30, pp. 879–889.

Coleman, P. T. 2006. Conflict, complexity, and change: A meta-framework for addressing protracted, intractable conflicts – III. *Peace and Conflict: Journal of Peace Psychology*, 12(4), pp. 325–348.

Coleman, P.T. 2011. The five percent: Finding solutions to seemingly impossible conflicts. New York, Public Affairs.

Coleman, P.T., Vallacher, R., Nowak, A. and Bui-Wrzosinska, L. 2007. Intractable conflict as an attractor: Presenting a dynamical model of conflict, escalation, and intractability. *American Behavioral Scientist*, 50, pp. 145–147.

Coleman, P.T., Vallacher, R., Nowak, A. and Bui-Wrzosinska, L. 2011. Navigating the landscape of conflict: Applications of dynamical systems theory to protracted social conflict. In: Ropers, N. ed. *Systemic thinking and conflict transformation*. Berlin, Berghof Foundation for Peace Support. pp. 39–56

Deng, F.M. 1984. The Dinka of the Sudan. Illinois, Waveland Press.

Deutsch, M. 1949a. A theory of co-cooperation and competition. *Human Relations*, 2, pp. 129–152.

Deutsch, M. 1949b. An experimental study of the effects of co-operation and competition upon group process. *Human Relations*, 2, pp. 199–231.

Human Security Baseline Assessment for Sudan and South Sudan. 2009. Human Security Baseline Assessment for Sudan and South Sudan Project. Available from: http://www.smallarmssurveysudan.org/facts-figures-arms-holdings.php [Accessed 28 September 2011].

International Crisis Group. 2009. Jonglei's tribal conflicts: Countering insecurity in South Sudan. *Africa Report No. 154*, 23 December 2009. Juba, Nairobi and Brussels, International Crisis Group.

Johnson D. W. and Johnson, R. 1989. *Cooperation and competition: Theory and research*. Minnesota, Interaction Book Company

Jok, J.M. 2011. *Diversity, unity and nation building in South Sudan*. Washington, D.C., United States Institute of Peace.

Lewis, M., Takai-Kawakami, K., Kawakami, K. and Sullivan, M.W. 2010. Cultural differences in emotional responses to success and failure. *International Journal of Behavioural Development*, 34 (1), pp. 53–61.

Lutheran World Federation. 2011. Wanglei incident rapid assessment report. Juba, Lutheran World Federation.

Körppen, D. and Schmelzle, B. 2008. A systemic approach to conflict transformation: Exploring strengths and limitations. In: Körppen, D., and Schmelzle, B. and Wils, O. eds. *Berghof handbook for conflict transformation, dialogue series*, (6). Berlin, Berghof Foundation for Peace Support. pp. 5–11.

Mackie, D.M., Silver, L. and Smith, E.R. 2004. Emotion as an intergroup phenomenon. In: Leach, C.W. and Tiedens, L.A. eds. *The social life of emotions*. New York, Cambridge University Press. pp. 227–245.

McEvoy, C. and LeBrun, E. 2010. *Uncertain future: Armed violence in southern Sudan*. Small Arms Survey. Geneva, Graduate Institute of International and Development Studies.

Murphy, P. 2006. The delicate practice of supporting grassroots peacebuilding in southern Sudan. London, Conciliation
Resources

Nowak, A. 2004. Dynamical minimalism: Why less is more in psychology. *Personal Social Psychology Review*, 8 (2), pp. 183–192.

Ricigliano, R. 2011. Making peace last: Toolbox for sustainable peacebuilding. Oxfordshire, Paradigm Publishers.

Schomeru, M. and Allen, T. 2010. Southern Sudan at odds with itself. *London School of Economics*. Available from http://www2.lse.ac.uk/businessAndConsultancy/LSEConsulting/pdf/southernSudan.pdf [Accessed 28 September 2011].

Smith, E.R., Seger, C. and Mackie, D.M. 2007. Can emotions be truly group-level? Evidence regarding four conceptual criteria. *Journal of Personality and Social Psychology*, 93, pp. 431–446.

Tangney, J.P. 1999. The self-conscious emotions: Shame, guilt, embarrassment, and pride. New York, Guilford Press.

United Nations. 2005. *UNMIS report to the Secretary-General: Progress report on the Sudan, September–December* 2005 [S/2005/821]. New York, United Nations.

United Nations. 2006. *UNMIS report to the Secretary-General: Progress report on CPA implementation*. [S/2006/728]. New York, United Nations.

United Nations. 2007. UNMIS report to the Secretary-General: Regular report on the Sudan covering the period from April through August 2007 [S/2007/500]. New York, United Nations.

United Nations. 2009a. UNMIS report to the Secretary-General: Regular report on the situation in the country and on UNMIS covering the period from October 2008 through January 2009 [S/2009/61]. New York, United Nations.

United Nations. 2009b. *Report of the Secretary-General on UNMIS* [S/2009/357]. New York, United Nations.

United Nations. 2009c. Report of the Secretary-General on UNMIS covering the period from 14 July through 15 October 2009 [S/2009/545]. New York, United Nations.

United Nations. 2010a. *Report of the Secretary-General on the Sudan* [S/2010/31]. New York, United Nations.

United Nations. 2010b. Report of the Secretary-General on the United Nations Mission in the Sudan [S/2010/168]. New York, United Nations.

United Nations. 2011. Report of the Secretary-General on South Sudan [S/2011/678]. New York, United Nations.

United States Institute of Peace. 2011. *Diversity, unity and nation building in South Sudan*. New York, United Nations.

United States Institute of Peace. 2012. Empowering local peacebuilders: Strategies for effective engagement of local actors in peace operations. New York, United Nations.

Williams, L. A. and Denson, T. F. 2012. *The impact of group pride on aggression*. Paper presented at the Society for Personality and Social Psychology Annual Convention, Emotion Preconference, 26–28 February, in San Diego, United Sates of America.

About the Authors Stephen Gray is a Fulbright Scholar and Associate of Columbia University's Advanced Consortium on Cooperation, Conflict, and Complexity (AC4). Gray is a trained mediator and has written extensively on conflict, both academically and as a journalist. His research focus is on complex systems applications in conflict analysis, transformation and peacebuilding.

Josefine Roos is Associate of Columbia University's Advanced Consortium on Cooperation, Conflict, and Complexity (AC4). She has carried out extensive research on applications of dynamical systems theory in Myanmar, South Sudan and the United States of America. Roos is a social development consultant, peacebuilder and trained mediator.

ACCORD The African Centre for the Constructive Resolution of Disputes (ACCORD) is a civil society organisation working throughout Africa to bring creative African solutions to the challenges posed by conflict on the continent. ACCORD's primary aim is to influence political developments by bringing conflict resolution, dialogue and institutional development to the forefront as an alternative to armed violence and protracted conflict. ACCORD specialises in conflict management, conflict analysis and conflict prevention. We intervene in conflicts through mediation, negotiation, training, research and conflict analysis. ACCORD Conference Papers are outcomes of conference presentations by both academics and practitioners and seek to stimulate informed and relevant discussions in the field of peace and security. They are produced by ACCORD's Knowledge Production Department (KPD). The role of KPD is to establish ACCORD as a positive and constructive learning organisation that enhances theory, policy and practice in the field of conflict management. The department's activities and outputs are aimed at promoting effective and sustainable peacemaking, peacekeeping and peacebuilding in Africa and beyond. All ACCORD publications, including research reports, the Conflict Trends magazine and the African Journal on Conflict Resolution can be downloaded at no charge from our website.

Subscribe to receive email alerts or copies of any ACCORD publications by sending an email to publications@accord.org.za

Copyright © 2012 ACCORD. Short extracts from this publication may be reproduced unaltered without authorisation on condition that the source is indicated. For rights of reproduction or translation, application should be made to ACCORD. Views expressed in this publication are the responsibility of the individual author(s) and not of ACCORD.



ACCORD, Private Bag X018 Umhlanga Rocks 4320 South Africa, Tel: +27 (0)31 502 3908, Fax: +27 (0)31 502 4160, Email: info@accord.org.za
Website: www.accord.org.za



Photos in order of appearance: UN Photo/Paul Banks, UN Photo/Tim McKulka, UN Photo/Fred Noy, UN Photo/Tim McKulka, UN Photo/Isaac Billy