

# **The Environmental Youth Alliance**

An Exploration of Complexity Science

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## Abstract

Established in Vancouver in 1991, the Environmental Youth Alliance (EYA) is a youth-driven nonprofit organization that focuses on the improvement of the social and physical environment by Canadian youth. This paper shows that EYA's seemingly chaotic complexity plays a key role in its success. Complexity science offers insights about how leaders in youth-driven organizations can successfully run their agencies. This paper describes a context within which to situate such organizations, as well as the theoretical language to describe managers' own experiences. EYA needed to understand that it did not have to conform to a traditional, hierarchical "clockware" model of organizational development, and instead could view itself in terms of a horizontal, complex "swarmware" model. Using the work of Zimmerman et al. (*Edgeware*), Ralph D. Stacey and Craig Reynolds, the author describes EYA's internal dynamics as a youth-driven organization, which has informal or cultural controls rather than set policies, and operates according to three powerful "minimum specifications" of transparency, respectful and inclusive dialogue, and self-responsibility.

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## Introduction

Established in Vancouver in 1991, the Environmental Youth Alliance (EYA) is a youth-driven, nonprofit organization that focuses on the improvement of the social and physical environment by youth. As one of two Senior Managers, I have been with EYA since its inception. Despite its name, EYA's programs and audience are not those of traditional environmental groups. Although our organization has implemented a number of environmental programs, such as community gardens, urban green space and alternative energy programs, we have also implemented programs that focus on the *social* environment: a magazine for urban aboriginal youth, a capacity-building program for youth-driven organizations and a program to map community assets.

Administered and operated through a partnership of youth and adults, EYA is structured around the idea that youth hold power in all aspects of the organization, from program delivery to governance. A central argument of this paper is that this youth-driven philosophy leads EYA to operate as a complex organization: that is, an organization whose operations are best explained in terms of the new management model based on complexity theory as described by Brenda Zimmerman, Ralph Stacey and their colleagues. I have found this new model liberating. It has helped me better understand how my organization works, and I believe other managers of youth-driven organizations will also find it useful.

EYA has often been described as “controlled chaos.” This paper will demonstrate how a seemingly chaotic, complex state actually plays a key role in its success. Using complexity science to describe how EYA works, I hope to assist the general reader in better understanding youth-driven organizations. I also hope convey a message of encouragement to youth-driven organizations and their leaders who face a day-to-day struggle in running their agencies. This paper will provide these “managers of chaos” – the leaders of youth-driven organizations – not only with a context within which to situate their own organizations, but also the theoretical language with which to explain their experiences, and perhaps defend those experiences to others. I hope that they may

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draw from EYA's story some strategies and ideas that will allow their organizations to move forward – guilt free!

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## **EYA: A Youth-driven Story**

In the fall of 1990 I came on board as the Environmental Youth Alliance's first full-time staff member.<sup>1</sup> At that time there was a non-paid founder of the organization and a very active board of directors. There was a palpable feeling that EYA was "in the flow" – we were constantly being pushed just to the edge of our abilities, into new and untried territory. It was both invigorating and terrifying. It drove us to do more and go farther. From 1990 to 1993 EYA – myself, one other staff member, over thirty high school volunteers and a five-member board – initiated and participated in:

- Fifteen conferences organized primarily by high school youth, with an attendance of 150 to 1000, from every major city in Canada, and one in Australia
- Visits to almost every endangered wilderness area in Western Canada, as well as wilderness areas in Eastern Canada and Costa Rica
- Campaigns to save the Penan nomadic tribe in Malaysia, endangered spaces in Canada, and rainforest in Brazil
- Quarterly editions of an environmental newspaper written by youth and delivered to every high school in Canada

At its peak, EYA boasted a membership of 20,000 youth with offices in Ottawa, Winnipeg, Edmonton, Toronto, Victoria and Vancouver, all of which were run by high school students. Our organization was lauded for its success in engaging youth in environmental work by people such as environmental commentator David Suzuki, ethnobotanist Wade Davis, and children's star Raffi, as well as being awarded such distinctions as the "Most Outstanding Environmental Nonprofit in Canada" in 1992 by the federal government. What made the organization chaotic was that there was myself as the full time administrator, programmer and fundraiser volunteer coordinator, and until the end of

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<sup>1</sup> Two high-school youth members had been involved part-time before I joined EYA.

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1992, no other full time paid staff members.<sup>2</sup> It frequently happened that I would be parachuted, sometimes with a board member or the EYA's founder, into a high school two weeks before a conference and work with the all-volunteer high school club to develop and present the event.

EYA's first major national conference held in Ottawa in 1991<sup>3</sup> drew over one thousand students from across the country and internationally. Our speakers included such major figures as Dr. David Suzuki and the federal Minister of Environment. I commented at the time that the coordinator could have taught a masters-level management course, a comment I would still stand by today. There was no barrier that the students felt they couldn't overcome, often by ways and means that were unique. Over 400 young delegates, for example, had to be billeted. The tracking and linking of these young delegates, having them picked up every morning and kept safe, was done through a filing system created by one of our student volunteers. A how-to manual for high school students was created at the end of this conference, which became the bible for the following fourteen EYA conferences. The form of a high-school volunteer-driven program served as a template for our other programs.

Though EYA during 1990–1992 was amazingly successful to all outside appearances, it was already obvious to me that the way we were managing the organization was becoming unsustainable. Our 20,000 youth members were generating exciting, innovative projects – from introducing the first recycling and composting programs in their schools to campaigns to save environmental spaces globally. Their need for support, usually through requests about administration, budgeting and other more mundane management issues, meant that I and (to a lesser extent) my board were working around the clock, seven days a week. By 1992, even though another staff person had been hired to run our wilderness trips, the leaders and leading volunteers (myself included) were burning out. This burnout precipitated a rapid decline or crash.

In my experience, this kind of “phoenix to ashes” syndrome is particularly common in youth-driven organizations. Initially a youth organization is propelled forward by the

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<sup>2</sup> The EYA offices sometimes received short-term summer grants, and there was some compensation paid for work on specific programs.

<sup>3</sup> Three conferences had already been held in B.C. before I joined EYA.

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energy and ideas of the young people involved. Then, after its initial success, it experiences a levelling-off, followed by rapid decline, as soon as the need arises for more complex organizational structures, systems, and knowledge. In management terms, this phase is called a “poverty trap” – a time when financial and human resources are over-utilized and undersupplied (or even absent altogether). In EYA’s case this poverty trap occurred in 1993. Within six months, we went from five offices, two staff and over a hundred volunteers, to a phone in one manager’s house, no staff and no money. Things looked hopeless and the organization seemed near death.

While constantly exploring new horizons, EYA had been compelled to renew and reinvent itself to a point where its existing resources – human and financial – were exhausted. As manager, my own skills and time were stretched far beyond their limit. So was our operating structure. For example, the growth of EYA from a \$50,000 budget to \$250,000 in its first two years overwhelmed our relatively simple administrative and program management systems. The situation was exacerbated by certain shortcomings unique to youth agencies: gaps in management experience, limited access to people who had the requisite expertise and perhaps most important, a constant demand to maintain a governance structure that had everyone involved in every decision. The demands on my time and that of my board members increased to the point where I almost had a nervous breakdown, while internal conflicts within the board were threatening to tear the organization apart. This poverty trap inevitably led to the total depletion of organizational and human resources.

### **Poverty Traps and Other Underlying Issues**

As my account of EYA’s early success and subsequent decline illustrates, there are three underlying management issues that make youth-driven organizations vulnerable to poverty traps:

- Lack of connections to people with management experience
- Lack of experience and training in programming and administration
- A youth-driven organizational structure

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This combination of characteristics is unique to youth-driven organizations: the fact that youth have less experience, due to age, than adults; the fact that, by nature, youth appear to demand a more relational, complex, organizational structure.

Youth-driven organizations have limited connections to their larger community and to like-minded adult-based organizations or to professional resources of many kinds. While it may seem trite to suggest that success is based on “who you know,” this is in fact a harsh reality for youth. A youth-run group’s relationships to key figures in the community are often linked to how successful the group is in moving an issue forward.

For example, EYA was highly successful in advancing environmental issues and involving youth, and thus was able to attract key figures in the environmental movement. In times of early success, new relationships come easily, as EYA’s early links to “star” figures such as David Suzuki and Raffi showed. These newly developed relationships in turn strengthened EYA’s position in the community.

Such success-oriented relationships became less easy to draw upon when EYA was in crisis. In fact, when EYA became unable to manage itself, some of our key relationships fell away. Many of our colleagues in the community were unable or unwilling to assist us, either due to their lack of administrative knowledge, their unwillingness to become involved at that level, or EYA’s own inability to articulate what we needed. There were also few ways for youth organizations to access resources to get the needed knowledge or assistance. This seems to be due to the belief that youth cannot, or will not, organize themselves. “Ageism” combined with acute need could have led to the demise of EYA, as it has led to the demise of other youth agencies.

Youth organizations like EYA also face a lack of training or education of the sort required to respond to crises or unexpected developments. While an adult organization might be able to canvass its members when a demand for new knowledge or special experience arises, a youth organization is much less likely to have access to specialized or advanced skills. A study undertaken by EYA in 1998 on youth-driven organizations revealed that none of the groups surveyed provided training in key capacity areas such as

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accounting, management and technology.<sup>4</sup> This lack of experience and knowledge, combined with a lack of connections to access the needed experience and knowledge, suggests that the capacity of youth-driven organizations to meet certain challenges in the area of administrative capability would be very low.

The third and most important factor for EYA was the idea that the organization must be run for and by youth exclusively. This exacerbated the other two factors mentioned previously. Not only were youth challenged by not having training or links to the larger community, but the concept of a youth-only organization created further barriers to their obtaining support in these areas.

There is a quite natural ideal by both the youth and the adults who wish to support EYA that it can and should be run by young people. As an ideal, this notion is a great motivator for young people, who often are not able to exercise power or effect change within the community. As EYA's own study of youth-driven organizations showed, this assumption that youth-driven organizations are run only by youth was in fact mistaken. More than half (53 percent) of the groups surveyed actually existed within adult-run agencies. Only one group in the study was actually run solely by youth – meaning that young people held all the positions of power among the staff and on the board. That particular group was, incidentally, the only group that defined “youth” as including persons up to the age thirty.<sup>5</sup>

The notion that youth-driven organizations can and must be run by youth only hampers these agencies in being able to reach out to adults to assist them in times of crisis. Adults, ironically, are often reticent to help youth groups lest they be accused of “taking over.” The young people themselves refuse to bring in adults, believing that it would compromise their organization's youth-driven character.

Certainly this was one of the biggest challenges for EYA to overcome. As a staff person who began working with the organization when I turned 25, I was often challenged by other members who were near to me in age. The board, which was made up primarily of

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<sup>4</sup> Douglas Ragan, *Youth-driven survey* (Environmental Youth Alliance, 1998), 6.

<sup>5</sup> *Ibid.*, 4.

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adults, also was often challenged. To avoid this potentially divisive issue, the organization maintained a veneer of being purely youth-driven. This worked well as long as EYA was highly successful; but when the organization began to slip into a poverty trap, tensions between stakeholders rose. By the end of 1992, the original board was purged, and the new board was relegated to figurehead status. EYA's search for a new and more authentically "youth-driven" structure would remain the most pressing issue in the organization for most of the remainder of the decade.

### **EYA after the Crash**

What was unusual for EYA compared to other youth-driven organizations is that the crash of the organization did not bring about its demise. Instead, a new organization emerged, tempered by its near-destruction, and a door opened on a new vision. The key questions in the renewal of EYA were structural and programmatic. Structurally, there was a question of leadership. EYA had positioned the organization dogmatically as being run by youth for youth; but this is not what was done in practice. Adults were actively involved in partnership with youth, though the adult role was not openly recognized. Programmatically there were questions as to what youth sector was our audience, and what environment we were trying to improve. It was noted that the focus of the traditional "conservation" environmental organizations was elitist – that only those who could afford to would be involved, usually middle to upper class youth. This demographic was reflected in the main youth leaders of EYA, many of whom came from private schools in Vancouver. A decision was thus made to look at improving the social as well as the physical environment. This programmatic re-orientation reflected the changes and challenges faced by the environmental movement itself, which was being accused of being misanthropic – putting the needs of the environment ahead of the needs of humanity. EYA, born out of these conservationist values, faced a challenge in remaining relevant.

With the new engagement of youth who were not necessarily middle- or upper-class, the strength of a youth-driven organization became a two-edged sword. The new youth members who were brought on board began to demand that EYA deal more and more with social issues, often issues of inclusion and exclusion such as racism, homophobia,

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classism, etc. One reflection of this new direction was EYA's decision to move its offices from Vancouver's affluent west side to the less affluent east side of the city. Gradually, as a result, the young people getting involved came increasingly from the less affluent areas of the city. Our core programs moved from wilderness trips, environment conferences and newspapers, to hands-on urban environment programs, youth capacity building and job training, and alternative media. Our core financial support slowly became Human Resource Development Canada job training programs for youth at risk, with a range of small grants funding our local environment work. Internationally we became involved in children and youth rights and community development. The "by youth for youth" philosophy, which mandates involvement with the immediate community, served the organization well in renewing its vision. However, this philosophy also continued to be the greatest challenge to the organization in matters of structure and leadership.

### **The Structural Threat: Leadership in a Youth-driven Organization**

The continued hidden threat within EYA was the problem of leadership. How did leadership manifest itself within the organization, its structure and the roles and functions of its leaders? In EYA it was an obscure force, known yet not known, uncovered but unseen – what Zimmerman et al. might call *the shadow organization*. The shadow organization exists "behind the scenes. It consists of hallway conversation, the grapevine, the rumour mill and the informal procedures for getting things done." For EYA to continue to move forward it had to better understand its darker side so as to know itself and its potential better.

Another metaphor that could be used to understand leadership within EYA is that of a "powerful stranger." The powerful stranger in EYA had its roots in the beginnings of the organization. The initial structure of EYA was built around a board of directors that was ever-present yet never seen. Youth were lead to believe that they were in control of the organization and, given EYA's loose structure, they often were; but key decisions, by design, were made without their involvement, or even their knowledge. Thus the story of a "by youth for youth" or *youth-driven* organization was created, with a strong

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implication of youth being able to “do it themselves.” As a key minimum specification,<sup>6</sup> the ideal of EYA being a flat, non-hierarchical, youth-run organization was just that – an ideal, which began to cause problems internally as the organization got larger. These potential seeds of EYA’s destruction continued into its new phase.

The issues of leadership and power continued to dominate during EYA’s years of growth from 1993 to 1998. My new co-manager and I attempted to continue the idea of a youth-driven organization by relegating the Board to figurehead status (it now met infrequently and made few decisions), and we created a parallel structure called the ACCESS committee. As its name suggests, the committee was created to provide access to the power structure within EYA. The committee was made up of staff and volunteers and one Board member and its role was to oversee all decisions. Following the “by youth for youth” organizational ideal, the ACCESS committee began to make decisions for the organization with little regard for those “adults” – the board – who held legal responsibility for the organization.

The ACCESS committee was important in bringing forward many power-related issues such as sexism, ageism, racism and homophobia, reflecting EYA’s commitment to the social environment and the new community it was now based in. New programming reinforced these themes: in partnership with the community, EYA created the Cottonwoods Community Garden in an old garbage dump in the downtown east side of Vancouver, a community known as “the poorest postal code in Canada.” Many marginalized youth participated in the garden’s construction through job creation programs. Other initiatives of this period were an urban aboriginal youth magazine, *Redwire*, a coalition of youth-run service agencies, Youth Driven, and a rooftop garden program.

Thus the EYA organization created a new story for itself that melded the ideals of a healthy social and physical environment through the engagement of the youth within the local community.

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<sup>6</sup> Minimum specifications (“minspecs”), which will be further explored later in this paper, are one of the nine “complexity aides” put forward by Zimmerman and her colleagues in *Edgework* (1998). The concept is based on the observed fact that simple rules can lead to complex behaviors (such as flocking in bird species). An extensive set of prescriptive rules focused on predetermined outputs is less effective than a set of a few specifications that facilitate a self-sustaining process.

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## **Management Gridlock: From Crisis to Coexistence**

Despite its success in renewing itself, by 1998 EYA was again in crisis, as dissonance between our youth-based East Side programs and our organizational structure once more brought the issue of organizational design and leadership to the fore. The result was gridlock and rigidity in EYA's governance structure. The ACCESS committee had become increasingly ineffective, and the organization was rife with infighting. There were frequent accusations that the management was ageist, racist, homophobic and sexist; at the same time, the new EYA programs were proving to be highly dynamic and innovative. We were winning awards and accolades; we were establishing new relationships, and we were still regarded on the local, national and international stage as a progressive and successful organization. Through this period of high stress very important lessons were learned. The saying "if it doesn't kill you it makes you stronger" definitely applied to EYA.

My co-manager and I devoted a great deal of thought to questions of power and leadership. For myself, to survive as a non-youth, white, male, middle-class manager of the organization, I had to understand how these issues played out in EYA, and how I represented these issues.

A major crisis in the organization arose within the ACCESS committee, where there were attempts to limit the committee's power – or even expel my co-manager and myself. There were many attempts to bring forward power-sharing models, and although some of these models were adopted in future years, at the time they were seen as untenable. Eventually a solution was proposed, by which a new organization was established; without it, EYA would probably have been torn apart. This new organization was called the Urban Youth Alliance (UYA) and would be run entirely by marginalized youth, with no adult involvement; in other words, it would become the ideal youth-driven organization that EYA had purported to be. The new proposal gave UYA joint funding for its first year, as well as providing computers and some organizational support. The proposal was accepted, and a period of tense co-existence began. To the credit of both organizations, this peace lasted. UYA was able to prove that it could run itself as a youth-driven organization, even though, despite its initial success, it folded two years later.

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By 1998 there were few issues of leadership and power left undiscussed. A new structure began to emerge which recognized both the role of adults and the importance of diversity to the success of the organization. In essence, the “powerful stranger” behind youth involvement in leadership became the familiar stranger. The organization could now move on to growing more naturally and organically. With the formal recognition of adults within the system, it was also easier to deal with the issues of lack of connectedness to the larger community, and lack of experience and training. Adults now had a more defined role, and the focus of the organization became not how to create an organization totally run by youth, but how to create an organization that had adults and youth working equitably and respectfully together.

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## **A New Understanding of Complexity: EYA from 1999 to the Present**

The current EYA leadership and management structure is a mixture of the traditional hierarchical organization and a youth-driven, non-hierarchical organization. EYA management brought the board of directors back into the picture, but with a membership of both youth and adults. We created a more formalized management hierarchy: Board, managers, coordinators and youth interns. This was done in order to bring some *transparency* to the decision-making process of the organization. New governance processes were created, such as days on which the Board, staff and participants came together to discuss organizational issues. Formal staff meetings were institutionalized. A mentorship approach, pairing youth leaders with experienced adults, was formally recognized.

The mentorship process is an attempt to combine the chaotic creativity of EYA with the traditional stability of a large organization. In its first five years, EYA leadership and power were either masked (adults held power through the Board, but pretended that the young people held the power), or was vested in a group that was not accountable (the ACCESS committee made all the decisions in place of the Board). Youth empowerment was the core value of both forms of leadership, but both forms were more fiction than fact.

*Diversity* became recognized as another pillar of EYA. Policies were introduced which demanded that EYA be representative of the communities it worked with at all levels of the organization. This was challenging, as the communities we now worked with were some of the poorest in Canada and some of the most ethnically and culturally diverse. One component of diversity that became important was the expectation that staff, my co-manager and myself especially, would be *self-aware* and *self-responsible*. As a manager of EYA, I had to be highly sensitive to this new dynamic, which now, five years later in 2003 is an unspoken part of the EYA culture. EYA had again survived and grown.

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## The Three Eras of EYA and Its New Minimum Specifications

In each era of EYA a crisis occurred. People within the organization recognized the crisis, resolved it and moved into a new reality, putting the past behind them and facing the future with hope.

In the first era, with EYA riding the wave of environmentalism in the early 1990s, this highly dynamic space was perceived as having no boundaries. But in the end, EYA overextended its resources, and a poverty trap was created. From this trap, a door opened through which the organization could see a new landscape, one in which there seemed a promising future – the improvement of the health of the social and physical environment in a community that was poor in these areas. This new landscape was one of idealistic promise, tempered with local realities. The well-known maxim, “think globally, act locally” was embraced by EYA with the creation of a two-acre community garden in the downtown East Side of Vancouver, and other initiatives for local community change. The memory of this era is still very much alive in the minds of EYA members who took part, and has become a rich part of the organization’s history.

EYA’s second era was a time of introspection: a deep and painful questioning of what EYA was, and how we were organized and leading ourselves. All levels of oppression were explored at an organizational and personal level. A crisis was brought about by the fear of “the dark stranger,” the illusion of EYA as a youth-driven, inclusive organization. This crisis was resolved when the threat posed by this false conception of leadership within EYA was understood and put to rest – for the moment, at least.

This intense reflection brought about a third era in EYA – organizational renewal based on a new understanding of what EYA was. Three principles were emerging as the *minimum specifications* that defined EYA and its culture:

- Transparency
- Respectful and inclusive dialogue
- Self-responsibility

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These have become the basis for designing organizational structures, which in turn have revealed a better way of working within EYA. These minimum specifications have allowed us to move from the ideal or ideological standpoint of non-hierarchy, and look to creating more functional values.

In focusing on *transparency* as a key minimum specification, we have made *conflict* transparent, made tension permissible and sometimes allowed *paradox* to exist within the organization. An example of such a paradox is the existence of adults within a youth-driven organization, to the point of a redefinition of youth-driven as being an equitable partnership between adults and youth.

*Respectful and inclusive dialogue* has pushed us to develop and utilize many decision-making tools that facilitate broad involvement in the organization, such as a consensus-based approach that incorporates brainstorming and facilitation. Most of EYA's staff members are trained extensively in facilitation and conflict-resolution techniques, primarily because of the life skills training we give the participants in our programs.

*Self-responsibility* as a minimum specification seeks a balance between personal autonomy and responsibility toward the organization. EYA still cultivates a level of chaos: it is highly decentralized, and there are no official administrators within the organization, other than the accountant. Co-ordinators have broad leeway in running their programs. Programs are designed on a minimum-specification template and there are no set ways to go about programming, though the culture of the organization demands that certain topics be covered, e.g. power (the "isms" – sexism, racism, etc.), conflict resolution, facilitation and group skills. Programs are also based on the "youth-driven" model. Recently a policy manual has been created, but its language is suggestive as well as prescriptive. EYA thus demands a high level of self-management in the way that staff members work, and this minimum specification is reinforced in our weekly staff meetings. Self-responsibility is accepted because of the freedom staff have in designing

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their programs. Without this freedom, self-responsibility could be perceived as lack of support.<sup>7</sup>

Each of these minimum specifications has at its core a strong emphasis on communication and dialogue. Without the constraints of policy manuals and set ways of doing things, there is room for many novel ideas to be tested while maintaining a focus on core values. These core values are not merely words in a mission statement but are embodied in the relationships among the members of the organization.

The experiences of EYA over its three eras from 1991 to 2003 can be helpful to other youth-driven organizations in uncovering the challenges that similar agencies might have to face. These challenges can be better understood by looking at youth-driven organizations through a complexity lens. The following section will explore and explain some aspects of complexity science and some complexity tools as they relate to the youth-driven organizations.

### **A Non-hierarchical Organizational Model: Complexity Theory**

Complexity theory, as presented by Brenda Zimmerman and her co-authors in *Edgeware* (1998),<sup>8</sup> is the foundation for a non-traditional management model based on a theory of interrelatedness derived from biological science. This contrasts with traditional management models, which are usually based on a mechanistic and hierarchical structure derived from the physical sciences. Zimmerman et al. do not suggest that the one should entirely displace the other: “Traditional management theories have focused on the predictable and controllable dimensions of management. Although these dimensions are critical in organizations, they provide only a partial explanation of the reality of organizations. Complexity science invites us to examine the unpredictable, disorderly and

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<sup>7</sup> In her report *Bridging: An Inquiry into Naming the Essence of EYA* (Vancouver, n.d.) Michelle Pante mentions lack of support (specifically by management) as a key concern, due to the complexity of the relationships between EYA members, leaders, volunteers and stakeholders.

<sup>8</sup> Brenda Zimmerman et al., *Edgeware: Insights from Complexity Science for Health Care Leaders* (Irving, TX: VHA Inc., 1998). Also available on line at “Edgeplace,” <http://www.plexusinstitute.com/edgeware/archive/index.html>.

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unstable aspects of organizations. Complexity complements our traditional understanding of organizations to provide us with a more complete picture.”<sup>9</sup>

In this section I will relate three aspects of the organizational structure of EYA to the complexity principles articulated by Zimmerman. I have chosen them because they are largely responsible for EYA’s success. First, EYA’s strong collective, non-hierarchical instincts are reflected in Zimmerman’s description of *swarmware versus clockware*. Swarmware refers to management processes that focus on “experimentation, trials, autonomy, freedom, intuition and working at the edge of knowledge and experience,” versus processes that are “rational, planned, standardized, repeatable, controlled and measured.” The second complex characteristic of EYA is its creative nature, which pushes the organization “beyond the cutting edge to the bleeding edge.”<sup>10</sup> EYA has been compared to a nonprofit research-and-development firm taking knowledge that is being newly tested in the community, scaling it up and putting it into practice. This process is similar to Zimmerman’s principle of *tuning to the edge*, by which a complex organization performs a balancing act between that which is known and understandable and that which is unknown or unclear, and accepts the discomfort that goes along with this. The third complexity characteristic of EYA is seeing *conflict as a positive process* that can lead to greater organizational development. This mirrors Zimmerman’s principles of *cooperation and competition* and *paradox and tension*. EYA has created an ideal space for cooperation in which people are encouraged to continuously learn, and competition in which stakeholders are expected to challenge one another. This paradox creates tension, which is the lifeblood of the organization. Each of these principles will be related to EYA in particular, and to youth-driven organizations in general.

### **Youth-driven Organizations as Complex Adaptive Systems**

Complexity science is based on a philosophy that says that though one might know what is happening in the immediate, as time progresses that which is ultimately knowable

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<sup>9</sup> Ibid., 7.

<sup>10</sup> See pp. 26– 27.

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decreases. Complexity science suggests that you trust your instincts, look for the patterns over the straight lines and believe in the subtle rather than the obvious.

Leaders in youth-driven organizations often embrace the principles of complexity science unwittingly in their early stages of development (as EYA did from 1991 to 1993); there is often no time or support to do otherwise. When they reach the point at which their organization begins to grow and expand, they also reach a point of crisis, then feel forced to re-structure the organization – create more policy, define roles, establish a hierarchy – often against their own will and the will of the young people they work with. In this part of the paper, I hope to give these leaders a complexity framework in which they can place their organization, and some tools with which to build upon the strengths of their complex agencies. However, I do not believe that all youth-driven organizations could exactly replicate how EYA evolved, nor should they aspire to do so.

What would EYA have needed to know in order to avoid its major crises? First of all, we needed to understand that we did not *have* to conform to the model of organizational development traditionally espoused by the corporate world – a *clockware* model that is “rational, planned, standardized, repeatable, controlled and measured.” If we had known that there was a model which celebrated the chaotic aspects of our organization – a *swarmware* model, based on “experimentation, trials, autonomy, freedom, intuition and working at the edge of knowledge and experience,” we would have strengthened those swarmware areas, and would have better been able to deal with EYA’s “clockware” components. I will further expand upon concepts such as clockware and swarmware in this section, and will demonstrate how youth-driven organizations can, with full awareness, make use of complexity science as successfully as EYA managed to do through trial and error.<sup>11</sup>

The start of my journey in understanding complexity science, and by extension EYA and youth-driven organizations in general, was to look at the basic building block of complexity – the *complex adaptive system* (CAS). A CAS is a system made up of a variety of agents, each behaving with the use of local knowledge, which are rooted in

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<sup>11</sup> Zimmerman et al., *Edgeware*, 3.

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their relationship to others within the system. In practice, nearly anything that is organized as a system – an individual, a family, an ecosystem – can be viewed as a CAS.<sup>12</sup>

A further understanding of complex adaptive systems has been achieved by the computer modeling of largely natural or biological phenomena, such as the BOIDS program created by Craig Reynolds that demonstrates the flocking nature of birds.<sup>13</sup> Reynolds observed that flocking birds would be unable to complete their intricate manoeuvres if they used a traditional hierarchical model of management – if the flock were following a “lead bird” each successive bird would be less and less physically able to react quickly enough. In the computer models that he created, when he used a hierarchical management structure the birds always “hit the wall.” However, if the birds followed a more relational, distributive model in which they followed a set of minimum specifications on how they related to the bird in their immediate vicinity,<sup>14</sup> they would not run into one another, and a flocking motion would happen.

The BOIDS model fits my observations of how youth-driven agencies work. There is often little hierarchy and a deliberate drive to maintain a “flat” organization structure. Thus, like the BOIDS, the organization is run on a very localized and relational basis, with no overarching policies or rigid directives. For example, a survey undertaken by EYA in 1997 of youth-driven organizations found that very few had any policy at all. Decisions such as human resource management would be determined both on past practice and organizational culture, and on the immediate and local qualities of an issue. EYA’s minspecs of transparency, respectful and inclusive dialogue, and self-responsibility represent the minimum rules (and supporting values) under which EYA agrees to work.

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<sup>12</sup> Ibid., 8.

<sup>13</sup> See Reynolds’s Web site, “Boids: Background and Update,” <http://www.red3d.com/cwr/boids/>.

<sup>14</sup> The BOIDS experiment has 3 minspec rules: (1) *Separation* (don’t get too close to any object, including other boids); (2) *Alignment* (try to match the speed and direction of nearby boids); and (3) *Cohesion* (head for the perceived center of mass of the boids in your immediate neighborhood). Complexity science infers from this experiment that even a few simple rules can allow complex things to happen, and complexity theorists frequently use BOIDS as a model to illustrate a minspecs approach.

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## **Complexity, Management and Leadership**

A key term the authors of *Edgeware* use to characterize complexity-tuned CAS management is *swarmware*: a form of distributed leadership that allows high autonomy for staff to improvise and use their own intuition. Swarmware has minimal hierarchy and management, and thus all are pushed to the limits of their abilities, relying upon internalized minspecs for coordination rather than leadership from a few individuals. Swarmware management makes a good fit with youth-driven organizations because the informal organization, with its relationships and dialogues, is as important as, or more important than, the formal organization. This form of management contrasts with a “clockware” approach, which is rational and planned by a few for the many, and favours prescribed roles and responsibilities that are coordinated through hierarchy. It is important to note that these terms are not precise. The authors of *Edgeware* consider them to be metaphors, presenting a general idea or image of what a given type of organization looks like, rather than prescribing a specific recipe. It is unlikely that you would be able to find a “pure” clockware- or swarmware-run organization; you would more likely find organizations that combine the two models to varying degrees.

Youth-driven organizations often have no choice but to base their decision making on a swarmware model, since they may not have the infrastructure, experience or the staffing to do anything else. Seen within a negative context, swarmware appears as chaos – an accusation that has been levelled many times at EYA. However, complexity science suggests that swarmware is essential in contexts where creativity and adaptation are the keys to success. It allows experimentation, provides autonomy for people to run their own programs, and supports people who push the boundaries.

## **Complexity and Self-organization**

The application of complexity theories to organization and management followed the emergence of new scientific ideas in the late 1980s. Ralph Stacey, one of the principal proponents of complexity science, suggests complexity science has potentially radical

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applications in management.<sup>15</sup> His work describes a number of complex processes, such as self-organization and the emergence of pattern and order from less ordered states. Like Zimmerman et al., Stacey explains that complexity science focuses on a distributive or relational model of the world, rather than one that is mechanistic and hierarchical. This model is well suited to youth-driven organizations: from my experience, young people naturally self-organize in a way that is emergent and relational.

The theory of complex adaptive systems (CAS) focuses on a system's internal capacity to evolve spontaneously through self-organization. For the purposes of my analysis, self-organization refers to interactions between individuals, or agents, in the absence of a system-wide plan. CAS, as explained earlier, are characterized by a large number of agents, each operating by a set of rules to adjust its behaviour to that of other agents. A central concept in this model is a theory of self-organization that involves the "emergence and maintenance of order, or complexity out of a state that is less ordered, or complex."<sup>16</sup>

An aspect of Stacey's thinking that is relevant to EYA is his theory that "self-organizing agents" are always participants and can never dictate the actions or outcomes of the organization they are involved in. He argues that self-organizing agents can only affect their organization through localized interaction based on established relationships. For youth, as for Stacey, the important organizing question becomes whether the behaviour of those involved serves to block or enable change.<sup>17</sup> This question, combined with the ideology of an organization run exclusively by youth, has been a defining theme during the first three eras of EYA. The story of EYA from 1991 to 2001 is the story of an organization's struggle between its stated desire for a non-hierarchical organization, and the need for leadership and articulated processes.

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<sup>15</sup> Ralph D. Stacey et al., "Complexity and Management: Fad or Radical Challenge to Systems Thinking?" in *Complexity and Emergence in Organizations*, vol. 1 (London, 2000).

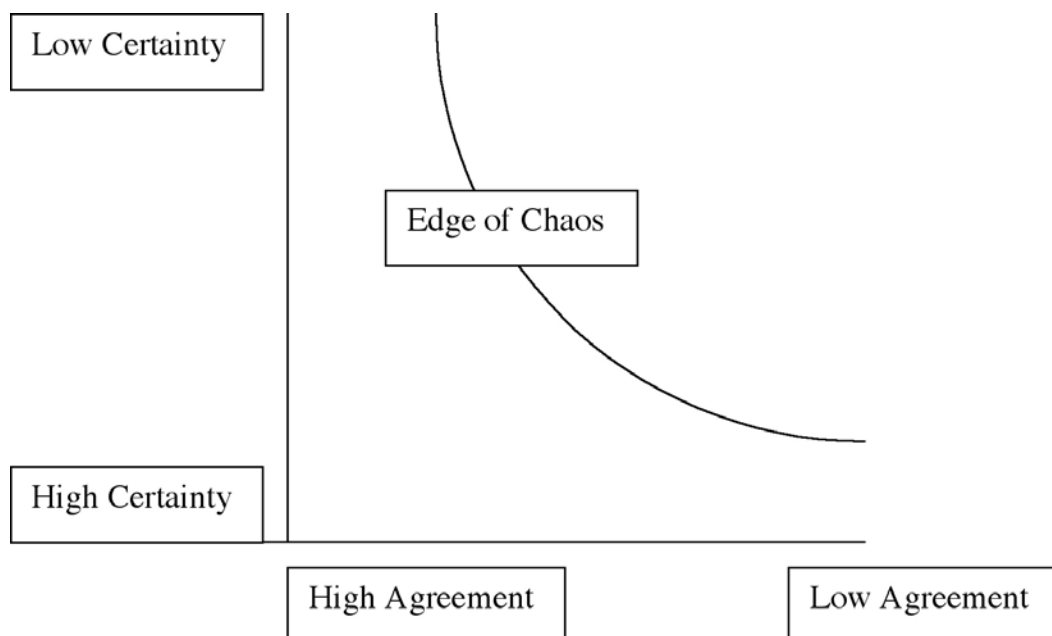
<sup>16</sup> Stacey et al., 276

<sup>17</sup> *Ibid.*, 313

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## Tuning to the Edge

In exploring its character as a complex adaptive system, EYA has embraced the complexity principle which encourages organizations to *tune to the edge of chaos* rather than seek certainty. Zimmerman et al. explain: “Foster the "right" degree of information flow, diversity and difference, connections inside and outside the organization, power differential and anxiety, instead of controlling information, forcing agreement, dealing separately with contentious groups, working systematically down all the layers of the hierarchy in sequence and seeking comfort.”<sup>18</sup> The use of this principle in youth-driven organizations is key; as a leader, it gives me a way to describe my experience that success comes not from moving towards clockwork and institutionalization, but from the ability of the organization and its staff to push the boundaries.



SOURCE: Simplified from Zimmerman et al., *Edgework*, 140.

**Figure 1. The Stacey Matrix**

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<sup>18</sup> Zimmerman et al., *Edgework*, 31.

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A tool to better understand the dynamics of this principle is a diagram created by Ralph Stacey called the Stacey Matrix (Figure 1).

When an organization is in a state of *high certainty* and *high agreement*, it is probably not pushing its boundaries or taking any risks. This space would be, in management terms, a simple state. Many people believe that this is a desirable state that organizations should strive to attain. But research shows that this is not the case. If an organization is not being pushed and challenged, if it is not taking risks and adapting, it may be comfortable, but it is inevitably declining.

At the other extreme, an organization that is in a state of low certainty and low agreement is one that is focusing all its capacities towards the cutting (or “bleeding”) edge; it is in the “zone of complexity” and flirting with the edge of chaos. Though for some this is a difficult place to be, it is the place where new ideas are generated and dynamism happens. This uncertain space often fosters two other paired principles of complexity: *cooperation and competition*, and *paradox and tension*.<sup>19</sup> This, as explained earlier, is often due to limited resources, which force the organization to be creative, experimental, and intuitive, often pushing the organization to the edge of chaos. If this near-chaotic state is assumed to be the normative way of working, the organization will take on a consistently chaotic quality. This is not necessarily bad; surveys done at EYA revealed that some members took pride in the chaotic nature of the work. Other staff expressed concern that the work was too chaotic – that they had to always be coming up with new ideas to keep the organization moving forward. Thus an environment of both cooperation and competition was created – a need for all move forward together, but with the expectation that everyone is doing so at 110-percent output. A leader within a “tuned to the edge” organization must balance the tension created by this dynamic.

This kind of leadership does not try to generate the creativity and vision for the organization, but to maintain an atmosphere of creative dialogue. Stacey writes:

Effective managers are those who notice the repetitive themes that block free flowing conversation and participate in such a way as to assist in shifting those themes. . . . Effective managers will seek opportunities to talk to people in other communities and

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<sup>19</sup> See Zimmerman et al., *Edgeware*, 33, 41.

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bring themes from those conversations into the conversational life of their own organisation. They will be particularly concerned with trying to understand the covert politics and unconscious group processes they are caught up in and how those might be trapping conversation in repetitive themes. They will also pay attention to the power relations and the ideological basis of those power relations as expressed in conversations.<sup>20</sup>

Far from playing a lesser role under this non-traditional definition of leadership, the manager in a complex organization must have the ability to work and communicate with a broad range of external and internal stakeholders. EYA has refined this role further by defining the minspecs of transparency, respectful and inclusive dialogue, and self-responsibility that the manager facilitates within the organization. I would like to end this paper by coming back to a more in depth description of these, as the development of a shared set of minimum specifications is the foundation that allows all the other aspects of complexity to flow in a youth-driven organization.

## **EYA Minspecs and Youth-driven Organizations**

### ***Transparency***

Throughout its evolution, EYA has found that transparency is key to the effective functioning of our organization. I have described leadership as the “dark stranger” that has loomed ominously over EYA’s history. Transparency has brought the dark stranger into the light, and in complexity terms, released the dialogues of the shadow organization into the larger organizational conversation. Stacey believes that the tension between the shadow conversations and the mainstream organizational conversation is the source of creativity.<sup>21</sup> This has proven to be true within EYA, and nowhere more so than in the crucial dialogue about leadership and power.

This occurred in stages. In the first era of EYA, a false position was promulgated, according to which the organization was run by youth, when much of the organization in fact was run by the adult Board. In the second era of EYA, the youth-run ACCESS

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<sup>20</sup> Stacey, Ralph D., *Strategic Management and Organizational Dynamics* (Philadelphia, 1999), 16.

<sup>21</sup> *Ibid.*, 20.

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committee again distorted the true picture of the organization, as power was centralized in young people who were not legally responsible for the organization. In both these eras, it can be seen that transparency of leadership and power were the core issues. In the current era of EYA there has been an attempt to uncloak the dark stranger of leadership and show, without apology, how leadership and power really work in the organization.

Transparency is key to youth-driven organizations functioning on a swarmware model; without transparency, they descend into infighting and chaos. One of the surprising findings in EYA's study on youth-driven organizations in Vancouver was that only one organization was "purely" youth-driven, i.e., run by young people without adult help. All other organizations had a broad range of youth and adult leadership; some had no youth at all in leadership positions. This study helped EYA to focus on the reality of the organization, versus ideologically based myth of the purely youth-run organization, and allowed many agencies to admit to having adults involved.

### ***Respectful and Inclusive Dialogue***

Transparency in youth-driven organizations also has a broader application. Stacey, in his recent writings on complexity science, maintains that dialogue is the truly cohesive factor in organizations. He suggests that organizations are a pattern of conversations, and that an organization changes only insofar as its conversational life evolves.<sup>22</sup> When that dialogue becomes "stuck" and conversation breaks down so does the organization.<sup>23</sup> In EYA this breakdown in conversation lasted for many years when people justifiably felt they were out of the loop – without access to power or decision making.

Many of the differences between swarmware and clockware agencies hinge on this question of a fluidity of dialogue versus codified and written policies or regulations. Swarmware agencies are high-touch, low-policy agencies. Behaviour is regulated by an agreed-upon, often unwritten, culture or set of minimum specifications, which are reinforced through day-to-day interaction. Job descriptions are likewise more fluid than in clockware agencies, as roles are negotiated sometimes on a day-to-day basis.

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<sup>22</sup> Ibid., 5.

<sup>23</sup> Ralph D. Stacey, *Complex Responsive Processes in Organization* (London, 2001), 228.

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Hierarchies are levelled and anyone in the organization can speak to the CEO at one moment and the next moment be cleaning the toilets. This fluidity in roles and policy is possible because there is a high level of respectful dialogue among the staff and participants within an organization. Inclusion and dialogue are facilitated by the fact that most youth-driven groups are relatively small.

The boards of youth-driven swarmware agencies often take an active role in the dialogue and life of the organization. Boards are less likely to confine themselves to policy or fundraising, and may even become directly involved in program delivery.<sup>24</sup> Often the board's membership overlaps with people who are actively involved in the day-to-day work of the organization.

Stacey goes so far as to suggest that dialogue is the unifying force of human organizations. He places the creative and generative aspects of an organization not in its systems, but in the dialogues of its members. When looking at youth-driven agencies as informally structured swarmware organizations, we see that dialogue rather than policy is the cohesive factor. Thus, to maintain the successful qualities of a swarmware organization, a leader must build upon and facilitate its dialogues. It follows that tools such as conflict resolution, facilitation, anti-oppression training, all are key to maintaining free-flowing, unimpeded dialogue.

### ***Self-Responsibility***

Self-responsibility emerged as a minimum specification in the second era of EYA (1994–1998) out of the dialogues described above. A strong focus developed on being responsible for one's internalized beliefs or prejudices – meaning that people can unknowingly hold racist, or homophobic, or sexist beliefs, and act on those beliefs. Self-responsibility as practiced in EYA recognizes that it is each person's responsibility to discover and examine his or her internalized belief system, and assume responsibility for changing his or her behaviour. This responsibility is especially important in EYA and other youth-driven organizations where a fully developed policy infrastructure does not

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<sup>24</sup> For example, the president of EYA's board spent six months last year coordinating a team of ten young people in a biosphere reserve in central Ecuador.

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exist and self-regulation replaces much of the supervisory functions of traditional organizations.<sup>25</sup>

## **Our Story Evolves**

As EYA has grown larger it has faced a gradual trading off of its swarmware for clockware-organized features. EYA now has a larger body of policy because it is harder to transfer the cultural norms of the organization through “high-touch” methods; for the sake of organizational equity certain things must be codified. As with all organizations, there needs to be a bit of clockware in the agency. It is neither appropriate nor safe in this time of corporate and nonprofit accountability to experiment intuitively with procedures such as accounting or liability.

Each organization or leader must chose how much risk the organization will tolerate in adhering to a swarmware model, recognizing that an imbalance on either side has potentially negative effects. Youth-driven organizations that become institutionally bound to a clockware organizational model face the threat of losing not only their innovative strengths but also the interest of the youth involved, who may feel they no longer have sufficient autonomy or freedom. On the other hand, an organization that has no structure makes people feel that there is too much risk – sometimes with legal consequences. EYA has attempted to deal with this issue by mentoring our younger leaders.

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<sup>25</sup> EYA’s 1998 survey of youth-driven organizations found that the majority had little or no policy structure.

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## Conclusion

In writing this paper I have given a brief synopsis of my journey with a complex organization. My struggles over the past fifteen years, as well as those of many others who have run youth organizations, reflect a hunger by many to understand the complexities of youth and youth organizing, with the goal of allowing young people a greater say in the affairs of the local, national and international communities in which they live.

I believe complexity science will pull back the veil on the many challenges that youth managers face. With complexity theory, youth managers can with more confidence explain why and how their organizations work, versus being seen as flaky, radical or worse. Principles such as swarmware give hope that youth organizations need not adopt the conventions of hierarchy. Stacey's matrix demonstrates to youth that their ability to think outside the box, and on the edge, is a valuable skill. The strong focus on interdependence and dialogue also supports the focus of youth, and youth organizations, on the importance of relationships. Though there will always be challenges in organizing, and self-organizing, complexity science brings new light to the previously inaccessible science of management. It is my hope that this paper, though not a prescriptive roadmap, is at least a good story.

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