

# **The Value of an Ecosystem-Based Approach to Organizational Sustainability: The Case of a Hybrid Sports-Based Youth Development Social Venture in the US South**

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*This article explores complexity-thinking, non-linear-based models for non-profit entities aiming to create a systemic change. It applies an 'enriched', ecosystems approach that accounts for non-linear inputs-outputs, tipping points, dynamic contexts, and human, non-human, and institutional actors, capturing the various relationships and their multi-directional characteristics. It introduces additional factors, such as feedback loops and emergent changes, that can allow an organization to find new strategies towards sustainability and social impact. We apply this ecosystem model to social entrepreneurial organizations operating in the field of sports-based youth development via the case of A's & Aces, drawing from first-hand experience and organizational data.*

*Keywords: ecosystem-based model, sports-based youth development, social entrepreneurship, sustainability, A's & Aces*

## **INTRODUCTION**

The pursuit of lasting social value in the face of chronic and systemic issues - such as structural racism, and classism and race-based gaps in youth opportunities in the United States (US) - requires systems based thinking and analysis to guide actions and policies. This paper argues for employing a complex adaptive system ("ecosystem") approach to guide social mission-driven organizational strategy, innovation, and long-term sustainability through a case study of A's & Aces, a New Orleans-based "hybrid" non-profit organization impacting under-resourced children through tennis, education, and life-skills. The paper first reviews literature on complexity and ecosystems thinking for organizational strategy and social change, presenting an ecosystems approach. We apply this ecosystem model to social entrepreneurial organizations operating in the field of sports-based youth development via the case of A's & Aces, drawing from first-hand experience and organizational data. Ecosystems thinking - in contrast with conventional, linear, equilibrium-based logic models - brings awareness to a wide range of relevant actors and unseen opportunities in interconnected, inter-dependent, complex systems. Sources of unpredictability (e.g., impacts of climate change, global pandemics) are not just external threats (as in risk-management thinking) but active agents in dynamic, ecological systems. The case study further highlights opportunities for hybrid,

civil society non-profits as unique organizations distinct from those in the government or private commercial sectors that seek multiple revenue streams.

## LITERATURE REVIEW AND CONCEPTUAL FRAMEWORKS

Before presenting the organizational case study, we introduce what we mean by an ‘ecosystems approach’, with a brief review of literature on complexity thinking and its application. We then situate the case study in the specific domain of sports-based youth development (SBYD).

Complexity refers to concepts in several fields spanning complexity sciences as well as applications of complexity thinking in different domains. As a science, complexity is an established field arising from different disciplines. Complexity thinking dates to the 1940’s, drawing from computer science, cybernetics, systems-thinking, ecological sciences, and physics. It captures a type of system where “complexity” is featured, where the “whole is greater than the sum of its parts”, where there is unpredictability, and other features characteristic of complexity noted below. John Holland (1992) offers a scientific view on *complex adaptive systems* – the systemic object of study is a “moving target” and challenging to understand, interpret, predict, and control, and he points out the value of computer modeling to simulate the real world. Building the science of complexity, physicist Fritjof Capra (1996) popularized systemic-thinking as a tool for understanding the world in his book *Web of Life*. Ecologist and data scientist Eric Berlow (2010) described the power of complexity to understand food webs in nature and offered a powerful insight that complexity is not “complicated”. In fact, researchers can find a few simple rules that guide the emergent property of complexity of a variety of systems ranging from birds flocking and slime mold colonies growing, to humans organizing in cities, and patterns of traffic.

The term “ecosystems approach” specifically refers to the application of integrative complexity insights to social sector organizations. An ecosystems approach is based on insights and modeling of complex systems, complex adaptive systems, complexity, and chaos theory (Resnicow & Page, 2008). Employing an ecosystems approach means to “embrace complexity” of situations rather than deny it through disciplinary lenses, which would be a “reductionist” approach. By ‘embracing complexity’ we imply the recognition of several features that characterize complex systems. There is an inter-dependence of actors within systems and feedback that can be either positive (or amplifying), or negative (or dampening). Non-human actors are also relevant, including natural forces such as weather, and human-made technological artifacts, such as cars and cellphones. Non-linearity characterizes the relationships between inputs and outputs in these systems; that is, factors driving change within a system are not constituting a predictable linear model but rather non-linear exponential functions such that change shows up as dramatic and irreversible “tipping points” in a system. Incertitude, or many forms of uncertainty, is thus a central feature of complex systems. It can take the form of calculable risk, incalculable uncertainty, ambiguity of perspectives, and ignorance. Sources of unpredictability, such as impacts of climate change, global pandemics and recessions, are not just external threats (as in risk-management thinking) but active agents in dynamic, ecological systems. Ecosystem thinking - in contrast with conventional, linear, equilibrium-based logic models – thus brings awareness of a wider range of relevant actors, and of unseen challenges and opportunities in inter-connected, inter-dependent, dynamic systems.

General implications of a complexity worldview relate to epistemology, organizational strategy, and problem-solving. Epistemologically and in terms of what constitutes valid knowledge, research methods must be suited to understanding whole-system interactions and seeing change as holistic, emergent, and inherently unpredictable. Approaches to knowledge production may take diverse forms of data-intensive, computer-based simulations, such as of global climate change, or modeling natural systems as referenced by Holland (1992). These models can be tweaked to change initial conditions and envision different futures; any action entails intervening within a system, leading to potential feedback and change. Innovation itself can be understood as an emergent property of a system, an outcome of interactions, whose results are greater than the “sum of the parts”.

In organizational strategy, complexity leads to new models of leadership to support innovation (Goldstein, Hazy, & Lichtenstein, 2010). Adner (2017) reveals that “innovation ecosystem theory” is

developing rapidly as a new field of research in business and management studies, especially business, technology, and service innovation. Jacobides, Cennamo, and Gawer (2018) point out that “ecosystem” is appearing in the title or abstract of top strategy journals more frequently. Boulton, Allen, and Bowman’s (2015) book *Embracing Complexity* reviews the science before applying it to several case studies across organizational settings from private firms to non-profits.

Finding solutions to complex societal problems in a highly globalized, interconnected world - often termed “wicked problems” (Rittel & Webber, 1973) - requires understanding the systems, paying attention to components, relations, feedback loops, outside influences and surprises, and the resulting dynamics. For example, applying chaos theory to public health problems (Resnicow & Page, 2008) shows how complexity informs our understanding of individual behavior change and thus shapes new, more effective interventions.

Other social sector applications, such as social labs, embrace complexity as new models of collaboration to address societal problems. Social labs are multi-stakeholder platforms for prototyping ideas to solve wicked problems at the scale at which the problems exist (e.g., a city, a watershed, multi-national markets) (Hassan, 2014). Several books explore applications for addressing problems of poverty, disasters, and food security in international development, foreign aid, and humanitarian action. Ben Ramalingam’s 2013 book *Aid on the edge of Chaos* is a comprehensive survey of complexity science and exploration of implications for policy, programs, and practices to address food insecurity, poverty, and other concerns. Work by STEPS Centre (UK) team integrates complexity with science studies to proffer a modest “pathways approach” to sustainability of livelihoods and cultural practices in specific urban and rural settings in India and Sub-Saharan Africa (Leach, Scoones, & Stirling, 2010). This approach captures plural knowledges and acknowledges many forms of ‘incertitude’ in complex situations. In the US context, the Black social movement activist adrienne marie brown fully “embraces complexity” in her 2017 book *Emergent Strategy*, showing a range of practical applications for social movement activists, especially those challenging structural racism and the climate crisis in the United States.

Social enterprise and social entrepreneurship sector applications in part echo business strategy. Adding to the field of social entrepreneurship, Bloom and Dees (2008) argue that in order to create a systemic, social change, social entrepreneurs need to understand these complex, dynamic systems in which they operate and are trying to change. Their “ecosystems mapping” illustrates these complex, non-linear relationships using categories of “players” and “environmental conditions”. Roundy (2017) proposes a conceptual framework to explain the interrelationship between entrepreneurial ecosystems and social entrepreneurship, emphasizing the community relations and cultural factors in which social entrepreneurs operate. Spigel and Harrison (2017) research the context of business entrepreneurship, growth, venture creation, and regional economic development, recognizing “resource flows through social networks” as key to a well-functioning system. Bringing economic analysis from conventional firms to analysis of social impact and scale, and identification of social value, Day and Jean-Denis (2016) argue for a more integrated understanding of social entrepreneurship, combining four different types of resources - financial, human, social, and political capital - each contributing to the scaling of social impact by mitigating resource limitations and thus increasing opportunities for social innovation. Our framework builds on these enhanced ‘ecosystem approaches’ and complexity models, and it includes additional ‘factors’ such as unexpected surprises, idiosyncrasies and feedback loops while treating all factors (e.g., weather, climate events, infectious disease pandemics) as part of the ecosystem, rather than external elements.

These ways of thinking about systems and change are not new: Donella Meadows (2008) wrote about complex system thinking in relation to earth’s systems, resilience, and points of intervention. Futurist Hazel Henderson used chaos theory in the 1990’s to guide new thinking around civil society and social innovation (Henderson, 1993). This ecosystems approach continues to gain traction across many fields and domains - spanning from mainstream business strategy to social enterprise structures, and mainstream international development to radical social change. This way of thinking helps make sense of phenomena, especially the pace at which change is occurring that has been catalyzed by digital communication technologies and increasingly inter-related economies and populations. This way of thinking can usefully guide data collection, monitoring and evaluation processes, “theory of change” models for non-profit entities, and other organizational activities (Murphy, Faughnan, Monhartova, & Schwanz, 2020). This can guide long-

term strategy for social mission-driven organizations, such as supporting overall system resilience as a key property, rather than maximization of growth or survival of any one organizational actor in the system. These themes emerge in the case study.

### **Sports-Based Youth Development in the United States**

The term ‘sports-based youth development’ (SBYD) was coined during the 2006 summit *Active Youth: A National Leadership Summit to Connect Sports, Health and Learning in Out-of-School Time* to refer to programs or organizations that use sports to get children (<18) and youth (<25) engaged in “out-of-school time” opportunities that provide them with healthy life-style options, life skills, and academic support. Sports are not just opportunities for exercise and recreation; sports are a hook to get children engaged in academic and life skills activities in a safe, fun, and enriching environment.

SBYD organizations differ from sports clubs in their social mission focused on human rights. According to the United Nations (UN) Sport for Development and Peace System:

sport and play are human rights that must be respected and enforced worldwide; sport has been increasingly recognized and used as a low-cost and high-impact tool in humanitarian, development and peace-building efforts, not only by the UN system but also by non-governmental organizations (NGOs), governments, development agencies, sports federations, armed forces and the media. Sport can no longer be considered a luxury within any society but is rather an important investment in the present and future, particularly in developing countries (UN System).

While access to sports is important, for SBYD programs learning sports-based skills *per se* is secondary to academic learning and life-skill development (Perkins & Noam, 2007). These are essential to succeed beyond school and especially important for low-income children who often lack access to quality enrichment activities and out-of-school time program options that can help close the achievement gap. Sports-based programs, whether out-of-school or in-school, provide important extracurricular outlets for disadvantaged children who are particularly susceptible to influences that can lead to poor outcomes. Research shows that sports could help narrow the achievement gap between African American students and white students. Braddock, Royster, Winfield, and Hawkins (1991) found that male African American 8th grade athletes were more likely to have plans to complete high school and attend college than non-athletes. Many SBYD organizations target these opportunity gaps and other structural crises that disproportionately afflict under-resourced children and youth and inhibit their development.

The term “under-resourced” is used in this paper to describe populations that are lacking external resources (e.g., quality enrichment programs) and which are facing structural and institutional barriers that prevent them from accessing these resources in a socially just manner. Many minority children lack access to out-of-school-time opportunities due to their low socio-economic status as well as other structural factors related to race in the US. African American middle school students in Chicago spent only 2.6% of their time in structured after-school activities (Bohnert, Richards, Kolmodin, & Lakin, 2008). In New Orleans, the Youth Risk Behavior Survey designed by the Centers for Disease Control and Prevention (CDC) showed that only 26.1% and 13.2% of African American boys and girls respectively, met the CDC recommendation for daily physical activity (Centers for Disease Control and Prevention [CDC], 2005).

Despite such research calling for more SBYD and other enrichment opportunities, reliable funding for SBYD programming is often lacking. The report *Roadmap to Afterschool for All* (Earle, 2009) called for greater investment from all sectors to help ensure that under-resourced children in particular can access quality affordable after-school programs. Unfortunately, economic downturns and subsequent economic cuts in both public and private sectors have had a negative impact on funding for sports programs and extracurricular activities in general. For instance, cuts in education forced many US public schools to spend their scarce resources on the core subjects mandated in the ‘No Child Left Behind legislation of 2001’ and concentrate their efforts on test scores and advancing pupils to the next grade level (Rentner et al, 2006). Fewer physical education (PE) classes, recess hours, and extracurricular activities resulted. Similarly, out-



of-school-time programs that derive funding from the private sector faced cuts due to the recession, and government funding was channeled to basic teaching.

In these scenarios, organizations which depend on donations and grants must face cuts to their programs, charge or raise fees, or employ other strategies to maintain programming, such as following hybrid social enterprise models of diversifying revenues. Charging fees has unequal effects as youth from low income families are less likely to attend programs that charge fees (Simpkins, Ripke, Huston, & Eccles, 2005). With access to SBYD programs being more limited and given that they play positive roles in children's development and opportunities, minority low-income children will be further left behind in life when these programs lose financial security. The 'opportunity gap' will keep growing.

Despite evidence in their favor, rarely do public schools in low-income neighborhoods offer a variety of sports, especially non-traditional ones. Non-traditional school sports, such as golf or tennis, have already been historically inaccessible to most low-income communities. This is in part due to high participation costs and other structural factors. Rather than bringing people together by being accessible to all children, these sports have been seen by minority groups as elitist or "white sports", especially in the US.

African American studies and sociology professor Lori Martin (2015), in *White Sports/Black Sports: Racial Disparities in Athletic Programs*, unpacks myths of post-racial society in the US. Martin asserts that to ensure all Americans enjoy the country's promises of fairness, justice, and equality, we must understand the role of race and racism and address structural barriers that perpetuate inequality in all areas of social life, including sports. Thus, for instance, organizations that charge fees without offering any "scholarships" (i.e., fee waivers) discriminate against children from low income households. Martin argues that previous efforts to address structural racism in sports have failed; they were, at best, symbolic attempts, not solutions to create systemic long-lasting change. This disparity is exemplified by a study conducted by Hartmann and Manning (2016) using an example of youth soccer clubs: while minority children from low income neighborhoods are actively recruited by 'elite' programs, access for these children at the recreational level is not supported.

SBYD in the US have a place in overcoming historically formed structural racism and injustice, in promoting access to sports as a right, and in narrowing the "achievement gap" for low-income children of color. Especially in a US context, given the educational system, SBYD organizations have the opportunity to remove structural barriers and help 'level the playing field' for many children. SBYD entities face challenges in conventional donor funding, thus looking to social entrepreneurial strategies for inspiration. This article goes on to explore the application of an ecosystem approach for challenges facing a specific SBYD organization that is aiming for systemic change and the removal of institutional barriers so all children can access affordable, quality programming.

## **CASE STUDY: A'S & ACES**

### **Introducing the Organizational Case**

A's & Aces was founded in New Orleans in 2008 with a mission to provide academic assistance, life skills, and tennis to New Orleans children. A's & Aces was incorporated in the State of Louisiana as a 501 c3 and is governed by a Board of Directors. Currently, the Board has eight Directors. Since 2008 its budget has grown from \$0 in starting financial capital to over \$450,000 in restricted and unrestricted assets in 2020.

#### *Vision and Mission*

A's & Aces' vision is to build a healthier, safer, more successful future for New Orleans and the city's children through improved literacy, positive behavior, citizenship, and the enjoyment of tennis for life. A's & Aces' mission is to provide academic assistance, life skills, and tennis to New Orleans public school children.

#### *Goals and Objectives*

Organizational goals are to better prepare students to succeed academically, physically, and socially/emotionally in school and for a lifetime beyond, and to narrow the "opportunity gap" by creating more accessible, equitable, and socially just opportunities on and off the tennis court.

### *Strategies*

Tennis is a critical component of A's & Aces' tri-fold mission. It is the hook that draws children to get involved and stay committed. While character developing life-skills and academic support are critical to having successful productive lives, tennis can also provide an opportunity to build social, academic and career networks, and to participate in a fun, social, lifelong, global, non-contact, low-impact, co-ed, team and individual sport. Ultimately, this can provide incredible benefits to participants and for society.

### *Equity and Inclusion*

A's & Aces welcomes children of all backgrounds, regardless of their socio-economic status: African-American and other historically excluded ethnic/racial groups are the target populations. This includes those who need partial or full scholarships, as well as those who are in the higher-income household brackets. This diversity not only provides for an interaction among people from different backgrounds, but importantly, it also provides opportunities to use a sliding scale and bring revenue to the organization.

To achieve its overall goal, A's & Aces seeks to increase: academic attainments with a focus on literacy; tennis skills and physical literacy to promote life-long exercise habits; and, life skills and citizenship to promote community service and children's overall growth. A's & Aces uses best practices from the industry in terms of tennis curricula - such as downsized progression-based equipment for children ages ten and under, competitive opportunities, and low student-teacher ratios, among others. Caring, professional staff are assumed to be critical for children to learn and stay engaged. Effective programs rely on several essential programmatic features, including caring staff (Perkins & Noam, 2007). As regular participation and extended durations of exercise are required to achieve measurable gains in a child's development through sports (Bergeron, 2007), the presence of caring professional adults, low instructor-to-student ratios, the quality and overall enjoyment of activities, as well as engaging environments are essential to keep children involved over time (Dishman et al., 2005; Frederick & Ryan, 1993).

This SBYD model seeks to invite young children to the sport of tennis and retain those who are highly driven to be the best they can be in the classroom and on the courts, and who will use these skills to assist their pathway to college and throughout life. The rationale is that new tennis activities can result from people engaging with A's & Aces' programs - participants engage their parents, other relatives and friends, and graduating students create new tennis social networks and start new intrapreneurial initiatives (e.g., introducing a high school team within their school). This fosters new relationships and also shifts the perception of what tennis has been historically associated with: privilege and lack of access for under-resourced populations.

### **Understanding A's & Aces via Logic Model**

A 'theory of change' is a description of the desired outcomes and the impact an organization wants to see and the various steps that lead to that intended impact (Taplin & Clark, 2012). Conventional approaches to theory of change call for a 'logic model', a series of action steps charted into a conceptual framework. Standard categories are 'inputs', 'activities', immediate 'outputs', valued 'outcomes', and greater long-term societal 'impact'. Organizations use these to clarify purpose and activities to donors (who often require it) and to guide monitoring and evaluation systems. This is a starting point for our exploration of an ecosystem approach. A logic model helps articulate assumptions, clarify directions, and reveal hypotheses to explore around organizational strategy and tactics, i.e., the change we are aiming to achieve and how we get there.

### *Inputs*

In a logic model, inputs are the various forms of capital used to accomplish the intended social impact and systemic change. Usual forms of capital are human and intellectual, social, financial, natural, and physical.

With regard to human capital, A's & Aces has grown from a volunteer-only organization to employing a full-time Executive Director and several part-time and full-time employees/contractors. A's & Aces hosts over one hundred volunteers annually to help with instruction on the court, tutoring, mentoring, and fundraising support, and 8 AmeriCorps volunteers during the summer at no cost. There is considerable

turnover from year to year, however, requiring training and on-boarding. For example, service positions, such as AmeriCorps and service learners who constitute a majority of the volunteer labor force, are term-specific; AmeriCorps members serve eight weeks during the summer and service-learners come for 20-100 hours a semester. Continuity for the organization is kept by the Executive Director and the President. Part of human capital, intellectual capital represents a decade-long experience of providing services, operating a National Junior Tennis & Learning (NJTL) chapter, and recruiting participants to tennis.

Social capital is about “trust and norms of reciprocity”; it refers to the genuine partnerships and connections in human relationships between people. For A’s & Aces it includes connections with industry leaders (national, sectional, and district leaders of the United States Tennis Association, USTA), individual donors, school and city officials, alumni, and former volunteers among many others. One of the co-founders, for example, has decades of experience working in the New Orleans community. A former coach has also been a decade-long university tennis coach, providing connections to his university. Alumni of the program (as children) have grown up to now teach in the program during summers. Staff members of a local historically black college and university (HBCU) have provided space and support for program activities.

For financial capital, funding comes from individuals, businesses, and grants from various foundations and corporations, including the USTA Foundation. Earned income includes revenues from hosting tournaments and implementing a sliding scale for programming. In-kind support, such as access to courts and office space, is significant and contributes to about 40 percent of its annual revenues each year.

The main component of physical capital is not secure and depends on in-kind support from the City of New Orleans, including access to tennis courts and a classroom/academic space (City-owned Joe Brown Park Tennis Center) or university courts where A’s & Aces can operate. Tennis equipment and educational supplies are also secured via partnerships.

Natural capital is a strong asset for A’s & Aces as tennis is an outdoor sport in the Southern parts of the US needing reliable and mild weather. New Orleans’ climate provides for year-round outdoor programming.

### *Activities*

A’s & Aces provides a wide range of services, including after-school programming, Saturday clinics, holiday mini camps, summer camps, tournaments, and special events and initiatives. Its approach is to offer programming from the beginner/entry level to high performance players who train year-round.

### *Outputs*

On the individual level, we are referring to the participants of the various programs and activities: i.e., the unduplicated number of children served, the number of tournaments hosted, the number of tutoring hours, etc. Short term outcomes include increase in tennis skills and physical literacy, higher GPA, graduation to next grade, and others. Outcomes are both quantitative and qualitative, assessing each child on their own. For example, over time, one child may not achieve a high ranking but will continue playing tennis for the rest of his/her life.

### *Long Term Outcomes*

Other desired aims are organizational, community, and industry level shifts.

- Organizational level: This aspect refers to A’s & Aces creating structures and relationships to create systemic social change.
- Community level: This captures networks, relationships, and cultures, and views of tennis as a sport for the privileged to a sport of everyone. Increased health outcomes at the individual level lead to increased health outcomes at the community level. Building social capital is the result of various interactions among participants from different socio-economic and racial/ethnic backgrounds.
- Industry level: This refers to the macro-level change, shifting the system structures within the industry, in this case the tennis industry. A’s & Aces is also part of the SBYD movement and

takes part in advocacy efforts, leading to strengthening this field and bringing more resources to it.

### Impact

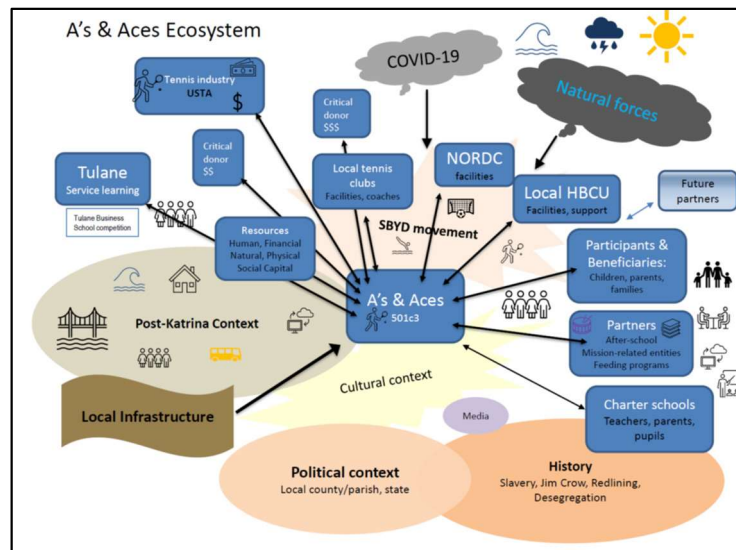
Since its foundation in 2008, A's & Aces has exposed over 5,000 children to the sport of tennis. Several former program participants have served as A's & Aces instructors, applying their skills to teach others. Tutoring support has helped many students to increase their grades and maintain their GPA. Two graduates have received prestigious scholarships to universities. Over hundred children have participated in sanctioned events, breaking the barriers in the tennis industry.

The logic model represents a simplified framework of how an organization operates in reality. As a linear model with clear causality, it represents a simplified system with many limitations. It does not capture the dynamic, unpredictable, larger ecosystem social entrepreneurs operate in. Conventional, linear models can lead to wrong expectations, flawed programs, and missed opportunities in terms of partnerships, savings or cost-reductions, and new funding streams. The next section applies the 'ecosystem model' for organizational strategy to the case of A's & Aces.

## FACING THE REALITIES OF COMPLEX WORLD: ECOSYSTEM MAPPING

Here we discuss how an ecosystems model for A's & Aces maps out the whole 'environment'; it embraces the complexities that shape how the organization operates and creates change. This 'enriched', non-linear complexity-based model captures the various relationships and their multi-directional characteristics, and introduces additional factors, such as feedback loops that can positively (amplifying effects), as well as negatively (dampening effects) impact the organization's work. This model accounts for unpredictability, irregularity, and anomaly, not trying to categorize but rather capture all idiosyncrasies that are part of the overall system.

**FIGURE 1  
GENERIC A'S & ACES ECOSYSTEM MAP**



This section elaborates on a few key interconnections in this generic ecosystem map of A's & Aces (See Figure 1). By mapping out the actors, factors, and relationships, the organization can better identify partnership and other resources (inputs in the logic model). It can also assess factors that can lead to *decrease* in funding and identify new resources and activities, such as the ones leading to 'hybrid'

opportunities and more sustainability. It points out what possible strategic directions the organization may take to achieve bigger impact in the long run.

### **Feedback Loops and System Idiosyncrasies**

Feedback mechanisms include positive ‘loops’ such as former participants becoming instructors. (The double-ended arrow between organization and participants). When some of the A’s & Aces participants reached a high school age, the organization started piloting a job skills development program that included counselor-in-training positions. This job skills development pathway has grown into a well-structured, recognized program within the organization, providing leadership and teaching skills to its participants. Since then, eight of the former alumni and senior participants have taught in the A’s & Aces program as a paid staff or a volunteer. This creates a virtuous cycle as these individuals represent role models and inspiration for others. At the same time, they develop marketable job skills that they can bring outside of the organization, benefitting the system as a whole, not just the organization itself.

Another example of amplifying interconnections relates to the various partnerships A’s & Aces has with other organizations, such as Tulane University (See Figure 1). Tulane students completing their graduation service-learning requirement spend a semester working with the organization, either tutoring and mentoring the children or playing with them on the tennis court. Tulane students are exposed to the work of the organization, which leads to unexpected outcomes, such as students seeking internships and conducting research in this field of work beyond their service. The experience and skills they gain through their service with A’s & Aces becomes a valuable asset outside of the organization but creating impact within the system.

Other unpredictable events can bring financial benefits as indicated by the “Critical donor”. For example, a few years after hurricane Katrina devastated New Orleans, Connie Uddo, the Executive Director of the St. Paul’s Homecoming Center recommended A’s & Aces to a crew filming a documentary, featuring a volunteer as he visited various non-profit organizations trying to rebuild the city. Connie Uddo, a former tennis instructor, was instrumental in directing the filmmakers to A’s & Aces. When aired in prime time nationally, the last scene of the documentary filming was the surprise announcement that it was an episode for ABC’s “Secret Millionaire”, providing A’s & Aces not only with a nation-wide exposure but also a \$50,000 unrestricted donation. A different example points out to the donor community. In 2015, a philanthropist reached out to A’s & Aces’ leadership to learn about the organization’s model in an effort to create a program that would provide under-resourced children with tennis instruction. After a few meetings, the individual decided to support A’s & Aces rather than starting a new venture. He has been an anonymous donor and the biggest individual supporter of the organization. Such an individual became a unique actor within the system, with the donor’s ultimate goal being to create social impact.

There are also possible negative, dampening effects that need to be accounted for and monitored. Some of these occur outside of the organization’s control, such as the USTA’s decision to reorganize its operating structures and cut over one fifth of its employees nation-wide in 2020. Several A’s & Aces’ allies were laid off. Other effects are being monitored. Another negative feedback loop resulted from an early effort to operate a City-owned facility that was being rebuilt after Katrina. Different, competing interests in the community and A’s & Aces’ lack of understanding of community relationships and the significance of the facility to the various groups led to a failed effort which possibly hurt some relationships in the short-term and created a misguided impression of the organization among certain members of the community.

### **Natural Environment and Disasters**

#### *Hurricane Katrina as a Catalyst*

A’s & Aces was founded after hurricane Katrina in 2008 as a response to the lack of quality after-school time opportunities for children. Devastated by a major hurricane in 2005, the City found itself with damaged infrastructure, including schools and recreational facilities. Several schools operated for years out of modular buildings awaiting their campuses to be rebuilt. None of the City-operated tennis facilities were open. Dedicated to the sport, the A’s & Aces founders came up with innovative responses. First was a 10&U model of tennis (then called ‘Quickstart tennis’) that downsizes the sport to children 10 years old or

younger. Importantly, this format made tennis ‘portable’ in a sense that no tennis courts were needed; instead, small “pop-up” tennis nets were used on school playgrounds, in the gyms, and even in their cafeterias. A’s & Aces was thus able to bring tennis to schools and expose hundreds of children to the game without having access to a tennis facility at the beginning. The idea of bringing tennis to schools was born out of a 2008 Tulane University Business competition in which A’s & Aces participated as one of the finalists. It was pointed out by the judges that bussing children to a tennis facility was not financially feasible, and thus it was suggested that A’s & Aces provide tennis in the classroom in a form of video games. Though this concept was rejected by A’s & Aces, it did promote the idea of bringing tennis to children at school. Additionally, coming to schools led to many partnerships that are ongoing for the organization.

### *Constant Changes in the Natural Environment*

Natural environment is appreciated as a set of factors and relationships intrinsic to the system, not an ‘externality’. Some of these factors are related to weather trends and the impacts of changing global climate, such as rising sea level, vulnerability to storm surges, warmer average temperatures, longer summer seasons, more extreme weather events, and changing biological diversity, among others.

- Weather events can affect the organization in day-to-day operations, the participants and their families, impact who can participate, and even cancel events.
- Frequent local flooding in certain areas, especially lower income areas, can limit participants from being able to get to programming sites.
- Also, the subsiding soil of the City makes construction of tennis courts more expensive. Only post-tension concrete slab courts can remain playable beyond a couple of years. Asphalt courts often crack severely anywhere between 2-3 years after being built and represent a safety hazard.
- Located on the Gulf of Mexico at the Mississippi delta, New Orleans is prone to hurricanes each year. The most recent example is hurricane Zeta that damaged the physical asset A’s & Aces uses - a City-owned facility, which in turn has limited its operations. As a public facility, the repair is projected to take months.

Among the positives is the fact that New Orleans’ climate provides for year-round outdoor programming. There is a significant cost associated with indoor courts during the winter in the north/colder places that is eliminated here. Yet, extreme heat during the summer months can require adjustments to programming conducted outside (i.e., the tennis part of programming), and will likely continue to be more problematic. This complex environmental ‘factor’ needs to be monitored and adapted to.

### **Key Domains**

There are several relevant contexts for A’s & Aces as its work spans across several domains, including the tennis industry and the education sector, specifically as it relates to out-of-school time enrichment programs.

### *Tennis as Big Industry: A Barrier and an Opportunity*

The tennis industry is a key domain - one that faces many limitations and structural barriers, yet also represents opportunities. In the United States, the tennis industry encompasses many different programs and populations, ranging from beginner/recreational play to high performance and professional tennis, serving young children all the way to the age 90 and over division, reaching out to historically excluded populations through wheel chair tennis, adaptive programs, and diversity and inclusion efforts. It is governed by the United States Tennis Association (USTA) and organized through private clubs, public facilities, community tennis organizations, youth-serving entities, among others. A’s & Aces is affiliated with the USTA as an NJTL chapter organization and a Community Tennis Association. The USTA Foundation is the organization’s major funder. The USTA was founded in 1881 by a small group of white men from country clubs throughout the Northeast. It was originally named the United States National Lawn Tennis Association (USNLTA) as lawn tennis was being played during this time. Its goal was to promote

the standardization of the rules and regulations for tennis throughout the country; currently the USTA is the largest tennis association in the world and strives to develop the sport's growth at every level in the US.

The industry is lacking diversity and inclusion due to its historical inaccessibility - by design and intent - and current lack of affordability. The national political trends continue to change, impacting other sectors, including the tennis domain. For example, on the local level, the Louisiana Tennis Association has created a Diversity and Inclusion Committee that is now being more supported as a result of national events, such as the Black Lives Matter movement. This represents an opportunity for A's & Aces to create alliances and promote equity and justice in the tennis industry.

Assessing the contexts in which tennis-based youth development organizations operate through ecosystems lenses can help A's & Aces navigate the challenges while identifying opportunities to remove the structural barriers. This includes supporting its hybrid business model activities, making the organization more sustainable while increasing its impact. The hybrid-model activities are based on the concept of a sliding scale that allows for economically diverse groups to participate in the program, while earning income and creating social impact. The organization generates revenues that support its mission. Though registered as a non-profit, it can diversify its stream of revenues by introducing an earned income model that allows it to sell services which at the same time are programming activities. In that process, the organization identifies new markets: while children from low-income families can afford to participate, wealthier constituents can also benefit from the services - using a sliding scale model that charges based on participant's socio-economic background. This, in turn, brings different populations together that may not have otherwise interacted. This interaction is an end in itself.

#### *School System and Educational Partners*

The post-Katrina educational system in New Orleans underwent significant changes. The charter school movement took over New Orleans public schools which created many opportunities but also many challenges. From racial implications (Dixson, Buras, & Jeffers, 2015), governance and organizational structure (Babineau, Karapetyan, & Rossmeyer, n.d.) to student enrolment strategies (Welner, 2013), charter schools and their unique operations impact student recruitment for out-of-school-time providers.

From A's & Aces' perspective, newly established charter schools were very open to new, innovative approaches to education. This included bringing non-traditional opportunities to their students, such as the sport of tennis. A's & Aces partnered with several schools and was allowed to come during regular school hours as part of physical education classes and even enrichment sessions. This included afterschool times. When A's & Aces gained access to real tennis courts via its partnership with Dillard University, an HBCU, some schools were willing to bus their students to the courts and even bring them back to their respective homes. As schools evolved, their priorities changed, however. Increased focus on testing scores has decreased the time for enrichment activities; some schools fear to lose their operating charter status. Nonetheless, schools have been and remain important partners and resource for A's & Aces.

While Tulane University with its graduation requirement provided hundreds of volunteers over the years, Dillard University provided key physical capital: tennis courts and a classroom. As A's & Aces' program participants matriculated from the down-sized "eight and under" tennis format and needed access to real tennis courts, Dillard University opened its space to the organization. This provided more than free access to tennis courts; it created an opportunity for A's & Aces to engage its participants on a welcoming college campus, as part of its 'pathway to college' initiative, one of its key ongoing activities. This synergy represents an opportunity to make tennis more *accessible* to the historically excluded populations.

### **Current Events and Crises in 2020: Tipping Points for Organizational Strategy**

#### *COVID-19 Pandemic*

The instability of the financial markets and recession can impact funding streams, such as foundation grants and corporate donations. The COVID-19 pandemic has already cut corporate giving as many organizations are struggling, some even going out of business. This trend is likely to continue for the next couple of years, creating financial threats but also partnership opportunities where resources can be leveraged and shared. The pandemic impacted many aspects of our life, which includes the way people

recreate. The tennis industry, like other sports, has been hit hard by the lack of revenues coming to the sport. The USTA has already cut over 20 percent of its staff nation-wide and it underwent significant changes to its operations. Its charitable branch, the USTA Foundation, has suspended certain types of funding and programs. A's & Aces work operates within the domain of tennis industry and thus is impacted by the sector and related trends. In order for NJTL chapters to grow, the tennis industry must remain stable, attracting players and revenues. Tennis has been already suffering from a decline in memberships and participation. The pandemic has further exacerbated the trend, with the USTA Open not being able to sell tickets and concessions. The USTA depends on US Open revenues, representing a significant amount of its overall operating budget. The City Park in New Orleans has increased its hourly rental to \$20 per court. The threat of high cost of playing tennis - from court rental, private lessons, to tournament travel, needs to be resolved, so as not to prevent parents, especially low-income household families, from enrolling their children into tennis. This represents another opportunity for A's & Aces to make tennis more *affordable*.

### **Emergence: Possible Strategies as a Result of Dynamic, Non-Linear Changes**

A's & Aces ecosystem map illustrates the organization's significant amount of in-kind support that comes from the City's recreation department - the New Orleans Recreation Development Commission (NORDC) and Dillard University. These partnerships significantly decrease A's & Aces' operating expenses. More importantly, these entities have overlapping missions. NORDC's mission statement is "to advance the physical, mental, and social well-being of New Orleanians by providing safe and welcoming environments for recreational, athletic, and cultural experiences." Its vision is "a sustainable and innovative organization that transforms lives" (New Orleans Recreation Development Commission, n.d.). The partnership benefits both entities - A's & Aces implements NORDC's mission while NORDC provides its facility. Since A's & Aces founding, there has been no interest and no capacity to partner with NORDC for regular tennis programming year-round - A's & Aces is the only entity that has been able to do that and has done it continuously since 2009.

Prior to COVID-19 pandemic, A's & Aces operated at Dillard University which served as the organization's temporary home in terms of storing its equipment and conducting the majority of its programming. With the start of the pandemic, A's & Aces had to vacate the University's space and consolidate its operations and programs at the City's facility. Importantly, the City was able to provide A's & Aces with the storage space in its recreation center near by the tennis courts at no cost.

These dynamic, unexpected changes tested the organization's networks and partnerships. A few months after vacating Dillard, the University approached A's & Aces in an effort to reengage in a partnership as the University now seeks to bring its varsity tennis teams back by the fall of 2022 (since their teams were suspended after Katrina). A's & Aces would be part of bringing that program back in exchange for having a home at the University, thus merging missions, sharing resources, and generating revenues to support both programs.

### *Resilience of the Overall System*

What emerges from these unexpected, non-linear changes and irregularities is surprising: there does not need to be a single sustainable financial source for the organization to continue its services and fulfill its mission. The key to the organizational sustainability is the resilience of the overall ecosystem - "too big to fail" does not refer to the scope of the organization but to the size of its impact and the networks and the relationships the organization has within the system. For example, competition exists but at the same time resources are shared among these competing parties. A private tennis club donates its used equipment to A's & Aces which then further shares it with another SBYD organization that operates in New Orleans East and where the two organizations have to share the same City-operated facility. Systems thinking highlights the interconnectedness and inter-dependency in complex systems, as well as the unseen opportunities that result from these relationships.

These emergent, non-linear changes point to a plausible direction for A's & Aces - focusing on supporting the larger SBYD community within the tennis domain to create systemic change. This would lead to supporting community-wide initiatives and strengthening the network and relationships among the



various actors rather than simply investing only in A's & Aces programs. For example, serving on the Louisiana Tennis Association's Diversity and Inclusion Committee advocates for a change at the systems level which is part of A's & Aces' overall goals. Thus, to be able to respond to emergent situations, flexibility and adaptability need to be part of the strategic direction. The difficulty lies in the organization's ability to either quickly shift resources or have resources readily available and not compromise any standing programs and operations.

### *Suggestions for Further Research*

There are a few key questions that emerge from this case study. First, what learning systems does A's & Aces need to develop to effectively monitor and evaluate this dynamic, unpredictable ecosystem and to keep contributing to its resilience? If the widely-used (in monitoring and evaluation practices), traditional logic model and theory of change will not suffice to fully describe the system and its various components and relationships, organizations need to develop new methodologies and tools to help them assess their environment in order to guide their strategies.

Second question centers around the concept of hybrid model activities: what systems or factors/resources need to be in place to ensure the mission of the organization (to benefit the under-resourced population) is protected (i.e., mission comes first ahead of income) so these competing forces stay in balance?

Finally, how can we further enhance this 'ecosystem approach' to better capture the various 'elements' and relationships that comprise it? Different design techniques and modeling strategies will lead to improved visualization that can guide practitioners and their strategies.

## **CONCLUSION**

Efforts to create systemic change by providing under-resourced children with quality programming in a sustainable way while bringing racially and economically diverse populations together have been resonating with many SBYD organizations for a while. The vision is to change the sports landscape - whether through golf, tennis, baseball, or other traditional and non-traditional sports - and create a replicable model for other organizations. While each organization faces unique sets of circumstances, resource scarcity, and different community needs, a few concepts have been established to replicate the SBYD model and provide under-resourced children with access to affordable, quality sports-based youth development programming. To increase their long-term social impact and sustainability, SBYD organizations can benefit from an ecosystem model that accounts for natural environments, feedback loops, uncertainty in different forms, and non-linear, dynamic change and aims for system resilience overall, rather than maximizing any single output.

An ecosystem-based thinking is a necessary extension and an alternative to conventional mechanistic, linear models, especially for social entrepreneurial SBYD in the United States, and for hybrid multi-revenue organizations seeking financial, organizational sustainability in face of dynamic societal context. Complexity models and tools help identify and assess otherwise unseen opportunities and find new ways to combine their non-profit revenues and resources with earned-income streams that are aligned with their social mission. A broader "ecosystem approach" aims for system resilience in a context of great uncertainty, rather than isolated, organizational growth or profit. What has emerged from this framework that the linear theory of change and logic model did not reveal is that 'sustainability' is not a steady source of revenue, but resilience of the system to overall sets of threats, challenges, and unexpected dampening effects. Thus, scale is not about organizational size, but the focus is on system-wide impact, strengthening networks, and building the community that comprise the system. Understanding these complexities and non-linear, dynamic changes can help guide organizational strategy towards more sustainability and long-term social impact.

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