



The Adaptive Cycle as a Lens for Service-Learning: Community Engagement Partnerships

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This paper deploys the adaptive cycle as a construct to understand the dynamics of community engagement and partnership building during an international service-learning project. A multi-disciplinary team of USA-based university students collaborated with a local community in Zambia to build two ventilated improved pit (VIP) latrines. Post-field project reflection challenged the “product-first” view commonly held in service learning projects. Time was a central point of post-field reflection. Through critical scrutiny, the student team came to recognize that contextually sensitive relationship building had been essential in enabling community ownership of the project. The construct of the adaptive cycle provided a crucial analytical tool for tracing the process through which partners from very different backgrounds achieved a sense of common purpose and opened the way for an understanding of community engagement as weaving a thread through the complex dynamics of partnership. The adaptive cycle may be useful as a preparation and implementation framework for other service-learning projects emanating from institutions of higher education.

Service-learning and community engagement (SLCE) continue to garner attention in higher education. Reasons for this include opportunities to enrich the student experience (Intolubbe-Chmil et al., 2012), to put knowledge into action (O’Meara et al., 2009; Prins & Webster, 2010), and to showcase and enrich university-community partnerships (Crabtree, 2008; Sandy & Holland, 2006). Service-learning and community engagement also attract multi-perspective analyses in higher education research. From the viewpoint of participating universities, scholars have examined service-learning as a distinctive pedagogical approach and as a way of

complementing the intellectual and technical skills developed through the formal curriculum (Bringle & Hatcher, 2011; Clayton et al., 2010; Fish, 2003; Swords & Kiely, 2010). Student perceptions of the processes and outcomes of service-learning have been analyzed both by the students themselves and by practitioner, faculty and community partners (Allen et al., 2014; Harshfield, et al. 2009; Heil et al., 2010; Link et al., 2011; Prins & Webster, 2010). Although still a minor component of the published literature, the perspectives of community partners are beginning to emerge in scholarly publications as integral to the process of service-learning (d'Arlach et al., 2009; Clayton et al., 2010; Kiely, 2007; Sandy & Holland, 2006). This recognition has shifted the SLCE focus from service or product delivery to the process of developing partnerships characterized by equity, closeness and integrity (Bringle et al., 2009; Clayton et al., 2010). Despite good intentions, uncritical or unacknowledged assumptions about the nature of service-learning relationships put universities at risk of treating their community "partners" as commodities, a risk that is perhaps greatest in international service-learning projects in the global South (Erasmus, 2011; Longo & Saltmarsh, 2011).

Conceptual work by Enos and Morton (2003), Crabtree (2008), Bringle et al. (2009), and Clayton et al. (2010), has done much to sharpen the theory and practice of service-learning relationships. They distinguish three main relationship types and related approaches to service-learning: exploitative, transactional and transformational. *Exploitative* relationships have little input from, or real benefit for, the community. *Transactional* relationships involve exchange benefits (for example, products or service for a fee), but there is no expectation of long-term engagement or change. By contrast, *transformational* approaches focus "on the transformation of a relationship between two parties into a joint creation of work and knowledge" (Bushouse, 2005, p. 33), where a central goal of the engagement is to develop a new mindset regarding agency, respect for knowledge systems and local expertise through the incorporation of diversity into the co-construction of knowledge. This asset-based approach looks *towards* the community for solutions rather than *at* the community for problems; capacity recognition and enhancement are key characteristics; dignity and equity are the basis for interactions. A transformational approach entails reciprocity, "is focused on engaging people not projects and aims to extend the engagement beyond the limits of a transactional approach" (Intolubbe-Chmil et al., 2012, p 13).

Transformational relationships are genuine partnerships, where partnership is defined by the characteristics of closeness, equity and integrity (Bringle and Hatcher, 2011; Clayton et al., 2010). Challenges to achieving this transformational experience while undertaking SLCE include the focus on product and related linear thinking over adherence to the process of engagement (Allen et al., 2014). Similarly, the question as to how to conduct SLCE in such a way as to not increase dependency of the community on outside actors is also raised (Bringle et al. 2009; Morton, 1995; Schmidt and Robby, 2002). These issues can challenge the ability to achieve transformational relationships and possibly erode the resilience of those very communities with whom students, faculty and universities seek to engage. In this case, the resilience of the community can be defined as its ability to maintain its identity and ability to function after

experiencing disturbances and or shocks to it (Folke, 2006; Walker et al., 2006; Walker and Salt, 2012).

As faculty and student educators and practitioners, we reflectively explore the question of what students and faculty have come to learn about the engagement encounter that we did not know/realize/took for granted prior to post-field reflection, especially as it relates to understanding resilience. More specifically, is there an appropriate, alternative and/or supplemental theoretical construct that can be used during the phases of preparation, implementation and post-field reflection to better equip faculty and students to undertake the desired transformational work of SLCE while meeting the aforementioned challenges? With the use of qualitative examinations of daily individual and group project journals as well as continued post-field communication with the community and project partners, we argue that the notion of an adaptive cycle, as conceptualized by Holling (2001), provides a representational construct for framing transformational approaches to the process of service-learning and community engagement. Through a reflective account of a student international service-learning experience in Simoonga, Zambia, the authors illustrate how the adaptive cycle with its four general phases of growth, conservation, release and reorganization, can serve as a guiding framework for student understanding of and preparing for the complex dynamics of campus-community engagement, albeit on a small scale.

This account begins with descriptions of contextual matters, and then continues with an explication of the adaptive cycle and its retrospective application to the case of a SLCE activity in Simoonga. Finally, it explores the dynamics of relationship building and provides insights into the mutual transformation of the student team and the community. The purpose of the paper is to share the insight gained and the model posited with the larger community with the hope that it might be further explored, challenged and adapted in a fashion appropriate for a particular context to improve the nature and impact of future service-learning and community engagement activities.

Context and Setting

Service-Learning in an International Context

Despite innovative successes of recent times, humankind still faces an “ingenuity gap” between the increasing seriousness of the world’s problems and the lagging supply of solutions (Westley et al., 2011, p. 764). International service-learning, at its best, may make a modest contribution towards addressing this challenge. Well-conceived community engagement, respectfully conducted, supports the face-to-face interaction with others that can “potentially increase cross-cultural understanding and challenge students to clarify and reconsider their role as a citizen” (Bringle and Hatcher, 2011, p. 11).

However, the inevitable heterogeneity in perspectives, agendas, cultures, resources, goals and power does little to facilitate joint problem solving, which may be why a transactional approach is more attractive to those designing service-learning experiences (Clayton et al., 2010). The realities of service-learning as a time-bound activity also present a serious impediment to relationship building. Yet without attention to the time required to develop and sustain partnerships between students and community, service-learning projects remain within the donor-recipient framework that typified much development work and volunteerism of the past. Within this framework, the roles of giver and recipient continually reinforce short-term solutions and continued dependencies that reflect the giver's imposed understanding of a community's needs rather than the expressed needs.

The shift to transformational approaches locates international service-learning within the context of "rights-based development" (Cornwall and Nyamu-Musembi, 2004). In international service-learning, as in development, the challenge is to align human rights principles with everyday practices and procedures. This "calls for existing resources to be shared more equally and for assisting ...marginalized people to assert their rights to those resources" (Cornwall and Nyamu-Musembi, 2004, p. 1417). In this light, proponents of service-learning are no longer viewed as "white knight[s]," entering a disadvantaged community to save, but simply as people "who must respect the situation" they are entering (Butin, 2010, p. 5). This respect requires sensitivity to the "cultural, political, and "anti-foundational" perspectives and not only the technical aspects that define what is possible in the field (Butin, 2010, p. 8). Enhanced communication plays a crucial role in reaching these touchstones and helps to take account of cultural, political, and anti-foundational dimensions of the process of service-learning and community engagement (Magoon et al., 2010).

If international service-learning is to aspire for more transformational relationships that seek to enhance and develop competencies for global citizenship, this ought to be carried out through a deeper inquiry into the dimension of reciprocity. Longo and Saltmarsh (2011) argue that "reciprocity is thought of in terms of relationships that are defined by mutually beneficial exchange" between students and communities (p. 76). Brown-Glazner et al. (2010) describe the iterative process of reciprocal empowerment as essentially a cycling between realizing the assets that both partners – students involved in service-learning and the community partner – possess and can contribute to collaboratively addressing an expressed need. This cyclical approach to developing transformative relationships may also move SLCE away from the typical "donor" – "recipient" model of engagement previously discussed. This paper explores what students and faculty have come to learn about this particular engagement encounter that was not known, realized, or taken for granted prior to post-field reflection, and to share this insight gained with the larger community with the hopes of improving partner outcomes in general.

The Simoonga Project: Background and Setting

The Simoonga project emerged from a relationship established by one of the initial team members who visited a Zambian village named Simoonga in 2006. This village of about 1,500

inhabitants is located 17 kilometers from Livingstone, a tourist town close to Victoria Falls, and three kilometers from the Zambezi River. The student maintained regular contact with the Simoonga community and formed Supporters of Simoonga (SOS), a student-based Contracted Independent Organization (CIO) at the University of Virginia, to raise funds to improve access to schooling in and around the village. Over the course of the engagement and dialogue of the SOS group with contacts in Simoonga, the Simoonga community expressed needs more pressing than access to schooling; chief among them, the need for improved sanitation. Consequently, a student team of five undergraduates and a graduate mentor was formed in an attempt to collaboratively address that need. The student project team quickly converged on a proposal to construct permanent ventilated improved pit latrines (VIPs) for the purposes of better communal sanitation. Seven months later and after much preparation inside and outside of the traditional classroom, the team travelled to Simoonga, where they were to spend a period of six weeks in the summer of 2010 implementing the proposed project.

In the months prior to departure, the constant and steady iterative dialogue between the students and the community, and within the community itself, allowed for greater breadth of diversity in perspectives and agendas. This greatly enhanced the planning process by helping to articulate expectations on both sides. As part of the university's larger proposal process, the student team was required to submit an application to the Institutional Review Board (IRB) that stated the project plan and to demonstrate how the collaboration was going to be conducted. It involved having a signed letter from the community partners that the student team had their consent to move forward with the project idea; this letter of support was attached to the application. In the overall IRB application, it was indicated to the oversight committee that reflective processing and the possibility of publication were both parts of the original plan. This intention was also shared with the community partners and in-country contacts prior to beginning any activities on the ground. When talking about the project proper *per se* the student team did acknowledge contributions of those on the ground in a previous publication (McDaniel et al., 2011). The present effort represents a further, more introspective processing of the student-faculty team experience beyond the originally implemented project.

For the purposes of this analysis, data points came from observations and reflections captured in two different sets of journals – personal and team. While each team member had to take notes on the events of the day, the team had agreed on a daily rotating leadership. As part of that rotating leadership, the team leader for each day took account of what they understood to have transpired and recorded those events in the team journal. The team journal was used to capture voices of community as a matter of discussions, meeting outcomes, as well as the day-to-day mechanics of engagement. What was recorded during the day was then read back to the student project team in the evening during the daily wrap-up/debriefing session that the day's project leader facilitated for clarification of the collective understanding. This was over and above the students keeping their own personal journals, which served as an additional aide memoir of the experience. Upon return, the daily team journal was then reprocessed with the faculty advisor as part of a supervised research activity during the following fall semester. In addition to notes about the day-to-day activities, there were copies

of plans and purchase orders for materials. There were emails, blogs and phone calls made prior to the visit. This material served as the starting point the following semester for the collective team and individual processing and reflection upon the field experience.

To respond to this expressed need of the Simoonga community, the student group found itself in an ever-expanding web of relationships that involved a great number of different partners and partnering agencies. Generally speaking, the project itself followed the structural SOFAR framework proposed by Bringle et al. (2009) and Clayton et al. (2010) by involving actors from the Student team, community Organizations, Faculty, Administrators and the community Residents themselves. Participating actors ranged from individual experts and community development practitioners through local, national and international NGOs, to District, Provincial and Federal level Ministries (Table 1). While the composition of the aforementioned actors are diverse, it is important to note that the diversity began with the student team itself, which was comprised of two engineering students, one in systems and the other in mechanical engineering, a global development studies/foreign affairs major, a French and Spanish major from the University of Virginia and a geology major from an out-of-state institution. Their on-the-ground graduate student mentor was a non-traditional educational Ph.D. student from the African continent with more than two decades of educational experience at the high school and post-graduate levels; experience that included working with Peace Corps volunteers. The faculty mentor brought more than 15 years of experience working with in-region colleagues on issues of coupled human natural system dynamics as well as educating and mentoring dozens of diverse, U.S.-based student groups on international service-learning projects.

This diverse web of the participating organizations continued with the student team's larger in-region network of contacts. These included a local not-for-profit, Support to the HIV/AIDS Response in Zambia (SHARe) in Lusaka, which served as the initial project partner. Another ally, the River Club, a local tourist lodge located within the Simoonga vicinity, provided valuable insights into previous project implementation in the village. Each time the student team engaged in discussions with actors from a particular group at a particular level things changed. Discussions with SHARe in Lusaka, for example, were focused on the implementation of their larger project goals in Simoonga. However, discussions with a Ph.D. scientist affiliated with the Zambian Meteorological Department and networked with the student team's faculty advisor professionally, emphasized the need for understanding the protocol of access in these more rural settings. These discussions were more about the sharing of guidelines and suggested approaches as to how to proceed once in Livingstone. As it turned out, had their only contact been the interaction with SHARe, the students would not have known that they needed to visit the regional Ministry of Health in Livingstone, something SHARe took for granted as that organization was already in Simoonga. Had the team overlooked the Ministry of Health, it would have been unaware of local requirements for the construction of latrines and also missed out on a very crucial contributor to the project. During the meeting, the Ministry assigned a technician to work with the students. This technician turned out to be one of the more significant allies on the ground for the student team as he was closer to the

undergraduate team members in age and world view, and provided yet another point of cultural reference once the project was in progress.

At the time of the team's visit to Simoonga, the village government consisted of a headwoman and headman, assisted by the village council. According to the village council, members from each of the five most prominent ethnic groups of Zambia can be found living together in Simoonga drawn by the relative cheap cost of living as well as proximity to and availability of work in the numerous surrounding tourist resorts. Eighty kilometers from the border with Zimbabwe to the South, Simoonga is also home to many Zimbabwean refugees due to recent political and economic turmoil. The village is believed to have come together as a unit around the 1900s. It is rare to find a resident whose membership in the community went back further than one or two generations. These circumstances provided for the formation of an atypical Zambian village. Such diversity was not something the team had anticipated. Where the team had expected to find a village that shared a common history and sense of community, they found instead, a collection of individuals who had come together under varying circumstances, but initially for instrumental purposes. As the students came to realize in discovering the limits of communication across geographical and socio-cultural difference, these complexities were not something to be brushed over.

The multidisciplinary nature of the student group, coupled with Simoonga's diversity and the insights and knowledge shared by the broader web of actors described previously, brought a wide spectrum of perspective and dynamism to the relationship building process. Diversity, according to Walker and Salt (2012), is one of the defining characteristics of resilient socio-environmental systems. In resilience thinking, the greater the diversity, the greater the resilience of the system (Walker and Salt, 2012). A diversity of perspectives and actors can be thought of as frustrating to the process of conducting service-learning and community engagement in that their involvement can be viewed as "slowing down" the implementation process. However, the sharing of knowledge and wisdom through lived experience contributed greatly to the resources that the student team was able to bring to bear with their service-learning activity. The use of these resources ultimately led to a broader engagement with perhaps a more resilient outcome.

According to Sutton (2011), effective international service-learning requires "a close attention to local context and a clear understanding of the forces shaping that context" (p.126). For an opportunity to appreciate the linkages between partners and how connected things are beyond what Sutton says, we argue that, in addition to the clear understanding of the forces shaping the context, students, faculty and practitioners need to have an appreciation of the linkages and connectedness within a given system. Six weeks on the ground helped the student team to learn as much as they could about the current forces and existing relationships, and organization and system linkages operating on different levels. In this way, the project will be something that people in the community could vet and agree, or more importantly, disagree upon, as relevant to their unique circumstances. Given the aforementioned, the cyclical nature of the process as well as the interconnectedness and

differences in dynamics between all of these different systems, could the incorporation of theoretical constructs from other disciplines involved with complex systems help inform the engagement/partnership/SLCE encounter? If so, could the adaptive cycle construct be used as a conceptual framework to better inform this process and to understand and explain the dynamics of interaction with the community in Simoonga?

An Adaptive Cycle Framework

As discussed earlier, a broader problem with SLCE stems from the fact that many service-learning projects/participants expect a linear process based on assumptions of inter-community homogeneity (history, culture, place etc.) and a clear, *a priori* pathway as to how best to complete a project (Allen et al., 2014). These expectations get in the way of relationship building, reciprocity, learning and successfully completed projects. Accordingly, upon reflection, project faculty have looked to other disciplines for conceptual frameworks that may help better prepare students to understand cycles of change in dynamic systems.

The notion of an adaptive cycle as conceptualized by Holling (2001) and others (e.g. Walker et al., 2004; 2006), may serve as an accessible way to describe the often non-linear dynamics of community engagement in the context of international service-learning. An adaptive cycle, according to Holling (2001), is “a heuristic model for understanding the dynamics of complex systems from cells, to ecosystems, to societies, to cultures” (p.393). Holling and his colleagues conceptualized the adaptive cycle as part of an integrated theory for understanding complex socio-environmental systems. A central claim of the theory is that all ecosystems and socio-economic systems, regardless of scale, are comprised of space-time hierarchies and adaptive cycles, which together form a “panarchy,” defined as:

... the hierarchical structure in which systems of nature (for example, forests, grasslands, lakes, rivers, and seas), and humans (for example, structures of governance, settlements, and cultures), as well as combined human-nature systems (for example, agencies that control natural resource use) [...] and social-ecological systems (for instance, co-evolved systems of management) [...] are interlinked in never-ending adaptive cycles of growth, accumulation, restructuring, and renewal. (Holling, 2001, p. 392).

This means that fundamentally, the adaptive cycle is a way of describing, taking into consideration, and insisting on, the centrality of relationships as the “hubs” around which service, learning, community engagement and change take place.

This concept of a four phase cycle of system adaptation and change includes phases of growth, conservation, release and reorganization of system capital and connections, and has been used to understand the complex systems such as political systems, economic systems, management theory and socio-ecological systems (Folke, 2006; Gunderson and Holling, 2001;

Holling, 2001; Pendall et al., 2009). Every adaptive cycle passes repeatedly through four phases: growth, conservation, release, and reorganization. The *growth* phase can be thought of as the time when resources are plentiful and those actors that are able to act fast are able to take advantage and dominate the system. The *conservation* phase can be thought of as the accumulation of capital and convergence with several system actors leading to reduced available resources and a set way of being for the system. The *release* phase is when the system and its functioning collapse and capital and connections bound up in a system are made available; and the *reorganization* phase is when the available capital (human, social, cultural, environmental, financial, etc.) and connections exposed to new innovations and or actors and are reconfigured (Cycles of change, n. d.).

Three general properties shape the adaptive cycle and the future state of a system, regardless of its scale. These are, first, the *wealth* or inherent potential of a system that is available for change; second, the *internal controllability* of a system as determined by the *connectedness* between its internal controlling variables and processes; and, third, the *resilience* or adaptive capacity of the system.

The trajectory of the adaptive cycle alternates between the fore loop, which is characterized by “long periods of accumulation and transformation of resources (from growth to conservation...)” and the back loop, which is characterized by “shorter periods that create opportunities for innovation (from release to reorganization...)” (Holling, 2001, p. 394). In the fore loop, connectedness increases and capital accumulates during the slow sequence from growth to conservation. In the back loop, the systems come undone quickly, resources are released rapidly and there is much creative potential to explore novel approaches and innovations for the system of interest. Although it is difficult to gauge how much time is involved or needed to move through the complete trajectory of an adaptive cycle, a general rule of thumb is that the fore loop is much longer and slower in its dynamics than the back loop.

In the following reflexive application, we use the cycle and its four phases as a lens to describe, analyze and understand the service-learning project student team/community dynamics of the Simoonga project. In using this construct, the authors make the assumption that the interaction between the university team and different contexts and groups associated within the Simoonga community together comprise a micro-system, in which several separate human and socio-ecological systems are interlinked.

The Growth Phase

The process of engagement for the team as outsiders began with negotiating access to the village of Simoonga. Although extensive communication with the village (via emails and conference calls) served as both a team-building and engagement strategy prior to arrival in Zambia, the growth stage of the adaptive cycle coincides with the initial growth phase of the project on the ground in Simoonga. A more thorough description of the student team preparation in the U.S is documented elsewhere (McDaniel et al., 2011). For the student team,

this was a period of coming to know Simoonga and its context, assessing and acknowledging the strengths and skills of its people, and developing an awareness of, and appreciation for, the existence and activities of governmental and non-governmental organizations in and around the community.

The team also actively sought to ascertain the type and nature of partnership that should be formed in the course of the project from the perspective of the Simoonga residents. This prompted the student team to move beyond the formal connections with institutional representatives of the community such as the village council and seek the input of ordinary residents of Simoonga. In the course of these informal discussions, valuable information was shared that would be useful for the actual project implementation.

This was also a time of growth for the student team itself. One of the approaches that the student team was instructed to take during their time on the ground was to use distributed project leadership – an approach where a different person of the group was tapped each day to be responsible for being the project “point” person/contact person, as well as the official project scribe for that day’s events. The point person of the day was required to capture what had happened and to share their individual understanding of the day’s events with the larger project group during the daily evening group reflection sessions. It was during this sharing of the day’s events that each project member would have the opportunity not only to share, but also to correct and advance a new idea or concept. This was symbolized by the transference of the group project journal each day to the different daily project point person. In this way, each group member learned their own strengths and weaknesses as the larger collective effort continued to emerge. It should be noted that each student was also responsible for maintaining their own personal journal for the process of documentation and reflection; a resource that each group member would have to draw heavily upon during the post-field reflection process.

This process was not simple data harvesting. Rather the student team, using an approach of integral accounting similar to Martin (2013), sought to learn from the community about the existing assets and different forms of capital that the community possessed. The integral accounting activity marked the start of the accumulation of wealth and capital that is the growth phase of the student team/community partnership. Within this phase, the student team allowed time to get to know what was important to the people in the community.

The process of engagement for the team as outsiders began at least six months before departing for the region with the respectful negotiation of access to the village of Simoonga. Upon reflection, it became evident to the project team that due to being better resourced, the team was able to move much more rapidly and essentially “outcompete” their colleagues on the ground during the development of the project. The student team’s preparations had stressed the importance of Respect, Relationship, and Reciprocity, the ‘3 R’s’ (Harshfield et al., 2009); the team not only had good intentions, but took steps during the planning process to ensure equity for all involved in the project. The reality however, was that the team was better

positioned to “grow” the development of this idea. And even though it was unintentional, during the project growth phase, the student team ended up with a disproportionate share of the capital related to the project – social, human and financial.

The Conservation Phase

The assessment also involved a survey of existing connections between the community and outside organizations, and within the community itself. Several organizations in the Simoonga vicinity were relevant to the project and had a significant work-related history with the village. These organizations included the nearby tourist resort, an NGO initiative dealing with Zambian health issues, and the Livingstone branch of the Zambian Ministry of Health. Of the three organizations, the tourist lodge was the most intimately connected to the core of the village culture and community. All three were bound to Simoonga through professional involvement, with established relationships. The team wanted to have a much deeper connection, something beyond a piece of paper with a pro-forma memorandum of understanding, with the Simoonga community while recognizing the established relationships, albeit transactional, that existed between the community and these organizations. It was therefore in the team’s interest to develop and maintain connections with the organizations. These connections continued to develop in this conservation phase with interactions between the community and the project group conforming to the familiar, “business as usual” approach to engaging outsiders. For Simoonga, this approach can be best described as one in which Simoonga was the dependent recipient relying on the outside donor.

The challenge in the conservation phase of the engagement was to reconcile the community desire for what had been their previous engagement experience with outsiders, a traditional donor-recipient model of interaction, with the student team’s desire to conduct more participatory and transformational service-learning; a challenge that became more evident once construction started on the latrine. This challenge to existing mindsets is what eventually led to at least one instance of the release phase. In adhering to the “business as usual” mindset, both the community and the student team unwittingly reinforced a consolidation and binding of capital (whether in the form of ideas, money or social connections) in the hands of relatively few actors (local authorities and donor/implementing agencies). By tying up this capital in the hands of relatively few actors, the system does not have much in the way of capital available to be used by the actors in times when the system is shocked or disturbed. In essence, fewer actors have significant capital and as a result, a smaller and less diverse group of actors is involved with the day-to-day functioning of the community system. Such a reduction in the functional diversity of a system has also been related to a reduction in the ability of a system to withstand shocks and or recover from disturbances, which in turn leads to a reduction in the overall resilience of a system (Walker and Salt, 2012).

The Release/Collapse Phase

Two examples of passing through the release phase of the adaptive cycle are presented. The first from the perspective of the student team occurred early on in the project when the

student team learned of the circumstances surrounding the community hall or community center, a 1-year-old structure that was in an advanced state of neglect. The roof was falling apart and most of the glass windows were lacking. According to the residents, the decision to construct the building was taken by a few community leaders along with the nearby tourist lodge. The lodge employs the majority of the working Simoonga residents and contracted local experts to do the job. Furthermore, once it was completed, the leaders claimed the building as their own and this further alienated the rest of the community. It was not only an example of imposed need and the lack of incorporation of the larger community wishes, but also a lack of awareness of the connections between community governance structures and the larger community. The narrative around this community hall served not only to challenge, but also to disrupt the mindsets of some of the student team members. At first glance, these students adhered to the notion that most, if not all service-learning and community engagement interventions, were by and large “good” interventions. By having access to a diversity of perspectives that many involved with SLCE often do not have the opportunity to hear, the students came to see how such an intervention, while often publicly celebrated as a tangible, concrete example of success (especially by the sources of funding), could come to be seen through the eyes of the receiving community as less than desirous.

The second example of experiencing a release phase was when the “business as usual” approach of Simoonga regarding donor-recipient development interventions collapsed. From the student team’s perspective, the recognition of the community not only as a contributor, but also as a joint owner and not just as a site for implementation, was an integral part of the process of service-learning and community engagement (Brown-Glazner et al., 2010; Bushouse, 2005). The expectation was that technical experts within the community (such as bricklayers, carpenters, and those with other construction experience) would take the lead in the day-to-day construction activities on the ground. With this volunteer based system, the project would be sustained by the existing expertise and human capital of community members.

As the student team came to learn, all previous development projects were entirely orchestrated by outside benefactors and implemented by contractors. Simoongans were well aware of their role in that dynamic. As “consumers of development,” the village as a whole, and village bureaucracy especially, were skilled in utilizing their disadvantaged circumstances “in order to turn them into opportunities” (Rossi, 2006, p. 2). These practices worked fine in soliciting past development assistance, but when the student team tried to foster a co-participatory project, an approach to engagement that stepped outside this framework, complications and misunderstandings arose, which pushed the engagement process into the release phase.

Although there was consensus on the need for community toilets, the process of engagement stalled over the way that the project was to be implemented. A day later, the method of project implementation was truly translated. The student team had the expectation of this being a co-participatory enterprise with no large financial resources poured into the community. There was no one to be seen near the worksite at the predetermined work

starting time. To those community members who were either skeptical of the project team's intentions or in their manner of engagement, it was made clear that the student team would honor their end of the project partnership and move towards the community in the hope that collaborators were willing to meet the team somewhere in the middle. In fact, the students showed up and began the manual labor on their own. The student team honored its part of the agreement reached during the initial enlarged community meeting and provided money for the food. The first day of construction, the village women cooked the food as agreed and the student team ate with them.

On the second day, the first volunteer appeared on the construction site at the same time as the team, followed by another volunteer 30 minutes later. As it turned out, the community respected these two middle-aged men across the village divide. The first volunteer and older gentleman later revealed that watching "the young people" work made him think about his own children, and he wanted to teach his children a "thing or two about life." The level of community expertise was demonstrated when one of the teachers at the Simoonga Basic School, who doubles as the village carpenter, set up a makeshift workshop by the construction site, where he proceeded to prepare all the wood for roofing the latrines. As construction progressed, temporary volunteers began to show up. Some came and carried water, unloaded trucks and shoveled sand for a day or less. Others simply watched and offered encouragement or stopped by to chat briefly with the larger team.

The student team also began to reach out to the community in other ways. When one of the volunteers lost his wife, work was suspended on the latrines and the team spent half a day with him in his residence. Another volunteer lost a baby and the team showed the same level of respect. These actions demonstrated concern and respect for the community partners and were a clear manifestation of the "engaging people not projects" mindset that other student teams had developed from previous international service-learning activities (Brown-Glazner et al., 2010; Harshfield et al., 2009; Heil et al., 2010). Furthermore, team members started learning the local languages, customs and traditions of this unusual village. Greetings in the local language became a ritual for community interaction and of getting some marginal members of the community involved in the project. One notable community member living on the margins was "Sarah," an older woman who was introduced to the student team as mentally challenged. Over the course of the project, "Sarah" became a regular visitor to the site, and greatly helped the students improve their language skills. As the team engaged with "Sarah" they began to see her in a different light and soon learned from her that what local community members considered "madness" might have actually had a different cause; one related to being inconsolable and having great difficulty in letting go of her grief at the loss of some close family members. Likewise, other community members not often at the center of power in Simoonga -- the children -- also became an integral part of this phase. They would show up on the site and team members would teach them some American games and play soccer with the younger ones, both boys and girls. At one point, the headmaster organized the entire school to pick up stones to fill the toilet.

It was such efforts and similar demonstrations of putting people first that gave the project team a place at the “table” for the iterative process of (re-)formulating the direction of the Simoonga project. Upon reflection, the student team considered community reluctance to forego the familiar implementation approach to development activities and the persistence of the student team to continue with their co-participatory approach as contributing to the collapse of the project. It was this collapse that led the engagement dynamic into the release phase of the adaptive cycle. This collapse forced both the community and the student team to come together to renegotiate and ultimately to reconfigure rather than to just settle.

The desire to reconfigure, however, should never be taken without due consideration for the outcomes. Ecological resilience, as Walker and Salt (2006) point out, assumes multiple stable states, not all of which may be desirable to those involved. The challenge is to engage stakeholders in such a way that they become comfortable with a certain level of uncertainty. The student team, through their commitment and adherence to the tenets of respect, relationship and reciprocity, and to process, did move the community into another type of engagement; one that pushed them beyond their thresholds and their understood system of being by the emergence of an engagement around respect and equity. However, as an ecological system there was always the possibility it could adapt by expelling the disturbance to their way of being, in this case the students’ approach to engagement. The student team could simply have been asked to leave the village. It is therefore necessary to move away from the assumption (and historic fallacy) even after successful completion of the project that things could only have gone the way they went. As Walker (2009) states, “Resilience, in short, is largely about learning how to change in order not to be changed. Certainty is impossible. *The point is to build systems that will be safe when they fail, not to try to build fail-safe systems.*”

The Reorganization Phase

Once the challenge to collaboration was acknowledged as one associated with introducing change to any community, the partners (Simoonga village and the students) entered a new sphere of renegotiation and reconfiguration, with both sides taking “baby” steps enshrined with respect for each other’s position. The students demonstrated respect for the community’s desire to do work in a certain way by assuring them they would welcome volunteers who came freely, and work with them at their own pace. The community, for its part, came to recognize the commitment of the students to actually doing the work and their dedication and adherence to the process (e.g. starting at 7 a.m. each day, carrying water, unloading trucks, timely provision of food) and to community protocols.

The renegotiation, reorganization and reconfiguration of the project remained a crucial part of the relationship building technique, and such negotiations needed to be honest and open to all. The team consulted with the village council on various occasions and the council remained the referent authority throughout. The council was informed of the project budget, determined where materials for construction were bought and had the final say on the location of the VIP latrines. This transparency also led to the creation of a new and broader governance structure in charge of the new VIPs, the local sanitation committee, and was crucial for the success of the

project. The difference between this project and past projects in Simoonga for the residents lies with the project's pursuit of engagement over efficiency (McDaniel et al., 2011).

As demonstrated above, this transformational form of SLCE could be seen to have passed through the various phases of an adaptive cycle. As part of the growth phase, the student team took the time to recognize the existing wealth, connections and capabilities inherent in the residents of Simoonga. The effort then passed through the "business as usual" conservation phase where social capital increased and diversity of perspectives and different ways of being decreased. Previously, outsiders had played a "dominant" role in driving community development projects in Simoonga that included outside perceptions, solutions, and implementation. The community's expectations of "business as usual" conflicting with the project team's co-participatory approach precipitated the release phase, when the project came to a complete standstill and the project implementation strategies had to be revisited. The project entered a reorganization phase during which the approach to engagement and implementation had to be re-configured, leading to a second growth phase during which the direction of the project was put in the hands of community members. This is consistent with our understanding of a transformative model of engagement, in which initiative does not reside with any one partner.

Context and Partnership Building

A take away from the use of the adaptive cycle is that things are always changing and cycling within a system; when things happen, a reconfiguration of the systems takes place and such reconfiguration may provide a way to jointly move forward. As the team looked back on its experiences in Simoonga, what emerged was the realization of the different ways in which the focus on process rather than product shaped the interactions. Taking the time to get to know the community not only provided a different approach to project implementation that pushed the partners through the release phase and ultimately to the reconfiguration phase. It also allowed for real engagement to evolve, that which comes with an understanding of the power structures and dynamics that not only constitute the essence of a community but also make it unique. Had the team approached Simoonga as simply another poor rural African village, it would have failed to capture this uniqueness. The following extended example illustrates the point.

Upon entering Simoonga, one must immediately choose to turn right, left, or to continue straight. The neutral choice of continuing straight leads past the community hall to Simoonga Basic School at the end of the road, where children from both sides of the village come together to learn. Essentially bisecting the village, this road held much greater significance in Simoonga than originally perceived. The road divided the village as the headman's territory to the left and the headwoman's territory to the right, a tangible realization of the social, political, and economic rift between the two areas. Inequalities and tensions between the two sides and

weaknesses of the governing structure became more apparent as time drew on. In the middle, attempting to bridge this village gap, was a nascent, year-old village council. An organization that the team had thought to be well-established was in actuality struggling to define its role and demonstrate its effectiveness as it straddled this division. The village school became the metaphor on which the team framed its version of engagement. Within the assets approach, it provided a common area for the potential of communication and collaboration across the village divide.

As with any community, the villagers in Simoonga live in complicated social and political dynamics that the team had to take into account once on the ground. Even though the construction of the VIP latrines was in response to an expressed need, the student team had to understand skepticism in the village. Acknowledging agency meant recognizing the possibility that some community members did not want anything to do with the project. The team had to exercise its own agency to make a place for new ideas to be shared. The most fundamental of these ideas was not specific technical plans for project implementation, but rather the hope to work alongside and follow the community's lead in project planning and implementation.

Each of the partnerships the student team formed had to be negotiated at multiple levels. The team's initial partners were NGOs already active in Simoonga, such as the USAID funded SHARe and the nearby River Club tourist lodge. SHARe, in particular, had strong ties to both the National Ministry of Health and with the village council of Simoonga (a council which the team later discovered to have been set up in part by SHARe). The students came to understand that the SHARe partnerships, as well as the relationship between the River Club and its ethno-tourism activities within Simoonga, clearly had both national and local socio-political layers. Cultural sensitivity and precautionary measures inspired the team to seek the blessing of the Ministry of Health. Further, the students felt that the residents of Simoonga viewed them, at all times, through the same lens as these other partners -- as one of the many outside obligations on their docket. In other words, in a certain fundamental sense, the student team was viewed as one more part of the already existing relationships between outside organizations and the village.

Viewing these relationships contextually, it appears that all three organizations were positioned in proximity to the heart of the Simoonga community but were not directly in the heart of Simoonga. To clarify, take the example of the health NGO; all previous projects with Simoonga had been organized through a select group of village leaders. The student team came to realize, much as Link et al. (2011) had found elsewhere, that the select group of village leaders was not in fact the true core of the community but rather that the greater community of average villagers was a much closer representation of the community core. Therefore, the NGO, like the two other organizations, had a degree of disconnect in the sense that they interacted principally with a small subset of the community unrepresentative of the entirety of the village community.

A vital difference between the student team and other development organizations comes from the team's role as a dependent partner and the organizations' and village's roles as independent partners. With the team, this essentially was a reversal in the power dynamics that the village had come to expect with outside partners and their projects, in which the village is dependent before, during and after the engagement. This reversal of power, rather than the latrines, constitute the key "disruption" to the system that is Simoonga. While the creation of the sanitation committee was an immediate and positive outcome, it is difficult to ascertain just what the long term effects of such a reversal of power will be. The community had the expressed need for improving sanitation in the village. The project team goal was to partner with the community in implementing a project that was community-led. The fact that the team intersected with existing relationships strengthens the argument for the use of an adaptive cycle framework in which the students consider relationships as constantly evolving/changing and not as static entities.

When reviewing the process of building partnerships, a general trend emerges: a move from a periphery-level partnership to a partnership positioned at the center of the community. If we consider these organizations as semi-disconnected partners, then we must classify the student team as "highly disconnected" in the incipient weeks of project research (beginning October 2009). The process that brought the students to the center of the community was twofold. The first part was the communication between the student team, the NGO and the tourist resort that preceded arrival in Zambia. The second part referred to the in-person meetings that took place between the students' arrival in Zambia and their first interactions with the greater village community, when they met with all three of their principal partner organizations and with the village council. In sum, the student team went through a rite-of-passage, a series of negotiations. The team moved between different levels of partnership by working with other organizations that already had established relationships in Simoonga.

The movement toward a stronger and more centrally positioned partnership simultaneously fostered a similar strengthening of partnership between the village and certain organizations in the vicinity (particularly the Ministry of Health). While the student team grew toward closer partnership with the village by virtue of meeting with the Ministry of Health, the Ministry of Health was in turn able to be at the heart of certain village activities and build their partnership with the village. Thus, the movement between partnership levels was ultimately done in conjunction with other village partners and thus was a multiparty approach. Admittedly, securing relationships took longer than actual project implementation; it also provided for a stronger if still somewhat reluctant engagement towards the project on the part of the community.

What the students have come to understand as perhaps the most tangible success of this approach to relationship building was in regard to project sustainability through the village's creation of a permanent sanitation committee. While some would see the creation of the sanitation committee as an indicator of success with regard to sustainability, the students have come to think of this more as a clear demonstration of project handover and transformation in

the process of service-learning project implementation. The project that was once driven by exogenous groups was now being led by community interests, *from within*; an indication that the community engagement activity was more resilient, and evidence of the political dimensions of the service. The new structure no longer was dependent upon the outside interests, but rather was able to rely upon expertise, vision, leadership, and counsel from within the community. The sanitation committee, which continues to meet regularly, organizes maintenance of the latrines and promotes improved sanitation practices through education and awareness of sanitation issues; encouraging use of the latrines; and raising funds and support for more latrines. With this phase, the project was, in a sense, community-owned even as we acknowledge that the community was composed of multiple and sometimes competing interests.

Conclusion

This qualitative and reflective case study focused on addressing questions related to whether appropriate, alternative and/or supplemental theoretical constructs exist that can be used to improve student and faculty understanding of complex system dynamics. These dynamics are often encountered while conducting international service-learning and community engagement activities. One implication for practice from this paper is that a large part of the preparation process is learning to see these types of activities as being non-linear. It is important for students to understand this experience as being part of conducting SLCE with its relationships and their dynamics, and joining in "disturbing" that system. Another implication is that upon reflection, the student team came to not only recognize the value of time and diversity in relationship building, but that time and diversity can also contribute to ensuring community equity and hopefully the establishment of project ownership by the community. Central to this newfound appreciation for the value of time and diversity was the student team embracing the focus on the process of engagement with all of its complexity, rather than primarily upon the end product to satisfy outsiders. Such a focus, in this case, has led to a greater resilience within the community as evidenced by the creation of a community sanitation committee.

What happened is that the project transitioned from being led by outsiders, and therefore imposed upon the community, to being closer to a true collaboration through the process of consensus and investment by the community and students together. Prior to departure for the field, the student team, through their coursework and mentored project preparation, was aware that, upon entering the community of interest, things always change, though the nature of the change is often unknown. However, with the use of the adaptive cycle as lens during the post-field reflection and project synthesis process, the student team came to understand that rather than conceptualizing the SLCE process as linear, there is a cycling of the dynamic of these opportunities; from the familiar, to the failure, and then to the reorganization. The group

sought to adhere to the following three “R’s” of global service-learning: Respect for self and others; and the valuing of Relationship and Reciprocity for all involved (Harshfield et al., 2009).

The student team’s goal was always to make the project more about the people with whom the team would be working rather than about the structures that would be built (Brown-Glazner et al., 2010). This “people’s approach” is one that transfers ownership and accountability for the project into the hands of the community, allowing for greater likelihood of a sustainable solution and future replication. The team also found that formulating such partnerships can, simultaneously, be the most difficult and complex part of the project process and perhaps, the most transforming. In its continuous adherence to the people first approach, one that prioritizes relationships, the team has stayed in communication with the people of Simoonga, through one of the volunteers and through the technician from the Ministry of Health. The village council secretary and the headwoman passed and the village now has a clinic. The sanitation committee is still active and the team has been invited to engage in other projects in the village. Team members often discuss such projects together and there is potential for future collaboration now that the students have graduated. The experience in Zambia also influenced career orientation among team members. One of the team members is a volunteer with Teach for America and another is a Peace Corps volunteer in West Africa. The project has been an educational process for the team and the community. And as Plater (2011) suggests, education is a primary, if not principal, means for advancing the human condition as well as individual prosperity within local, national, and global communities.

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Appendix

Project Participants	Role
<i>Students</i>	
University Students	Project facilitators and implementers
Simoonga Basic School Students	Volunteers helping to procure project materials
<i>Organizations</i>	
Supporters of Simoonga	Student independent organization
The River Club	Partnering tourist lodge facilitating connections
SHARe	USAID supported NGO focused on the responding to HIV/AIDS in Zambia, also supplied a technician to work with the team and who introduced the team to village council
Village Council of Simoonga	12-person leadership council which served as interface between project team and the larger community
Simoonga Basic School	Helped further disseminate information about the project
Zambian Ministry of Health	Governmental agency responsible for general health and well being of Zambian population; informational resource
<i>Faculty/Project Advisors</i>	
Environmental Sciences/Global Development Studies Professor	Served as faculty advisor, project mentor and supervisor of project synthesis and reflection process
Education Doctoral Student in Social Foundations	Served as on site faculty advisor and project mentor and worked collaboratively with faculty advisor
Government Scientist with the Zambian Meteorological Department	Served as informal project advisor regarding issues of protocols related to entering and working with rural communities

<i>Administrators</i>	
Office of the Vice President for Academic Affairs, University of Virginia	Provided funding of the student experiential learning program supporting the student team
University of Virginia Jefferson Public Citizens Program	Selection, support and institutional oversight of the student project teams
International Studies Office	Responsible for record keeping and institutional compliance regarding student track and issues of liability
Institutional Review Board	Responsible for ensuring research ethics compliance with sponsored human subjects activities.
<i>Residents</i>	
Simoonga Headwoman	Local administrative authority
Village Council Secretary	Local administrator and record keeper
Headman	Local administrative authority
SHARe technician	NGO liaison between project, SHARe and Simoonga leadership
Zambian Ministry of Health technician	Liaison between provincial office, community and project team
Village women	Contributed to the preparation of food for those working during the day on the sanitation project
Simoonga Basic School learners	Contributed to the gathering of raw construction materials (stones) needed for the project
Village Bricklayers	Contributed know-how/construction expertise
Village carpenter	Contributed know-how/woodworking expertise

Table 1. A list of entities participating in the Simoonga service-learning project and their roles grouped according to the SOFAR model classification scheme presented by Bringle et al. 2009.