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BUILDING RESILIENCE FOR A FLOURISHING WORLD

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On June 9, 2009, the IAJBS's 15th Annual World Forum passed a resolution that was very unusual, perhaps even unique, for any set of annual conferences. The theme of the 2009 World Forum at XLRI in Jamshedpur, Jharkhand, India, was "Leadership for Sustainability." The Jamshedpur resolution called for the next ten years of World Forums to be dedicated to the theme of global sustainability. All the World Forums since then have been built around this theme, focusing on topics such as "Educating champions of sustainable development: Best practices of our business schools," "Technology and business for a sustainable world," and "Sustainability & business practices: Implications for our schools."

The idea of establishing an IAJBS journal focusing on global sustainability emerged the following year at the end of the 2010 World Forum at Ateneo de Manila University. The resulting *Journal of Management for Global Sustainability* published four articles and an essay addressing the need to take action on the many inter-related aspects of global unsustainability, its disproportionate impacts on the world's most vulnerable peoples—most notably its impacts on increasing and making more intractable the tragedies of poverty and social injustice—and, of course, threats to the very existence of all species, including our own.

In June of 2009, the atmospheric CO_2 level was reported to be 389 ppm, having passed, in April 1987, the level of 350 ppm, widely recognized to be the point at which further increases in CO_2 levels seemed very, very likely to start a series of complex and destructive changes in the world's climate. On August 15, 2017, the Mauna Loa Observatory (NOAA-ESRL) reported CO_2 atmospheric concentration to be 405 ppm (ProOxygen, 2017). As the world continues to fail to take adequate actions to avoid global warming and climate change, the

predictions of severe consequences continue to turn out to be tragically accurate and apparent. Impacts of climate change and global warming seem to be visible virtually every day and seemingly everywhere (even on this 28th of July, shortly after the 2017 World Forum at Namur University, when one is on vacation near the French village of *Les Eyzies* and listens to the saddened words of highly-respected truffle farmer Eduard Aynaud as he describes the unfortunate and escalating changes in his own farm and community).

As the myriad and seemingly unending impacts of global unsustainability have accumulated, awareness of the need to develop new and more effective efforts to reduce and eventually end its contributing factors has increased. Acknowledging the need to keep building personal, organizational, community, and worldwide resilience to respond to, and hopefully contribute to the removal of, the conditions that create these impacts is therefore part of this awareness. Recognizing that the term flourishing (Ehrenfeld, 2010; Ehrenfeld & Hoffman, 2013; Laszlo & Brown, 2014) is an attractive phrasing to capture and perhaps go beyond the word "sustainability," the articles in this issue of the *JMGS* are in the spirit of building resilience thinking and actions (Walker & Salt, 2006) at all levels and in all ways to create a flourishing world.

There are many ways to frame not only the problem of global unsustainability but also possible approaches to creating greater resilience for dealing with our unsustainability-related problems. For instance, one of the deeper ways of looking at the problem of unsustainability, and of seeking opportunities for increasing resilience, is to see unsustainability as a spiritual concern. Not only do the ways we produce, distribute, and consume leave many of the world's people with little or no ability to meet the barest minimum of human needs, but even many of the most privileged of us are alienated from our natural and inherent connection with deeper meaning in life and work. Consumerism is turning out to be a pretty hollow and unsatisfying new religion. Many of our organizations seem to be committed only to financial gain for a limited number of "shareholders" or, perhaps more accurately, for the increasingly short-term oriented speculators in a company's shares. And, of course, the ways we produce-distribute-consume are destroying the capacity of the planet to support our existence as well as that of many other species.

Pope Francis' words in *Laudato Si'*—built as they are on the counsel, research, scholarship, and wisdom of many of the wisest experts in the world—have called attention to the need for changes not just in what we do but also in our ways of being in the world—who we "are." *Laudato Si'* can thus be seen as a call for transformative individual and institutional

leadership that is grounded in our deepest and most spiritual ways of being. It is such an important document that it, in addition to being the focus of the first article in this issue, will serve as the theme of the next.

In this sense, new leadership that is transformed and transformative is increasingly needed and called for at all levels and in all places. The first two articles in this issue, then, emphasize the importance of such leadership in building resilience. In both, the reality of the spiritual nature of the global unsustainability problem is evident, as is the need for leadership grounded in the best of our ways of being, in our spiritual nature.

In "*Laudato Si'* and a spirituality of resiliency," Robert Brancatelli reminds us of the spiritual nature of the global unsustainability problems and the opportunities for seeking spiritually-aware ways of being in our efforts to solve those problems. Focusing on business leaders and how they "might prepare for resiliency individually and then lead" their organization through the crisis of "environmental deterioration," Brancatelli frames his discussion in the "perspective of a spirituality of presence," explores the two dimensions of this spirituality: the prophetic and the contemplative, and "demonstrates their application in a business context," noting that "an important part of a spirituality of presence is Sabbath, which allows for the rest and re-centering of the individual and organization. Once 'frenetic activity' ceases, both the leader and the organization can begin the work of anticipating, preparing for, and responding to crises."

Building on many years of work in such fields as corporate social responsibility, global sustainability, organizational transformation, and, more recently, the nature and leadership of "intellectual shamans," Sandra Waddock discusses the need to develop the kinds of transformative leaders that can see beyond the "frenetic activity" noted by Brancatelli. Recognizing and honoring the spirituality-inspired wisdom of the world's great shamanic traditions, Waddock describes the need and opportunities for shamanic-inspired leadership very clearly in her article, "Leaders as shamans: Working to heal a troubled world":

> In a world greatly in need of healing, today's leaders acting as shamans could potentially bring the shaman's ancient wisdom to the effort to create a more sustainable, just, and equitable world. Today's shamanic leaders undertake the same roles as the traditional shaman: healing, connecting, and sensemaking in the service of a better world. From a leadership perspective, the shaman's work is that of healing the world around us and our (human) relationship with that world, which is what many leaders

> are already attempting to do. In this context, healing can mean making our relationships, systems, and organizations whole or sound. In a similar vein, connecting means working across boundaries of different types, such as relationships, disciplines, functions, sectors, and institutions, among others, to create collaborative initiatives or new insights that can move ideas and institutions forward in a positive way. Finally, sensemaking means helping others understand and interpret their world in new and hopefully constructive ways. It means creating a new vision of the future through tasks like developing new memes or framing new stories or narratives that help people relate to their enterprises or the world in different ways. In today's troubled world, where our dominant cultural mythologies, policies, and practices have resulted in frighteningly unsustainable conditions and divisiveness, [she argues] that more leaders explicitly need to (and can) take on these shamanic roles.

These calls for new leadership can be seen in turn as calls for creating educational innovations that will enable and support the emergence of the kinds of leadership and actions that help create a flourishing world. Indeed, *Laudato Si'* is a call for fresh and committed leadership in the Jesuit tradition of men and women with and for others.

The article by Marco Tavanti et al. and the essay by Elmer Soriano continue to contribute to our thinking about leadership for resilience. They do so by focusing on educational opportunities for developing individuals who are committed to creating a flourishing world and are active in bringing that world into being. In "Management education for sustainable development: Integrating ecology and community values in social impact practicums," Marco Tavanti, Molly Brennan, and Shelly Helgeson discuss the innovations in education being developed and pioneered at San Francisco University. With a focus on integrating university course work and social contributions from community-based, action-learning projects, they explore "a management education model to help integrate sustainable development ideas into university curricula and programs. This pedagogical model emphasizes a community-based approach along with other proven methods for university-community collaborations and course-based social impact analysis."

The authors explore the concept of integral ecology as it appears in *Laudato Si'* and how educating for sustainable development can start with community capacity development. Their article describes how the

> *Laudato Si'* encyclical's notion of integral ecology, along with the need to create community-benefit academic programs, inspired the establishment of a partnership between the University of San Francisco's Master of Nonprofit

Administration program and the Foundation for Sustainability Development. This partnership experience expanded into development practicum courses and solidified into strategies for integrating experiential learning and organizational development through community-based analysis.

They feel that the "graduate level pedagogical models discussed [in their article] are relevant to other academic institutions and programs that would like to educate students with a community-centered approach." They believe their work suggests that both sustainability and resilience cannot be articulated in educational and capacity development settings without intentionally and methodologically providing tools for building social capacity.

In "Moderating the impact of climate change one university at a time," Elmer S. Soriano describes how Typhoon Haiyan led to the development of a powerful and transformative action-learning experience with the students in his class during and right after it passed through the Philippines. Building on the learning he and his students experienced from the social contribution projects that emerged from that class and others, he expands the concept of classroom-created social action projects to the global level by suggesting that responding to "the threats posed by climate change presents a leadership challenge proportional in scale with the urgency and complexity of wartime mobilization." He describes how the "world's 190 million students may be enlisted to respond to such threats through action-research focused on building resiliency."

Looking toward the possibility of bringing about the kinds of transformative educational leadership needed to meet the challenges of climate change and global unsustainability, Soriano argues that concepts "such as social labs, institutional empathy, and scholarship [can] help reframe the mandates of universities as they respond to climate change, making them platforms for developing leaders and changemakers who will increase the resilience of communities and ecosystems."

In "Building urban water resilience: New perspectives for the Guadalajara drought-readiness program," Rodrigo Flores-Elizondo describes some of the challenges and complexities inherent in large-scale projects to build community resilience for a critically important resource: water. He notes that climate change "is compelling cities to become resilient in the face of a wider range of meteorological phenomena. Starting with approaches to cope with hurricanes or floods, resilient city strategies have to consider longer-term and more territorially expansive challenges, such as multi-annual and multi-regional droughts."

He says that

> [u]rban planners, local and regional governments, and political consultants are therefore driven to consider more complex models to build resilient cities. One example is the case of Guadalajara, Jalisco, Mexico's second largest city and which was recently included in the 100 Resilient Cities network. The city obtained a drought management program from the federal government in 2015, but such efforts have not yet been coordinated with current public policy or with the rapid growth of the city.

In response to these challenges, Flores-Elizondo outlines "a more comprehensive proposal of public policy to deal with a big city's water supply and expected shortages."

In a sense, Flores-Elizondo's article brings this issue of the *JMGS* full-circle with his description of what needs to be done to move toward an effective large-scale resiliency project. Projects on the scale and with the complexity he describes seem to require the types of inspired and transformative leadership—on many, many levels and in many collaborating entities—described in the other articles and the essay in this issue. And creating such new leadership seems to call in turn for the supporting educational system innovations described and suggested therein.

REFERENCES

Ehrenfeld, J. R. 2010. ***Sustainability by design: A subversive strategy for transforming our consumer culture.*** New Haven: Yale University Press.

Ehrenfeld, J. R., & Hoffman, A. J. 2013. ***Flourishing: A frank conversation about sustainability***. Stanford: Stanford University Press.

Laszlo, C., & Brown, J. 2014. ***Flourishing enterprise: The new spirit of business***. Stanford: Stanford Business Books.

ProOxygen. 2017. ***CO2 earth: Are we stabilizing yet?*** Available at https://www.co2.earth/daily-co2 (accessed August 18, 2017).

Walker, B., & Salt, D. 2006. ***Resilience thinking: Sustaining ecosystems and people in a changing world.*** Washington: Island Press.

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CREANDO LA RESILIENCIA PARA UN MUNDO FLORECIENTE

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El 9 de junio del 2009, el 15º Foro Mundial Anual de IAJBS pasó una resolución muy rara, tal vez singular, para un congreso anual. El tema del Foro mundial del 2009 en XLRI en Jamshedpur, Jharkhand, India, fue "El Liderazgo para un Desarrollo Sostenible." La resolución de Jamshedpur requiere que los diez próximos Foros mundiales anuales sean sobre el tema de la sostenibilidad mundial. Desde entonces, todos los foros mundiales se han centrado en este asunto, enfocado en "La educación de defensores del desarrollo sostenible: Las mejores prácticas de nuestras escuelas de negocio," "La tecnología y el negocio para un mundo sostenible," y "La sostenibilidad y las prácticas de negocio: Las consecuencias para nuestras escuelas."

La idea de crear una revista de IAJBS enfocada en la sostenibilidad mundial surgió el año siguiente, al final del Foro Mundial del 2010 en la Universidad Ateneo de Manila. El resultado, el *Journal of Management for Global Sustainibility*, publicó cuatro artículos y un ensayo sobre la necesidad de tomar acciones para los numerosos aspectos interrelacionados de la insostenibilidad mundial, sus impactos desproporcionados en los pueblos más vulnerables del mundo—sobre todo sus impactos en las tragedias de la pobreza e injusticia social que son crecientes y más intrincados—y son, sin duda, amenazas a la existencia de todas las especies, la nuestra incluida.

En junio del 2009, el nivel del CO_2 en la atmósfera estuvo a 389 ppm. En abril del 1987, ya había superado 350 ppm, el punto en el que más aumentos al nivel del CO_2 en la atmósfera muy probablemente causarían una serie de cambios complejos y destructivos al clima mundial. El 15

de agosto del 2017, el Observatorio Mauna Loa (NOAA-ESRL) reportó que las concentraciones de CO_2 en la atmósfera estuvo a 405 ppm (ProOxygen, 2017). Mientras el mundo sigue dejando de tomar medidas adecuadas para evitar el calentamiento global y el cambio climático, las predicciones de graves consecuencias seguirán siendo precisas y aparentes. Los efectos del cambio climático y el calentamiento global se puede ver prácticamente todos los días y en todas las partes (incluso este 28 de julio, poco después del Foro Mundial del 2017 en la Universidad de Namur, cuando uno está de vacaciones cerca del pueblo francés de *Les Eyzies* y escucha a las palabras tristes de un trufa agricultor muy respetado llamado Eduard Aynaud mientras describe los cambios crecientes y desafortunados en su propia granja y comunidad).

A medida que se acumulan los efectos innumerables y aparentemente interminables de la insostenibilidad global, se ha aumentado también la conciencia de la necesidad de desarrollar esfuerzos nuevos y más eficaces para reducir y acabar eventualmente con sus factores contribuyentes. Reconociendo la necesidad de seguir creando la resiliencia personal, organizacional, comunitaria y mundial para responder y tal vez contribuir a quitar las condiciones que hacen estos efectos forma parte, por tanto, de esta conciencia. Sabiendo que la palabra "*flourishing*"—floreciente (Ehrenfeld, 2010; Ehrenfeld & Hoffman, 2013; Laszlo & Brown, 2014) es un término atractivo para capturar y quizás, ir más allá de la palabra "sostenibilidad," los artículos de esta edición de la JMGS se escriben en el espíritu de crear un pensamiento y acciones de resiliencia (Walker & Salt, 2006) en todos los niveles y en todas las maneras para crear un mundo floreciente.

Hay muchas maneras para plantear no solo el problema de la insostenibilidad global pero también posibles estrategias para crear más resiliencia en afrontar los problemas de insostenibilidad. Por ejemplo, una de las maneras más profundas de ver el problema de insostenibilidad y de buscar oportunidades para aumentar la resiliencia es de verla como un asunto espiritual. Nuestras maneras de producir, distribuir y consumir dejan a mucha gente con pocos, o incluso, sin recursos de obtener las mínimas necesidades. Asimismo muchas personas privilegiadas están alienadas de nuestro vínculo natural e intrínseco con un significado más profundo de la vida y del trabajo. El consumismo se ha hecho una religión vacía y poco satisfactoria. Parece que muchas de nuestras organizaciones están por las ganancias financieras de solo unas "accionistas" o quizás, más precisamente, del número creciente de los especuladores a corto plazo. Por supuesto, las maneras en las que producimos, distribuimos y consumimos están destruyendo la capacidad del planeta para mantener a nuestra existencia y a la de muchas otras especias.

Las palabras del Papa Francisco en *Laudato Si'*—como se basan en el consejo, la investigación, la escolaridad y la sabiduría de los expertos más sabios del mundo—han llamado la atención a la necesidad de cambiar no solo lo que hacemos sino también nuestras maneras de estar en el mundo—es decir, quiénes somos. Por tanto, se puede considerar *Laudato Si'* como una llamada para un liderazgo transformativo individual e institucional fundamentado en nuestras maneras más profundas y espirituales de ser. Es un documento tan importante que se servirá de enfoque del primer artículo de esta edición y también será el tema de la siguiente.

En este sentido, se requiere cada vez más un nuevo liderazgo que se transforma y es transformativo en todos los niveles y en todos los lugares. Los dos primeros artículos de esta edición, por tanto, hacen hincapié en la importancia de tal liderazgo en crear la resiliencia. En ambos artículos, la realidad de la naturaleza espiritual del problema de la insostenibilidad global está bien clara, así como la necesidad para un liderazgo basado en lo mejor de nuestras maneras de ser, en nuestra naturaleza espiritual.

En "*Laudato Si'* y una espiritualidad de resiliencia," Robert Brancatelli nos recuerda la naturaleza espiritual de los problemas de la insostenibilidad en el mundo y las oportunidades de buscar maneras de ser que son espiritualmente conscientes en nuestros esfuerzos de resolver estos problemas. Centrándose en los líderes empresariales y cómo "pueden prepararse para la resiliencia individualmente para dirigir después" sus organizaciones a través de la crisis del "deterioro del medio ambiente," Brancatelli enmarca su discusión en "la perspectiva de una espiritualidad de presencia," explora las dos dimensiones de esta espiritualidad: la profética y la contemplativa, y "demuestra su aplicación en un contexto empresarial," notando que "una parte importante de la espiritualidad de presencia es el día del Sabbat, que permite al individuo y a la organización a descansar y reenfocarse. Una vez terminada la actividad 'frenética,' tanto el líder como la organización pueden empezar el trabajo de anticipar, prepararse para las crisis y responder a las mismas."

Basándose en muchos años de trabajo en campos como la responsabilidad social corporativa, la sostenibilidad mundial, la transformación organizacional, y últimamente, la naturaleza y el liderazgo de "chamanes intelectuales," Sandra Waddock habla de la necesidad de desarrollar los tipos de líderes transformativos que son capaces de ver más allá de la "actividad frenética" notada por Brancatelli. Reconociendo y honrando la sabiduría espiritual de las tradiciones chamánicas universales, Waddock describe claramente la necesidad y oportunidades para un liderazgo con inspiración chamánica en

su artículo, "Los líderes como chamanes: Trabajando para curar un mundo aquejado":

> En un mundo que necesita curación, los líderes de hoy que actúan como chamanes pueden traer la sabiduría milenaria del chamán al esfuerzo de crear un mundo más sostenible, justo y equitativo. Los líderes "chamánicos" del presente tienen los mismos papeles que los chamanes tradicionales: curar, conectar y dar sentido al servicio de un mundo mejor. Desde una perspectiva de liderazgo, el trabajo del chamán es curar el mundo que nos rodea y nuestra relación (humana) con ese mundo, lo que muchos líderes ya están intentando hacer. En este contexto, curar puede significar sanar nuestras relaciones, sistemas y organizaciones. De la misma manera, conectar significa trabajar a través de fronteras de diferentes tipos como relaciones, disciplinas, funciones, sectores e instituciones, entre otros para crear esfuerzos de colaboración o nuevas percepciones que puedan promover ideas e instituciones de una manera positiva. Por último, dar sentido es ayudar a los demás a entender e interpretar su mundo de un modo nuevo y constructivo. Eso significa crear una nueva visión del futuro a través de tareas como hacer nuevos memes o enmarcar historias o narrativas que ayuden a las personas a relacionarse con su trabajo o el mundo de otra manera. En el mundo aquejado de hoy donde las mitologías culturales, políticas y costumbres dominantes han desembocado en condiciones insostenibles y conflictividad, afirmo que más lideres tendrán que asumir estos roles chamánicos (y lo pueden hacer).

Se puede ver estas llamadas para un nuevo liderazgo como llamadas para crear innovaciones educativas que posibilitarán y apoyarán la emersión de un liderazgo y acciones que ayudan a crear un mundo floreciente. Ciertamente, el *Laudato Si'* es una llamada para un liderazgo nuevo y comprometido en la tradición Jesuita de hombres y mujeres con y para otros.

A continuación, el artículo de Marco Tavanti y colaboradores así como el ensayo de Elmer Soriano contribuyen a nuestro pensamiento sobre el liderazgo para la resiliencia. Lo hacen concentrándose en oportunidades educativas para formar a gente dedicada a crear un mundo floreciente y que trabaja para que este mundo sea posible. En "La gestión educativa para un desarrollo sostenible: Integrando la ecología y los valores comunitarios en prácticas de impacto social," Marco Tavanti, Molly Brennan y Shelly Helgeson hablan de las innovaciones en la educación que se desarrollan y se hacen primero la Universidad de San Francisco. Teniendo un enfoque en la integración de cursos universitarios y contribuciones sociales a través de proyectos basados en la comunidad y de acción–aprendizaje, ellos exploran "un modelo de gestión educativa para integrar las ideas de desarrollo sostenible en programas universitarios. Este modelo

pedagógico tiene un enfoque comunitario junto con otras metodologías probadas para las colaboraciones entre la universidad y la comunidad y un análisis del impacto social basado en el curso."

Los autores exploran el concepto de la ecología integral tal como aparece en *Laudato Si'* y cómo la educación para el desarrollo sostenible puede empezar con el desarrollo de la capacidad comunitaria. Su artículo describe cómo

> La noción que tiene la encíclica *Laudato si'* de la ecología integral y la necesidad de crear programas académicos para el beneficio de la comunidad, inspiraron una colaboración entre el programa de Máster en Administración sin fines de lucro de la Universidad de San Francisco y la *Foundation for Sustainability Development*. Esta experiencia de colaboración se extendió a cursos de prácticas de desarrollo y se consolidó en estrategias para integrar la educación basada en la experiencia y el desarrollo organizacional a través de un análisis basado en la comunidad.

Piensan que "Los modelos pedagógicos a nivel de posgrado estudiados [en su artículo] son relevantes para otras instituciones y programas académicos que quieren educar a los alumnos empleando un enfoque centrado en la comunidad." Opinan que su trabajo dice que tanto la sostenibilidad como la resiliencia no pueden ser articuladas en contextos de desarrollo educativo y de capacidad sin proveer deliberadamente y metodológicamente las herramientas para crear la capacidad social.

En "Moderando el impacto del cambio climático a través de la universidad," Elmer S. Soriano describe cómo el tifón Haiyan llevó al desarrollo de una experiencia de acción-aprendizaje muy poderosa y transformativa con los estudiantes de su curso durante y justo después de que el tifón pasara por Filipinas. Basándose en el aprendizaje que él y sus alumnos experimentaron de proyectos de contribución social que surgieron de la clase y otros, amplía el concepto de los proyectos de acción social creados en el aula a un nivel mundial diciendo que es responder "a las amenazas del cambio climático presenta un desafío de liderazgo proporcional en escala a la urgencia y complejidad de movilización en tiempos de guerra." Dice que "será posible pedir a los 190 millones de estudiantes en el mundo que respondan a esas amenazas a través de la investigación-acción con un enfoque en crear resiliencia."

Mirando hacia la posibilidad de producir los tipos de liderazgo educativo transformativo necesarios para afrontar los desafíos del cambio climático y la insostenibilidad mundial, Soriano sostiene que conceptos como "el laboratorio social, la empatía institucional y las becas ayudan

a reformular los mandatos de las universidades mientras responden al cambio climático, convirtiéndolas en plataformas para formar líderes y creadores de cambio que aumentarán la resiliencia de comunidades y ecosistemas."

En "Creando una resiliencia del agua urbana: Nuevas perspectivas para el programa de preparación para la sequía de Guadalajara," Rodrigo Flores-Elizondo describe algunos de los desafíos y complejidades que son inherentes en proyectos a gran escala para crear la resiliencia comunitaria para un recurso críticamente importante: el agua. Nota que el cambio climático "obliga a las ciudades a ser resilientes frente a una variedad de fenómenos meteorológicos. Empezando con propuestas para enfrentarse a huracanes o inundaciones, las estrategias de las ciudades resilientes tienen que considerar desafíos a largo plazo sobre un territorio más ámplio, como las sequías plurianuales y a nivel multiregional."

Dice que

> [los] urbanistas, gobiernos locales y regionales, y asesores políticos son por tanto motivados a considerar modelos más complejos para construir ciudades resilientes. Un ejemplo es el caso de Guadalajara en Jalisco, la segunda ciudad más grande de México, que se ha incluido últimamente en la Red de Cien Ciudades Resilientes. La ciudad obtuvo un programa de gestión de sequías del gobierno federal en 2015, pero los esfuerzos todavía no se corresponden con las políticas públicas actuales o el crecimiento rápido de la ciudad.

En respuesta a estos retos, Flores-Elizondo resume "una propuesta más extensa de política pública para ocuparse del suministro de agua de una ciudad grande y su escasez inevitable."

En cierto modo, el artículo de Flores-Elizondo cierra el círculo de esta edición de la JMGS con su descripción de lo que se debe hacer para ir hacia un proyecto de resiliencia a gran escala que es eficaz. Los proyectos a esta escala y con la complejidad que él describe requieren un liderazgo transformativo e inspirado—en muchos niveles y en muchas entidades colaboradoras—descrito en los otros artículos y en el ensayo de esta edición. Y parece que la creación de un nuevo liderazgo necesita a su vez las innovaciones del sistema educativo de apoyo que se describen y proponen.

FUENTES

Ehrenfeld, J. R. 2010. ***Sustainability by design: A subversive strategy for transforming our consumer culture.*** New Haven: Yale University Press.

Ehrenfeld, J. R., & Hoffman, A. J. 2013. ***Flourishing: A frank conversation about sustainability.*** Stanford: Stanford University Press.

Laszlo, C., & Brown, J. 2014. ***Flourishing enterprise: The new spirit of business.*** Stanford: Stanford Business Books.

ProOxygen. 2017. ***CO2 earth: Are we stabilizing yet?*** Available at https://www.co2.earth/daily-co2 (accessed August 18, 2017).

Walker, B., & Salt, D. 2006. ***Resilience thinking: Sustaining ecosystems and people in a changing world.*** Washington: Island Press.

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LAUDATO SI' AND A SPIRITUALITY OF RESILIENCY

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> The external deserts in the world are growing, because the internal deserts have become so vast. (*Laudato si',* §217)[1]

Abstract. This article examines Pope Francis' encyclical letter, *Laudato si'*, from the perspective of a spirituality of presence, which it relates to resiliency, or the ability of organizations to respond to current or emerging crises. This spirituality consists of two dimensions: the prophetic and the contemplative. This article explores both dimensions and demonstrates their application in a business context. In addition, an important part of a spirituality of presence is Sabbath, which allows for the rest and re-centering of the individual and organization. Once "frenetic activity" ceases, both the leader and the organization can begin the work of anticipating, preparing for, and responding to crises. The focus of this article, therefore, is on the person of the business leader and how he or she might prepare for resiliency individually and then lead an organization through a crisis. The particular crisis the article is concerned with is environmental deterioration as treated in the papal encyclical.

Keywords: *Laudato si'*; resiliency; presence; Sabbath; risk

[1]This quote originally appeared in a homily by Benedict XVI (2005).

INTRODUCTION

In the encyclical letter *Laudato si'* (2015), Pope Francis calls upon "every person living on this planet" (§3) to acknowledge "the immensity and urgency of the challenge we face" (§15). The challenge he refers to is the "environmental deterioration" of the planet (§3) and the related deterioration of our collective humanity (§56, 117–119). In similar fashion to the *Didache*, the first-century Church Catechism, the Pope lays a clear choice before his readers: life or death. The path toward death regards nature as nothing more than "an object of utility, as raw material to be hammered into useful shape; it views the cosmos similarly as a mere 'space' into which objects can be thrown with complete indifference" (§115; Guardini, 1965/1998: 63/55).[2] The path toward life, however, is paved with gratitude and appreciation for the mystery of creation (§243). This path is found through a "profound interior conversion" (§217) in which the individual becomes present to self, others, and the earth, which, "burdened and laid waste, … 'groans in travail' (*Rom* 8:22)" (§2).

In the following sections, this article will summarize what the author has identified as a spirituality of presence in *Laudato si'*, explore resiliency as a concept related to presence, analyze resiliency within a business context, and consider ways resiliency can be integrated into the Jesuit business school curriculum. Along the way, the article will entertain larger philosophical issues and suggest areas for further research.

THE SPIRITUAL VISION OF *LAUDATO SI'*

There are three overarching themes in *Laudato si'*: (1) recognition of nature as a gift from God, which compels human beings to accept the gift and respond in gratitude for the beauty of creation (§220); (2) rejection of the dominant "culture of consumerism, which prioritizes short-term gain and private interest" over the long-term interests of the poor and planet (§184); and (3) a conversion that reconciles individuals with themselves, others, and creation (§217–218). The Pope cites the Australian bishops in declaring that "we must examine our lives and acknowledge the ways in which we have harmed God's creation through our actions and our failure to act. We need to experience a conversion, or change of heart" (§218). The Pope believes that conversion can occur only in a

[2]See the related concept of *der Bestand*, or standing reserve: "Today all things are being swept together into a vast network in which their only meaning lies in their being available to serve some end that will itself also be directed toward getting everything under control" (Heidegger, 1977: 17–18).

spirit of sobriety (§223–224), moderation (§222), and simplicity (§214, 222). As a spiritual model, he offers St. Francis of Assisi, whose "poverty and austerity … were no mere veneer of asceticism, but something much more radical: a refusal to turn reality into an object simply to be used and controlled" (§11).

A closer look at these themes reveals what might be described as a "spirituality of presence." Readers familiar with the work of Martin Buber may recall his understanding of presence (*die Gegenwart*) as an unmediated encounter (*die Begegnung*) between two self-aware beings (Buber, 1970/1996: 45). Similarly, presence here implies more than physical or temporal location. It refers to the spirit of God as it is encountered in all areas of life, including creation, which stands "alongside" traditional forms of revelation such as Sacred Scripture (§85; John Paul II, 2000).[3]

Presence has two dimensions: the prophetic and the contemplative (§222). The prophetic, in turn, is composed of two parts that reflect the ancient biblical understanding of prophecy. In the first, the prophet warns the people that their actions are misguided and will result in calamity if pursued further. Ideally, this leads the community to acknowledge its sins and seek repentance, including for acts of past sin that need to be rectified.[4] In the second, the prophet shows the way toward reconciliation with God. This process can be found in the Hebrew Bible, in the books of the major and minor prophets like Isaiah and Joel. Contemplation, on the other hand, refers to the difficult inner work that must be done to act prophetically. This includes being open to realities that are not visible and requires a lifestyle of humility (§224), justice (§92), and inner peace (§11).[5] Pope Francis encourages everyone to live this way, which he characterizes as the only authentic way to be human (§225).

Again, in the tradition of the *Didache*, Pope Francis contrasts this spirituality of presence with its opposite, which he describes as a "throwaway culture" (§16). This culture is characterized by impermanence, distraction, and a certain "frenetic activity" that causes people "to ride rough-shod over everything around them" (§225), including the earth and other human beings. Such frenetic activity, fueled by "collective selfishness" (§204) and grounded in the "ironclad logic" of utility (§108), has led to the appearance of what liturgical

[3]For creation as a form of divine revelation, see also the Canadian Conference of Catholic Bishops (2003: 1).

[4]The concept of a historically responsible presence is taken up by Beth Crisp (2015).

[5]Compare Marsh (2015).

theologian Romano Guardini termed "mass man" (§203; Guardini, 1965/1998: 66–67/60).[6] In this worldview, the postmodern human being is treated in the same throwaway manner as the natural environment. Both are regarded as commodities with limited usefulness and function. The result is a breakdown of the natural world and society. This has become evident in climate change (§23–26) and its impact on biodiversity (i.e., the destruction of rainforests, species extinction, and the depletion of natural resources) (§32–42). The breakdown is also evident in its social effects such as poverty (§134), mass migration (§25), urban expansion (§44), and the scarcity of food and other resources for survival (§154).

When the spiritual void created by the throwaway culture is filled with even more material goods—the result of "compulsive consumerism" (§203)—people become aggressive, anxious, and fixated on superficialities (§226). Over time, these characteristics and the socio-economic conditions accompanying them give rise to a spiritual and ethical crisis that reinforces the consumerist lifestyle. This crisis becomes so addictive that individuals cannot recognize the degree to which they have been molded by its values and attitudes. Individual effort alone is often not enough to free oneself. Rather, achieving freedom requires the entire community (§219), which for Christians is the *ecclesia* (§64). To remedy the crisis, Pope Francis calls for the creation of "a new way of thinking about human beings" (§215), one based on fraternal love (§226), "ecological virtues" (§88, 211), and a "human ecology" (§5, 155). This ecology offers "liberation from fear, greed, and compulsion'" (§9) while promoting relationships of care and love (§231). When practiced regularly, this ecology grows into a *habitus* or virtue, and one's focus changes from material to relational goods.

Building upon his predecessor Benedict XVI's "ecology of man" (§155), Pope Francis identifies an "ecological conversion" (§217). This conversion is connected directly to human conversion and derived from the same sensibility and awareness (§16). By being present, one can see the interdependence of human beings and creation (§240). Such presence can have a positive impact on regional and global economies so that resources might be developed and allocated more justly (§32, 231). "Everything is connected, and this invites us to develop a spirituality of that global solidarity which flows from the mystery of the Trinity" (§240). However, global solidarity requires an honest assessment of economies (e.g., trade, capital, investment, markets, labor) so that attempts to counter ecological crises are not merely perfunctory or

[6]This theme is continued in Guardini (1930/1998), who speaks of "the restlessness of purposeful activity" (71).

rhetorical (§54). Unfortunately, at this stage in history, the Pope believes that the ecological condition of the planet has deteriorated so much that "radical change" is needed (§171). "The earth, our home, is beginning to look more and more like an immense pile of filth" (§21). Therefore, it is incumbent upon everyone—business, government, academia—to work collectively on policies and laws that are effective and enforceable.[7]

THE SPIRITUAL BASIS OF RESILIENCY

Resiliency refers to the ability to adapt to current or emerging, often unforeseen, crises. These crises might involve anything from climate change to political unrest and economic globalization. In an ecological context, resiliency anticipates the challenges of environmental deterioration, prepares for those challenges, and acts in ways that restore harmony to our relationships with nature and each other. Thus, resiliency relates directly to the themes of *Laudato si'* and can be viewed within the same spiritual framework of presence and conversion. However, to anticipate, prepare for, and meet the challenges of environmental deterioration, one first must become aware of those challenges. This is crucial, since what is not seen cannot be acknowledged, and what is not acknowledged does not exist. "This is the way human beings contrive to feed their self-destructive vices: trying not to see them, trying not to acknowledge them, delaying the important decisions and pretending that nothing will happen" (§59).

The unwillingness and/or inability of people to acknowledge reality despite scientific consensus and overwhelming empirical evidence may be the greatest challenge to resiliency.[8] Neither a conversion of heart nor an ecological conversion can take place without acknowledgement of the problem and a commitment to follow its solution to the end, even if that solution conflicts with one's established worldview. Thus, the Pope's plea for a new vision *of* human beings is also a call for a new vision *for* human beings; that is, for people to see in a new way. It is a call in the tradition of the biblical prophets for the people to wake up to the impending disaster and change their behavior. Here, "people" might refer more to business and governmental leaders than to the

[7]The 2015 United Nations Climate Change Conference reached an agreement on greenhouse gas emissions, global temperature reduction, and the establishment of national targets. The conference included business leaders. See Knowledge@ Wharton (2015).

[8]See IPCC-WGII (2014), particularly the summary which addresses policy in the face of intellectual bias.

public, since common citizens have demonstrated the capacity to act on their own when dissatisfied with official efforts to stop environmental deterioration. Nonprofit organizations like Greenpeace, Environmental Defense, and the National Resources Defense Council are examples of this, as well as the emergence of so-called "green" consumers, employees, investors, etc.[9]

The way business and governmental leaders will be able to reverse deterioration is by becoming prophetic themselves. This begins with the inner work of contemplation as exemplified in the biblical concept of Sabbath. In the Hebrew scriptures, Sabbath was the preeminent sign of the covenant between Yahweh and the Israelites just as it is in contemporary Christianity on the *Dies Domini* (Day of the Lord). Its purpose was to remind the people that they were part of a universe in which concern for other, whether in the form of worship to God or service to the poor and needy, defined what it meant to be a human being. No work was to be performed on that day, which was described as a "day of rest" analogous to God's day of rest in the creation narrative (Ex. 31:12–17).[10] It served to maintain balance not just between work and leisure but within social arrangements and even nature, since it required that the land lie fallow every seventh year so that it could replenish and not be consumed entirely (Lv. 25:1–7). Sabbath was also an act of economic justice because it gave the poor an opportunity to glean what they could from the fields for their survival (Lv. 23:22).

Sabbath forms the basis of a spirituality of resiliency in that it allows for the rest and re-centering of the individual and organization. Once frenetic activity is stopped, both the leader and organization can begin the work of anticipating, preparing for, and responding to crises. This, however, is not a one-sided affair but done in consideration of the profitability and mission of the organization. Admittedly, this may be difficult to achieve on a practical level and may even be more problematic for those working in highly competitive industries like financial services or mobile technology. The good news, though, is that Sabbath does not exist by itself. It often elicits and develops virtues like humility, patience, and prudence, which are crucial qualities to have alongside technical competence and managerial experience. No longer

[9]This has been considered in detail by Carroll and Buchholtz (2012/2015: 450–452).

[10]Compare with the Pontifical Council for Justice and Peace (2012: §69): "The Sabbath, for example, is not simply a break from work. Perhaps paradoxically, it is only in our detachment from work that we see its deepest meaning. Pope Benedict XVI explains this connection by stating that 'the biblical teaching on work finds its coronation in the commandment to rest.'"

seen as soft skills, these virtues have assumed an important place in the literature on decision-making. They help create a culture of trust in which employees are invited to contribute in meaningful ways to the organization's mission. This has been shown to lead to greater employee morale and measurable increases in profitability (Achor, 2010).[11]

By giving the leader an opportunity to align being with doing, which is the essence of spirituality, Sabbath can affect one's leadership style in substantive ways. As one withdraws from frenetic activity and turns inward, decisions become integrated not only with the self but with the organization. This means that self-discovery bears directly on individual and organizational performance. Alignment anchors the leader to an Archimedes point, as it were, from which various kinds of decisions can be made, from strategic to tactical and operational. This is important when leading teams from various functional areas whose members bring different areas of expertise to a project. A spirituality of resiliency is about becoming present to oneself and others and operating virtuously in all aspects of life, including decision-making (Kilburg, 2012: 57–62). It begins with contemplation and ends with reflective action or praxis.

RESILIENCY IN BUSINESS

When considering resiliency beyond the individual, several questions come to mind. First, is it even possible for organizations to develop in contemplative and prophetic ways, thereby becoming resilient in the face of crises? Second, can a spirituality of resiliency lead to scalable, sustainable action that becomes a *habitus* of virtue? And, finally, are there recent examples of resiliency in business that might serve as models or case studies?

First, for an organization to develop in contemplative and prophetic ways, it must rethink its presuppositions about the purpose of business. As a result of globalization, business leaders can no longer ignore the negative externalities of profit maximization. Rather, they must become aware of and acknowledge the consequences of what an earlier Pope, Pius XII, called a "cold and calculating egoism which tends to hoard the economic resources and materials destined for the use of all to such an extent that the nations less favored by nature are not permitted

[11]See Zetlin (2015); McGregor and Doshi (2015); Valentine, Godkin, Fleischman, and Kidwell (2011); and Kelly (2004), all of whom measure the relationship between social responsibility and profitability.

access to them" (Von Mises, 1944: 226).[12] Concern for profit, particularly in a global environment, must be balanced with sensitivity to the organization's mission and role in wider economic affairs.

Sensitivity can be nurtured only through a culture that promotes and is aligned with organizational values. This often requires the ongoing training and support of employees and a consistent focus on mission at all levels. This is famously exemplified by the encounter between President Kennedy and a NASA janitor in 1962. "What are you doing?" Kennedy asked the man, who was carrying a broom. "Well, Mister President, I'm helping put a man on the moon" (Nemo, 2014).

Like the individual version, organizational alignment begins by stopping frenetic activity and assessing the current situation—in this case, culture. In what ways does the organization suffer from misalignment between what it claims to be and what it actually does? Misalignment can occur consciously at the leadership level or unconsciously among employees. Regarding the latter, it is important to evaluate how employees view their work, their relations with each other and management, and the direction the company is taking. It is not enough to note what people say, since culture is reflected more accurately in unspoken actions. One of the most important factors here is trust: how is trust (or mistrust) experienced throughout the organization? Without trust, alignment is impossible, especially in the long-term.

An organization that has aligned profit with mission is in a much better position to anticipate, prepare for, and respond to challenges. Alignment reflects Pope Francis' view of the potential of business to be a "noble vocation" (§129), and becoming noble is the work of the prophetic dimension of presence. This is not meant to disparage profit, since no business can exist without resources. However, like the example of the NASA janitor, vocation puts profit in perspective. Vocation drives the culture of an organization just as profit fuels its operation. All too often, however, the image an organization conveys to the world through its marketing is at odds with the reality of its internal culture. When this occurs, the organization most likely is out of alignment and will eventually suffer financial consequences.

[12]See also John XXIII (1963: §126). Pope John XXIII's *Pacem in Terris* marked a turning point in the Church's view of itself and its place in the world, emphasizing the context in which the deposit of faith is proclaimed, with that context being the modern world. It urged the faithful to spread the Gospel message while bearing in mind the "signs of the times" (§126) which, for the purposes of this article, include business.

Secondly, is development of the contemplative and prophetic dimensions of an organization scalable? The answer depends on the degree to which these are taken seriously and supported by management. A mobile app development company in Silicon Valley, for instance, may be more attuned to and aware of its prophetic role simply because of its size compared to a more established company like Verizon. However, in either case, the development of a culture in which frenetic activity gives way to measuredand focused decision-making begins with awareness. Most organizations have accounted for this through their risk management function, with some even appointing chief risk officers (the risk management industry has developed in recent years in terms of both membership and resources). However, as the Pope has stated, the crisis affecting the environment and society can only be solved by new thinking (§191), not merely by managing new threats in conventional ways (Kaplan & Mikes, 2012). Thus, a spirituality of resiliency might provide a fresh approach to current risk management models. This suggests that scalability begins with individual effort, creativity, and dialogue (Kaplan & Mikes, 2012; Pillay, 2012). But the individual need not come from the C-suite, since a vibrant culture can produce ideas throughout the organization.

Finally, are there examples of companies that exemplify resiliency? The North Face, REI, and Whole Foods are three companies that have become resilient by "flattening their organizations and working across vertical boundaries, breaking down silos, transferring best practices, collaborating cross-functionally, and promoting laterally" (Organization Analysis and Design, 2015: 2), and they have done so in environmentally conscious ways that reflect the spirit of *Laudato si'*. For example, Doug Thompkins, founder of The North Face, was involved in land preservation projects in Patagonia (Langman, 2012). General Motors rebounded from bankruptcy in 2009 by reducing debt, eliminating underperforming brands, and anticipating market trends (Higgins & Urstadt, 2013).

In reality, most companies react to crises rather than prepare for them, which is the case with GM and its lack of resiliency during the financial crisis of 2008–2009. Ironically, its response to that crisis produced an even worse problem in the form of a public water crisis in Flint, Michigan. Another cautionary tale is Volkswagen, which faces its greatest challenge in the catalytic converter scandal. That scandal caused the resignation of CEO Martin Winterkorn and a dramatic drop in the company's earnings. The company is now in a Sabbath phase of reassessment, rethinking, and regrouping, and the most effective solution will be found through changes to the culture and not merely in decision-making or quality-control processes.

EDUCATING FOR RESILIENCY

Pope Francis acknowledges the importance of education in the effort to reverse environmental and social deterioration (§15). Jesuit business schools have an opportunity to help in this effort by forming leaders who are present to themselves and their organizations in the ways already noted. Thus, a spirituality of resiliency need not be seen as alien to the purpose of a business school, especially if it is integrated into the curriculum as a new form of risk management. Moreover, a spirituality of resiliency has the advantage of *being* over *doing*; that is, it creates the condition of possibility for putting risk management principles into action, including the move toward dialogue and away from a rules-based response to risk (Kaplan, Mikes, 2012). But it is even more than that, since it leads individuals and organizations toward virtuous behavior.

Before such a change can take place, however, Jesuit business schools must confront and eventually overcome a major hurdle: the belief that they need to compete with other business schools solely in terms of conventional market categories and rankings. This is not to say that Jesuit schools should become less rigorous in their admissions or turn their back on the market. It means that they should recognize and leverage their unique advantage. That advantage is an education grounded in concern for others, *cura personalis*, which now can be expanded to include the environment—*cura terraeque personalis*. This demands more than required courses in business ethics or sustainability—a revised curriculum should focus on Pope Francis' conversion in which students discover their natural virtues and learn how to use them for the good of the self, the organization, and the planet. When these goods clash, as they often do, students will learn how to move from contemplation to prophetic action in concrete ways which can be achieved across disciplines (Avari & Brancatelli, 2014).

Overcoming this hurdle will not be easy given that there are powerful biases acting against change. No matter how one downplays the role of rankings, test scores, and job placement, Jesuit schools will continue to be externally judged in these areas. From students to parents and alumni, many believe that a school's success comes down to the number of graduates it places. This requires an understanding of the needs of employers as well as trends in the workplace. It also requires ongoing analysis of macroeconomics. Internally, most Jesuit schools are diverse, composed of faculty and students from many ethnic and religious backgrounds. Since concern for others and the environment transcends religious affiliation, a revised curriculum must be designed in such a way that conversion is seen not in a sectarian sense but a

humanistic one centered on professionalism, vocation, and a spirituality of resiliency (Haughey, 2009). It also must have practical applications in technical courses such as accounting and finance. In the end, such a change in emphasis will require a concerted effort at all levels, beginning with the board of trustees. Most importantly, it will require the will to change and the determination to treat this principle of Jesuit education as a strength rather than something to be explained away or relegated to the mission office.

One might well wonder how this transformation is to be accomplished. Can a business school change its spots? Even if key administrators and faculty were committed to change the school's focus, how do they convince skeptics? This becomes even more important when those skeptics argue that the school is already seen in an ethical light and that concern for others does not need to be emphasized any more than it already is. However, while it is true that *cura personalis* is a hallmark of Jesuit undergraduate education, there is much work to be done at the graduate level, where students understandably are interested in acquiring practical skills for the job market. But this is where teaching business as a noble vocation makes the most sense and where Jesuit schools have the greatest advantage. *Laudato si'* has established a framework for teaching business in a morally responsible way based not on the content of decisions or the decision-making process but on the person deciding. Thus, courses could be offered to help students develop a spirituality of the individual as executive and leader. Such a spirituality would include presence, resiliency, and an appreciation of the differences between managing and leading. The spirituality of the organization could also be explored, since organizations are viewed increasingly as evolving entities with personhood and identity. This certainly would mark Jesuit schools as distinctive and set them apart from competitors, many of whom offer leadership programs emphasizing conventional categories like communication and team building.

Finally, an issue in need of further research concerns the "option for the poor," which the Pope has described as an "ethical imperative" (§158).[13] This option promotes the common good and questions the distribution of wealth (§156–158). The classic tension that it represents between the Gospel and the market touches upon basic questions of mission and identity for Jesuit universities, particularly business schools. It also presents exciting opportunities for dialogue and debate that could be integrated into a revised curriculum.

[13]The option for the poor was elaborated at the Latin American Bishops' Conference meeting in Medellín, Columbia (Latin American Bishops' Conference, 1968).

CONCLUSION

This article has examined Pope Francis' encyclical letter, *Laudato si'*, from the perspective of a spirituality of presence, which it related to resiliency. Resiliency—the ability to respond to current or emerging crises—has become an essential feature of organizations in the twenty-first century. However, resiliency is attained only after the business leader goes through a series of changes beginning with Sabbath and ending with prophetic action. But none of these changes can be programmed or controlled with any degree of certainty. In fact, dealing with uncertainty is a major characteristic of resiliency, which means that anticipating, preparing for, and responding to crises are a function of the spirituality of the leader. The focus of this article, therefore, has been on the person of the business leader and how he or she might prepare for resiliency individually and then lead an organization through a crisis. The particular crisis the article has been concerned with is environmental deterioration (§3).

What is the significance of examining the spiritual vision of *Laudato si'* and relating it to resiliency? Perhaps the best answer is to take seriously the call for a new way of thinking about the environment (§215). For a new way of thinking is required not just to meet that crisis but all crises that may develop in an organization, whether externally or internally. New problems will not be solved with the same kind of thinking that worked previously. And although risk management models may contain sophisticated approaches to uncertainty, how many deal with the greatest uncertainty of all—the human psyche? The larger philosophical questions here are obvious but may not be addressed in the rush to find practical solutions to problems, with practicality being a powerful bias in business. For instance, are certain decisions predetermined by the genetic makeup of the individual or by the cultural code of the organization? How, exactly, does a business leader exercise free will given operating constraints and the needs of stakeholders? What does a spirituality of the individual look like on a daily basis? In a different cultural context? What about organizational spirituality? Given that one can speak of organizational consciousness and subconsciousness, both of which have a direct effect on the bottom line, these questions are not purely academic.

For business to become noble and organizations to become resilient, attention must be paid to the underlying motives that drive individuals and organizations. These often involve more than money, since human beings desire meaning in their lives and organizations provide the structure within which people can find a purpose that transcends their

daily struggle for material security. The word "company" is derived from Latin (*cum pane*) and connotes breaking bread with others. Sitting down and breaking bread implies mutual trust, shared purpose, and belief in the collective effort to make life better, if not for the current generation then certainly for successive ones. This is the essence of spirituality and the basis for conversion in business especially as organizations evolve in the decades to come. Without necessarily offering specifics, *Laudato si'* provides a vision and goal for that evolution to take place.

REFERENCES

Achor, S. 2010. ***The happiness advantage: The seven principles of positive psychology that fuel success and performance at work***. New York: Random House.

Avari, M., & Brancatelli, R. 2014. Integrating virtue into the Jesuit business school curriculum. ***Journal of Jesuit Business Education,*** 5: 71–87.

Benedict XVI. 2005. Homily for the solemn inauguration of the petrine ministry. ***Acta Apostolicae Sedis*** 97: 710.

Buber, M. 1970/1996. ***I and thou*** (trans. & intro. W. Kaufmann). New York: Touchstone.

Canadian Conference of Catholic Bishops. 2003. ***You love all that exists ... all things are yours, God, lover of life.*** October 4.

Carroll, A., & Buchholtz, A. 2012/2015. ***Business & society: Ethics, sustainability, and stakeholder management*** (9th ed.). Stamford: Cengage Learning.

Crisp, B. R. 2015. On being open to changing our minds. ***The Way,*** 54(4): 33–38.

Francis. 2015. ***Laudato si'***. Available at http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html#_ftn152 (accessed January 7, 2016).

Guardini, R. 1930/1998. ***The spirit of the liturgy*** (trans. A. Lane, intro. J.M. Pierce). New York: Crossroad Publishing.

Guardini, R. 1965/1998. ***Das Ende der Neuzeit: Ein Versuch zur Orientierung*** (9th ed.). Würzburg: Werkbund Verlag; ***The End of the Modern World***. Wilmington.

Haughey, J. 2009. ***Where is knowing going: The horizons of the knowing subject***. Washington, DC: Georgetown University Press.

Heidegger, M. 1977. ***The question concerning technology and other essays*** (trans. & intro. W. Lovitt). New York: Harper & Row.

Higgins, T., & Urstadt, B. 2013. Exclusive: The inside story of GM's comeback and Mary Barra's rise. ***Bloomberg,*** December 12. Available at http://www.bloomberg.com/bw/articles/2013-12-12/exclusive-the-inside-story-of-gms-comeback-and-mary-barras-rise#p1 (accessed December 16, 2013).

IPCC-WGII. 2014. ***Climate change 2014: Impacts, adaptation, and vulnerability.*** Cambridge, United Kingdom: Cambridge University Press. Available at http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5_SPM_FINAL.pdf (accessed November 7, 2015).

John XXIII. 1963. ***Pacem in terris.*** Available at http://w2.vatican.va/content/john-xxiii/en/encyclicals/documents/hf_j-xxiii_enc_11041963_pacem.html (accessed January 7, 2016).

John Paul II. 2000. ***Insegnamenti,*** 23(2): 112.

Kaplan, R., & Mikes, A. 2012. Managing risks: A new framework. ***Harvard Business Review,*** (June 1): 48–60.

Kelly, M. 2004. Holy grail found: Absolute, definitive proof that responsible companies perform better financially. ***Business Ethics,*** 18(4): 4–5.

Kilburg, R. R. 2012. ***Virtuous leadership: Strategy, character, and influence in the 21st century***. Washington, DC: American Psychological Association.

Knowledge@Wharton. 2015. ***What are the gains from the Paris climate accord?*** Available at http://knowledge.wharton.upenn.edu/article/what-are-the-gains-from-the-paris-climate-accord/ (accessed December 19, 2015).

Langman, J. 2012. Conversation: Doug Thompkins. ***Earth Island Journal***. Available at http://www.earthisland.org/journal/index.php/eij/article/doug_tompkins/ (accessed December 23, 2015).

Latin American Bishops' Conference. 1968. Available at https://en.wikipedia.org/wiki/Conference_of_Latin_American_Bishops (accessed January 10, 2016).

Marsh, R.R. 2015. Ecology, angels and virtual reality: A triptych. ***The Way,*** 54(4): 39–50.

McGregor, L., & Doshi, N. 2015. How company culture shapes employee motivation. ***Harvard Business Review***. Available at https://hbr.org/2015/11/how-company-culture-shapes-employee-motivation (accessed January 7, 2016).

Nemo, J. 2014. What a NASA janitor can teach us about living a bigger life. ***The Business Journals,*** December 23. Available at http://www.bizjournals.com/bizjournals/how-to/growth-strategies/2014/12/what-a-nasa-janitor-can-teach-us.html?page=all (accessed November 19, 2015).

Organization Analysis and Design. 2015. ***How resilient is your company?*** Available at https://oadllc.com/articles/how_resilient_is_your.pdf (accessed December 12, 2015).

Pillay, S. 2012. A better way to think about risk. ***Harvard Business Review,*** December.

Pontifical Council for Justice and Peace. 2012. ***Vocation of the business leader: A reflection.***

Valentine, S., Godkin, L., Fleischman, G.M., & Kidwell, R. 2011. Corporate ethical values, group creativity, job satisfaction and turnover intention: The impact of work context on work response. ***Journal of Business Ethics,*** 98: 353–572.

Von Mises, L. 1944. ***Omnipotent government: The rise of the total state and total war.*** New Haven: Yale University Press.

Zetlin, M. 2015. Here's why half your employees will be gone in less than a year. ***Inc,*** October 28. Available at https://www.inc.com/minda-zetlin/heres-why-half-your-employees-will-be-gone-in-less-than-a-year-infographic.html (accessed November 14, 2015).

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BUILDING URBAN WATER RESILIENCE

NEW PERSPECTIVES FOR THE GUADALAJARA DROUGHT-READINESS PROGRAM

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Abstract. Climate change is compelling cities to become resilient in the face of a wider range of meteorological phenomena. Starting with approaches to cope with hurricanes or floods, resilient city strategies have to consider longer-term and more territorially expansive challenges, such as multi-annual and multi-regional droughts. Urban planners, local and regional governments, and political consultants are therefore driven to consider more complex models to build resilient cities. One example is the case of Guadalajara, Jalisco, Mexico's second largest city and which was recently included in the 100 Resilient Cities network. The city obtained a drought management program from the federal government in 2015, but such efforts have not yet been coordinated with current public policy or with the rapid growth of the city. This article explores a more comprehensive proposal of public policy to deal with a big city's water supply and expected shortages. It combines elements from the Resilience Alliance methodology and the Transition to Urban Water Services of Tomorrow (TRUST) Program funded by the European Union.

Keywords: Guadalajara; urban water supply; resilience; governance

INTRODUCTION

Large cities around the world face serious challenges brought on by climate change. Their growth, for example, tends to outstrip their capacity to manage basic resources like water. On top of such chronic conditions, how can they be expected to deal with acute events like droughts? Cities, therefore, must make themselves resilient, and this, in fact, is precisely what the United Nations expects and expresses through the Sustainable Development Goals of 2015.

The concept of resilience shows great promise as an approach for building paradigms that help to recognize shifting realities and human communities' responses to them. With its roots in sciences as diverse as physics, ecology, and psychology, resilience has been gaining widespread acceptance due to the possibilities it seems to offer for taking on the challenges of a world with a high level of vulnerability and growing uncertainty, one that is in constant crisis. Its greatest virtues include an openness to accepting risk and uncertainty as permanent features of the landscape. This vision, however, presents the concept of resilience as a kind of panacea for all the ills afflicting humanity, and attracts the attention of diverse segments of the population.

Like the paradigm of sustainability, resilience is understood in many different ways, depending on the attributes that certain actors wish to highlight. For example, the United Nations Office for Disaster Risk Reduction (UNISDR) defines resilience both in terms of preventing human casualties and property damage in the event of catastrophes and ensuring that affected populations recover quickly (UNISDR, 2012). Another concept of resilience focuses on modeling in an attempt to comprehend complex systems where slowly developing changes could lead to collapse if they are not properly managed (Bermejo, 2008; Bahadur, Ibrahim, & Tanner, 2010; Resilience Alliance, 2010; Smith, Ramoa, Galvao, Monteiro, & Jeffrey, 2015). This is the kind of resilience that the World Bank seeks to promote as a regional effort (World Bank, 2013; 2016), and yes it is also an urban-scale concern (Ramôa, Toth, Proença de Oliveira, di Frederico, Montanari, Monteiro, 2015; Smith et al., 2015).

This article discusses the first results of a research project in progress called Building Urban Water Resilience. It seeks to deal with the urban water shortage in the Guadalajara Metropolitan Area (GMA). According to government data, this city in Western Mexico with close to five million inhabitants is reaching the limits of its water supply. There

are no reserves to face growing demands or to deal with a drought. In response, the federal water authority (Conagua[1]) developed a pilot drought-prevention and -mitigation program (Pronacose, 2015) and presented it to the local water agency (SIAPA[2]). A couple of years later, the program had not yet been implemented, and still offers multiple areas for improvement in terms of resilience.

The proposed methodology for analyzing this program has two stages. First, it uses the assessment framework offered by the Resilience Alliance (2010) guide, which in turn is complemented in the second stage by a study of the European Union's TRUST series (Ramôa et al., 2015; Smith et al., 2015)[3], which analyzes urban system strategies that could be reoriented toward resilience. The objective is to generate new perspectives for building urban water resilience.

CONCEPTS OF RESILIENCE

Different studies exploring the epistemology of resilience agree that the term and its usage have evolved. It originally referred to static realities, such as in 19th-century materials science, before expanding to applications in ecology (Holling, 1973; Allen, Angeler, Garmestani, Gunderson, & Holling, 2014), psychology (Brooks & Goldstein, 2004; Melillo, Suárez Ojeda, & Rodríguez, 2008; Puig & Rubio, 2011; Rubio & Puig, 2015), socio-ecological (Adger, 2000; Landrum, Dybzinski, Smajlovic, & Ohsowski, 2015) and socio-economic systems in general (Bermejo, 2008; Porter & Davoudi, 2012; Shaw, 2012; Soares de Moranes, 2014), and organizational management in particular (Zolli & Healy, 2012; Véliz Montero, 2014). The scope of the concept has also evolved: from the simple physical property of resisting an external force without breaking —the degree of flexibility (material resistance)—to the changes that a system can undertake to conserve its essential functions in the face of an external threat (ecosystem resilience). Psychological resilience is more interesting as it involves not just returning to the state prior to the disruptive event but also gaining strength in the process. In other words,

[1]National Water Commission; "Conagua" in Spanish.

[2]The Inter-municipal System for Drinking Water and Sewer Services (SIAPA in Spanish) was founded in 1978 and serves roughly 90% of the population of the GMA. The half-a-million inhabitants who are not included live in the outlying municipalities and draw their water entirely from wells.

[3]This study was undertaken as part of the series Transitions to the Urban Water Services of Tomorrow (TRUST), financed by the European Union Seventh Framework Programme.

it offers the possibility that individuals will emerge from the challenge positively transformed and somehow improved. What, then, might this improvement consist of at the community level (Zolli & Healy, 2012; Uriarte, 2013)? What is needed to achieve it?

The relevant literature available has reached a certain consensus about the attributes that contribute to social resilience. They range from the community-wide provision of necessary and desirable conditions for individuals such as cultural identity, community self-esteem, and social humor and trust between the community and the government (Uriarte, 2013) to an understanding of what elements are seen as fundamental for building this resilience. A study of 16 contemporary authors led Bahadur and colleagues to identify the following ten elements (Bahadur et al., 2010):

- a high level of diversity;
- effective governance;
- perception and acceptance of uncertainty and change;
- community involvement and the inclusion of local knowledge;
- preparedness, planning, and readiness;
- a high level of equity;
- adequate social values and structures;
- non-equilibrium system dynamics;
- learning; and
- cross-scalar perspective.

It is also important to examine different perspectives to determine the agency that drives the construction of resilience in each case. Some of the texts reviewed use terms such as "stakeholders" or "interest groups." The term "agency," which refers to the ability to effect meaningful changes outside one's own sphere of influence (Giddens, 1995), works better inasmuch as it assigns an active role to the subject or group. For example, UNISDR, on the one hand, emphasizes the government's role in limiting deaths and suffering among the general population, in restoring essential infrastructure (communications, energy, water, and other services), and in channeling investment so that development matches the region's particular needs (UNISDR, 2012). At the other end of the agency spectrum, on the other hand, is the study of strategies by which communities adapt to changes (Uriarte, 2013; Soares de Moranes, 2014). In this community-based construction of resilience, certain social structures coalesce over time: social capital; trust as well as information from and dialogue with authorities; a history of positive responses to disruptive events; and participation, collective effort, involvement, and

experiences of self-organization (Uriarte, 2013). If resilience can thus be understood as the recovery of society's functions and metabolisms, the discussion can also focus on recovering the means that sustain everyday life, i.e., the components of relationships, capacities, and assets or resources that different individuals use to cope with and recover from stress and crisis. These components also provide the next generation with sustainable opportunities for subsistence and assure net benefits from other means of local subsistence in the short and medium term. For this purpose, Soares de Moranes (2014) identifies six types of capital:

- Social Capital: formal and informal relations among members (exchange of benefits)
- Human Capital: skills, knowledge, health, education
- Political Capital: decision-making mechanisms and their institutions
- Natural Capital: natural resources available to the community (direct environmental services)
- Financial Capital: cash and liquid assets (salable livestock), transfers, pensions
- Physical or Built Capital: basic infrastructure (housing, services) and physical assets

The building of community resilience would thus be oriented toward reinforcing the kinds of capital that are most vulnerable and volatile in a catastrophic event. In one study, Soares de Moranes (2014) looks at four hurricane-prone communities in Yucatán to find out how these different types of capital can compensate for one another. It is obvious that the meteorological event affects natural, built, and financial capitals. At the community level, the reinforcement of the other three kinds of capital can eventually compensate to a certain extent for the losses and shorten recovery time. Nevertheless, as Uriarte (2013) pointed out, pre-existing fragility such as poverty and mistrust of government, among other factors, can aggravate the problems and even degenerate into new problems such as domestic violence (heads of household who do not recover their economic activity or financial liquidity often report depression and frustration) and prostitution.

Socio-economic resilience is an approach that helps to generate more effective preparations for the challenges of uncertainty, but what can be done to come up with more complex strategies that include responses not only to catastrophic and relatively short-lived events (such as hurricanes or droughts) but also to man-made vulnerabilities (such as overdrafts on a city's water reserves even when there is no drought, or aging infrastructure without any plan to replace it)?

BUILDING URBAN WATER RESILIENCE

Among the Sustainable Development Goals (SDG) adopted recently by the United Nations, numbers 6 and 11 are important for the purposes of this article: *Ensure availability and sustainable management of water and sanitation for all*, and *Make cities and human settlements inclusive, safe, resilient and sustainable*. Specific targets 11.5 and 11.b warrant special attention:

> 11.5 By 2030 significantly reduce the number of deaths and the number of affected people and decrease by y% the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations.
>
> 11.b By 2020, increase by x% the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the forthcoming Hyogo Framework, holistic disaster risk management at all levels. (ICSU, ISSC, 2015:3)

Scientific experts assessed the complete list of SDG targets and proposed that most of the formulations (these two included) "could be strengthened by being more specific" (ICSU, ISSC, 2015: 1). Even in this ongoing debate, the objective of nations is clear: to develop safe and resilient cities. The challenge is that these cities and their water management have not been resilient or sustainable at all in the last century. In Mexico, for instance, policies aimed at meeting water demand primarily for irrigation and urban consumption during the 20th century led to the construction of a series of infrastructure projects (Conagua, 2011). This development affected the natural water cycle and the ecosystem services that it supported (MEA, 2005). Only in recent years has Mexican society begun to look for alternatives that might relieve the stress put on the environment, such as including treated wastewater in the supply.

There is no strategy, however, for building urban water resilience to prepare the country for events such as the droughts expected due to climate change. The public policy that comes closest is the National Drought Prevention Program ("Pronacose" in Spanish) launched in 2013. In 2014, the National Water Commission ("Conagua" in Spanish, and the federal authority responsible for the program) developed a pilot program of actions for Guadalajara, Jalisco, the country's second

largest city (Pronacose, 2015). The said program, however, focuses only on monitoring hydro-meteorological conditions to determine when a severe level of drought is being reached and when to declare a series of measures restricting water use among different social actors (businesses, governments, and the population at large). The board of the local urban water agency (SIAPA) has the complicated task of implementing and enforcing the system, but without separate infrastructure for the business and domestic sectors, the board's only tool for controlling consumption during a drought is the pricing mechanism. The situation also gets more complicated when the businesses that use the most water in their processes have their own wells with permits granted by the federal government and not by the local water board. Thus, while the prioritization of uses respects the human right of access to water (household uses first, then public uses, and finally commercial and industrial consumption), it is easy to foresee that the poor inhabitants of the city will be the ones to shoulder the heaviest burdens of the drought. It is possible to conclude, therefore, that the Pronacose is only a contingency plan and not an urban resilience program.

What contributions could a well-planned alternative resilience-building approach make so that the disruptive event not only never escalates into catastrophe but actually becomes an opportunity for social improvement? The GMA grew from 500,000 inhabitants in 1950 to almost 5 million at present. Without considering any other factors aside from its socioeconomic growth, this city is already jeopardizing its water supply. With sources stretched to the limit, could the resilience approach help identify and manage the slow-moving developments that threaten the quality of life of Guadalajara's most vulnerable citizens?

SETTING BOUNDARIES TO THE SYSTEM

To evaluate the resilience of a socio-ecological system, the Resilience Alliance (RA) published a workbook to guide agents through the implementation of these concepts (Resilience Alliance, 2010). The document first proposes setting boundaries to the system under evaluation and defining a focus of analysis as well as key components. In an iterative exercise, the guide proposes a series of steps to identify the variables that can modify the system and push it toward thresholds of major changes. The aim is to visualize all these elements on a single diagram, as well as their dynamics, thresholds, interconnections, and complex cycles, to come up with dynamic lines of action. The following sections describe these elements while applying the method to the GMA and its resilience to drought.

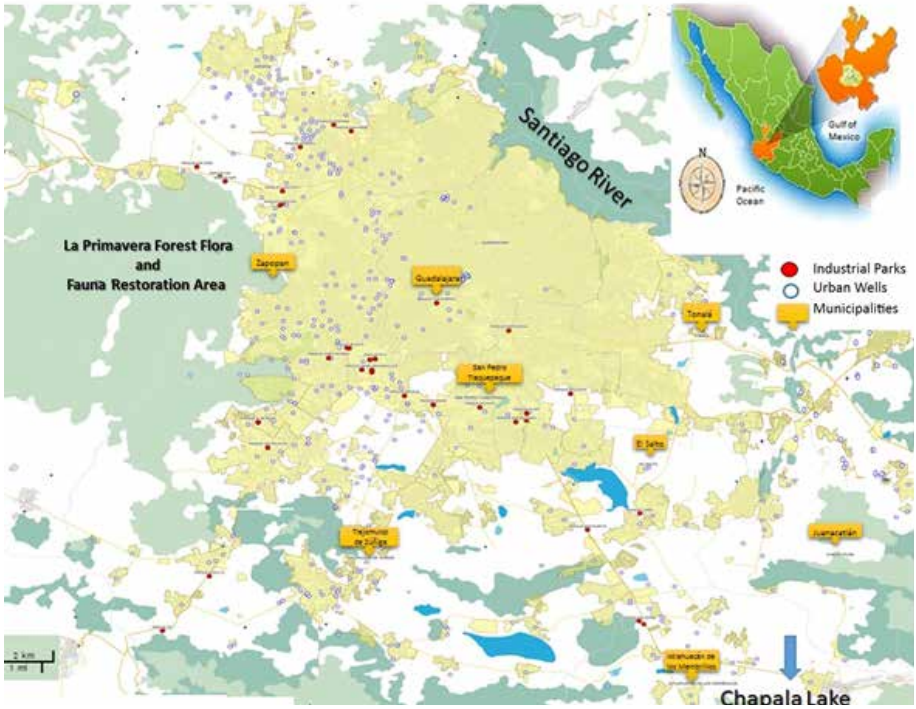

Figure 1: Guadalajara Metropolitan Area (Source: author's own formulation)

The founders of Guadalajara settled in the Atemajac Valley in Western Mexico almost five hundred years ago. The city remained small enough to meet its water needs by drawing from local rivers until the early 20th century, when the railroad link to the Port of Manzanillo on the Pacific coast turned the city into the country's second-leading hub of economic growth, trailing only the Mexico City Valley. A burgeoning manufacturing sector produced primarily foods and beverages, machinery and equipment, textiles, furniture, chemicals and pharmaceuticals, and footwear (Woo, 2001). Systems of wells and infrastructure projects began to tap water supplies from farther and farther away, eventually sparking conflicts with other major users of the Lerma-Chapala Watershed—farmers who depended on irrigation, pig breeders, industrialists, and urban users including Mexico City (see Figure 2)—with whom a distribution agreement was reached in 1991. This agreement underwent serious strain during the drought that affected the watershed from 1997 to 2003, after which it was reviewed and renegotiated, with a new edition signed in 2004 (Flores, 2014). During this drought, Guadalajara's water supply teetered on the brink: the Lerma-Chapala Watershed Council cut its allotment by 20% and the SIAPA board temporarily imposed staggered suspensions of

water service throughout the city. When rains replenished the supply, Guadalajara's allotment went back to previous levels, regular service was reestablished, and the city continued its growth[4] and its march toward vulnerability thresholds.

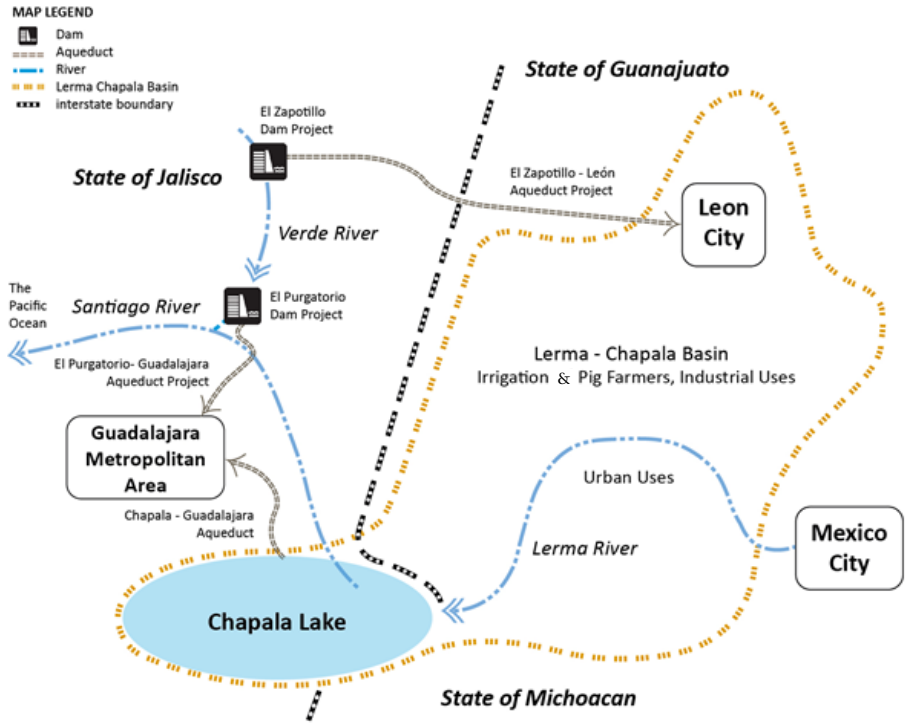

Figure 2: Outline of Guadalajara Metropolitan Area and Region: Sources and Users of Surface Water (Source: author's own formulation)

The supply for the city saw its last major investment in the 1990's, after which it totaled 280 Hm^3 per year: 30% from wells, 60% from Lake Chapala, and 10% from the Calderon Reservoir. Minor adjustments have raised the supply to 300 Hm^3 over the last two decades. The number of users, however, has increased by over 50%, which means that the per-capita provision has dropped to 197 liters per inhabitant per day[5]. To increase the water supply available to the city, the government has

[4]Guadalajara had an estimated 100,000 inhabitants in 1900, occupying just under 1,000 hectares. By 1970, it had grown to over a million and a half inhabitants, and almost 17,000 hectares. Its population is estimated to have passed the 4.8 million mark in 2015, spread out over almost 65,000 hectares (IMEPLAN, 2015).

[5]The World Health Organization recommends a per-capita provision of between 100 and 200 liters a day (WHO, 2003); Guadalajara's rate of 197 falls within this range.

projected a new system of dams on the Verde River north of the city (see Figure 2). What is overlooked is the fact that an eventual drought will bring down the levels of reservoirs, lakes, and rivers alike, which lends urgency to the task of building urban water resilience. In terms of territory, aquifers are being neglected, but other subsystems also call for attention, primarily the socio-ecological system surrounding Guadalajara.

Main Issues	Facts	Observations
Municipalities involved	9	The 4 seats of the main municipalities are included in the Guadalajara Urban Area (GUA[6]): Guadalajara, Zapopan, Tlaquepaque, and Tonalá (see Figure 1).
Millions of inhabitants in 2015	4.8	
Millions of inhabitants served by SIAPA	4.1	SIAPA supplies almost all of GUA
Surface water supply (m^3/s)	6.5	Surface water system supplies only SIAPA zone. No reserves available.
Groundwater supply (m^3/s)	4.5	Aquifers overexploited
Current water demand (2016) (m^3/s)	10.5	Peaks of demand reach total supply capacity during dry season.
Estimated increase of demand by 2020	6%	Based on expected increase of users at current consumption per user
Estimated increase of demand by 2030	14%	
Main municipal sanitation plants	2	Combined capacity of 10.75 m^3/s. Marginal reuse of treated wastewater.
Water Supply Projects (see Figure 2)	Additional Supply Expected	Reasons for Delay
El Purgatorio Dam Project	5.6 m^3/s	Held up by federal budget reductions
El Zapotillo Dam Project	3 m^3/s	Stopped by federal legal process
Second Chapala Aqueduct	2 m^3/s	Stopped for local political reasons

Table 1. Guadalajara Metropolitan Area Hydrological System (Source: Ochoa & Bürkner [2012]; SIAPA [2016]; and Jalisco State Water Commission's page: www.ceajalisco.gob.mx)

However, it is important to point out that 30% of this supply is lost to physical inefficiency. Moreover, the ongoing urban growth has the system's planners worried.

The RA methodological guide calls for delimiting a main socio-ecological system; for our exercise, this main system is the GMA (comprising nine municipalities [see Table 1]), with the focal subsystem being the hydrological region from which the water supply is extracted (see Figure 2). The next step is to define the risk that necessitates an increase in resilience: in this case, water shortages due to drought and depletion of the city's water supply. As a complete socio-ecological system, the GMA has developed socio-economically but it has also transformed the surrounding landscape: large farming operations and small farming villages have given way to urban centers, industrial parks, and a variety of services (see Figure 1). Wells that used to water crops and livestock now provide for urban users. The process has been disorderly, with little oversight—six of the GMA's seven aquifers are now overexploited, with the remaining aquifer located within the protected natural area known as La Primavera Forest,[6] bordering the city on the west. Lake Chapala, for its part, is located 40 kilometers southeast of Guadalajara (see Figure 1) and has a reserve of almost 8000 Hm^3, making the 240 Hm^3 allotted annually to the city inconsequential in times of abundance. During the drought mentioned earlier, however, the lake's level dropped to below 25% of its capacity, and the city's water withdrawals clashed with the needs of agricultural users along the Lerma River because authorities forced them to give up significant portions of their allotments to transfer them to Lake Chapala. As such, while the 2004 distribution agreement takes a more preventive tack than the 1991 version, in the final analysis it provides no definitive solution to conflicts like the one that arose between Guadalajara and the farming interests of the neighboring state of Guanajuato, conflicts which could trigger a veritable water war in Western Mexico.[7] Figure 3 shows these elements.

[6]The La Primavera Forest Flora and Fauna Restoration Area was created by presidential decree in 1982.

[7]Showing little political skill, the governors of the adjacent states of Jalisco and Guanajuato allowed tensions to rise over water allotments from the Lerma River: Guanajuato has major irrigation districts, while Jalisco supplies water downstream, primarily from Lake Chapala, to its capital city of Guadalajara. Tensions reached such a pitch that preventive federal police had to be deployed at strategic points along the Lerma River to safeguard the water transfers that had been agreed to in the Lerma-Chapala Watershed Council. The offices of the Presidency of the Republic, plus timely rainfall, helped to calm the political waters, and the 2004 distribution agreement was successfully negotiated (Flores, 2014).

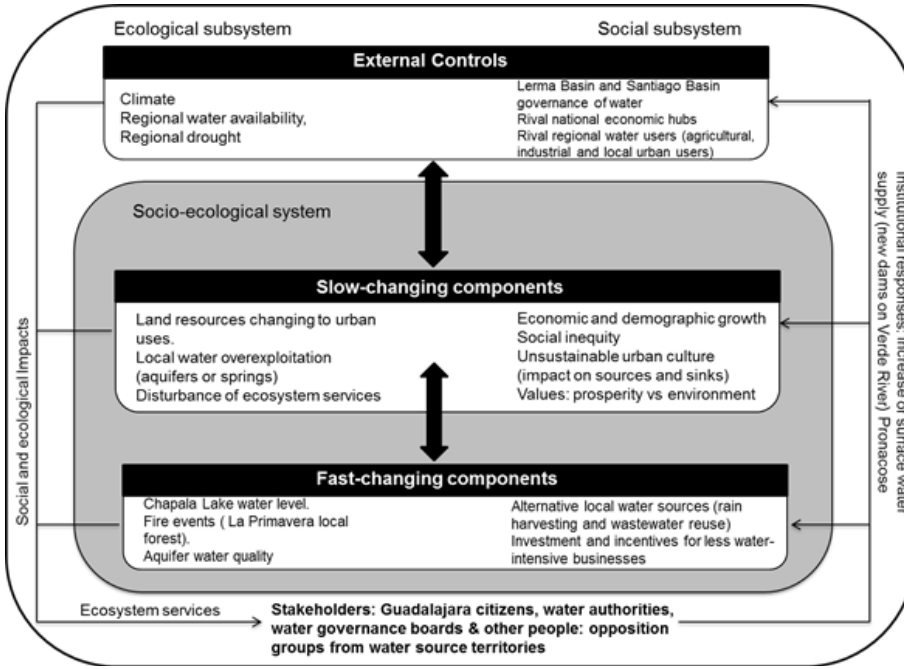

Figure 3: Conceptual model of the Guadalajara socio-ecological system and its components in the face of droughts (Source: Author's own adaptation based on Resilience Alliance, 2010)

The external elements that affect the system can be divided into ecological factors (climate, regional availability of water, and regional droughts) and social factors (competition for water within the Lerma-Chapala supply basin, water governance assemblies such as the Watershed Councils, and factors that affect the city's prosperity such as rival economic hubs).

Within the system being analyzed (the GMA), a distinction can be made between ecological factors contributing to slow-moving change (changes in land use, availability of local water, and the ecosystem services left intact in the city) and social factors contributing to such change (population growth, social inequity, unsustainable culture, and prosperity-centered values that trump environmental values). Components of fast-moving change include water supply (water levels in Lake Chapala and local aquifers) and fires in the Primavera Forest due to their effect on temperatures in the city. Fast-moving social factors could be alternative water markets, investment, and economic incentives for businesses to use water more sparingly (see Figure 3). All these modify the system's impact on the ecosystem services that underlie the city's prosperity.

For local authorities, it is clear that the whole socio-ecological system is supported by the hydrological system in question. As Table 1 shows, the GMA's water supply is reaching its limits while both the city and water demand are expected to grow considerably in the coming years. The institutional response in recent times has been to increase the supply of water from projected dams on the Verde River and to ration the public provision of water as set forth in Pronacose (2015). This article up until now has established these strategies as too complicated and unable to assure the water supply for the city in a climate change scenario (the bottom of Table 1 recaps the critical delays of new water projects for the GMA). A resiliency-based approach could thus open up new possibilities based on governance.

ADAPTIVE CYCLES AND PANARCHY

The diagram in Figure 3 can help lay out the elements and the relations among them in a resilience analysis, but it is also important to establish how the dynamic system works. For this purpose, Holling cycles and panarchy concepts are useful as long as they make it possible to review and reconsider systems in permanent and complex movement and reconfiguration. Socio-ecological systems exhibit cycles that the ecologist Holling classifies into four phases: exploration and growth (τ), conservation (K), release of capital (Ω), and reorganization (α) (Gunderson & Holling, 2002; Resilience Alliance, 2010).

As Figure 4 indicates, the growth phase τ connects resources and accumulates useful capital for the system until it reaches a certain level of stability in phase K. At this point, the system deals with the conservation of the accumulated capital and connected resources. These accumulations lead to a saturation of the system that diminishes its resilience. From the K phase, the system could cross a threshold and become unsustainable in its complex of functions. It then begins to lose the connectedness of its resources, releasing them and losing the accumulated capital. This release phase is Ω, the end of the cycle, and can be chaotic if it is not managed properly—it is understood and accepted that the end of the cycle can bring about the collapse of the system. However, this phase is not invariably chaotic; it can sometimes lead to a reorganization and a new cycle (phase α). During release, resilience is also gained. However, if the capital is dispersed too much between conservation and release, there will not be enough resources for the next cycle, and a "poverty trap" ensues.

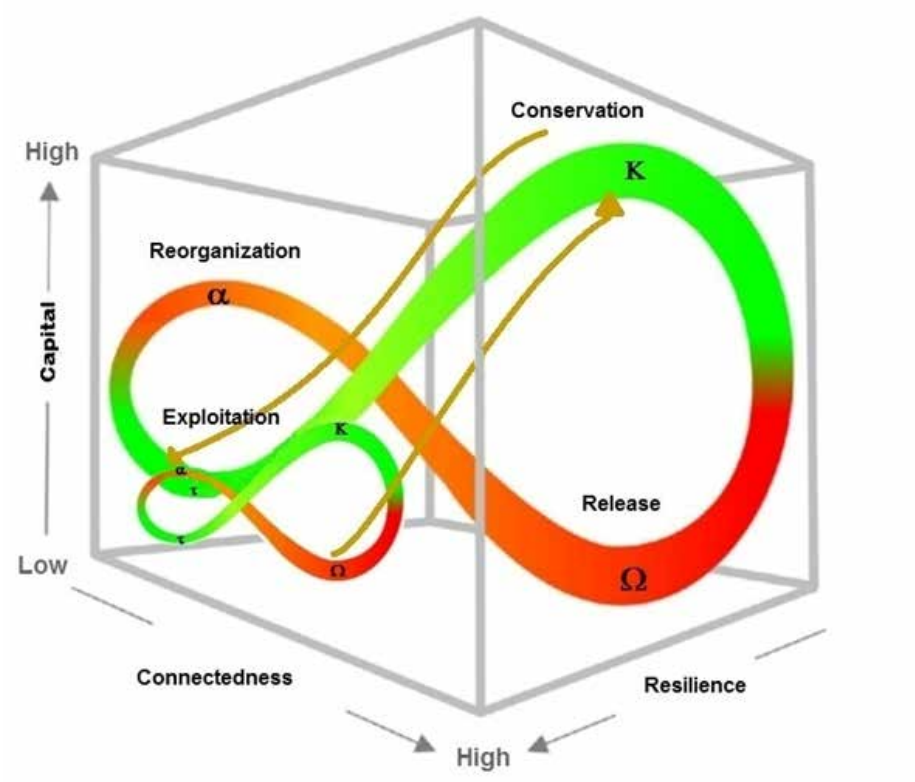

Figure 4: Holling Cycle Phases and Panarchy Illustration (Source: author's adaptation of Gunderson & Holling, 2002; Resilience Alliance, 2010)

Systems tend to exhibit several nested cycles and can feed back from one to the other. Thus, there is a complex of cycles of different hierarchies at different moments that interact among themselves. It follows that if there is a variety of critical variables, the behavior of their cycles can come together to determine where the system is in its cycle. This model is called "panarchy" (Gunderson & Holling, 2002; Davoudi, 2012).

Allen and colleagues (2014) propose plotting these panarchy models along at least two axes representing the time and space scales. The system whose Holling cycle is being studied is placed at the highest point of both axes, and then is gradually stripped of subsystems as the relations and moments of their own cycles affect the performance of the overarching system. Before designing these elucidating graphic representations, however, it is necessary to identify the key subsystems, their relations, and their status within the cycle. These exercises are iterative, and ideally require debate at different levels of governance and experimentation.

Figure 5 displays the hydrological system of the city of Guadalajara, with three levels of niches. They are established following the European Union's TRUST guidelines (Smith et al., 2015) regarding key subsystems in urban water management. The TRUST study reviewed the pertinent literature and found that technical aspects dominated (supply, sewers, sanitation, and asset management), as expected. Topics of governance, however, have begun to gain prominence and relevance. Thus, Governance and Technical Issues are the critical categories for the system. The TRUST research proposes useful interdependence layouts between them (Ramôa et al., 2015) that help to reread the GMA case. Both issues deploy several variables derived from local aspects (see Tables 2 and 3). As represented in Figure 5, technical aspects take more implementing time than governance aspects and they are expected to last longer as well. Governance issues, on the other hand, are able to include territories higher than the combined water infrastructure can. Community issues are not included in TRUST considerations, however. They were represented in Figure 5 to indicate their relevance and their possible situation on the temporal and spatial scales.

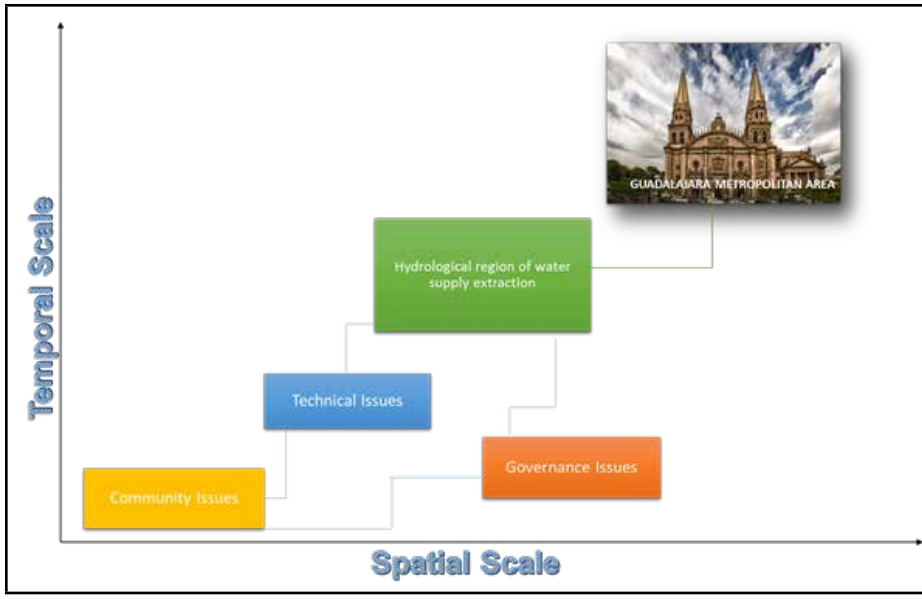

Figure 5: Panarchical outlook of some key topics for assessing the resilience of an urban water system (Source: author's own formulation based on Allen et al., 2014 and Smith et al., 2015)

To establish the critical variables of the system and their Holling cycle moments, local literature and knowledge are consulted. The concern of how to deal with water scarcity and its consequences for a growing city and its expected prosperity have led Guadalajara's social sectors

to discuss the options for dealing with the water problem. Current water management information has recently been made available and governance assemblies have been created to address specific topics such as the water tariff and the social conflicts derived from water issues. Following TRUST's urban services draft, Tables 2 and 3 display local aspects and results, with the proposed variables being the most pertinent ones in the resilience framework under discussion.

Governance issues include water policies and regulations, financial mechanisms, and organization and management. Mexican water regulations have been evolving recently ever since the human right to water was enshrined in the Mexican Constitution in 2012. There is also a new concern with anticipating droughts by means of a federal program that combines international climate monitoring with local management plans (Pronacose, 2015). Governance assemblies have also been created or reformatted (Water Basin Councils were created twenty-five years ago) to respond to these policies, and they have clashed with the classic authoritarian style of water management which is also tending slowly toward reform. Governance issues are therefore in transition and mix classic water policies, like increasing water supply to cover projected demand,[8] with new ones like the process of devising a self-sufficient tariff system with benefits for vulnerable groups and a dynamic response to drought periods. The variables deployed for this group of issues are complex and range from regulations to the agents involved in governance, as well as key actions.

Issue: Policy and Regulation			
Local aspect	Variables	Status	Goal
Increasing supply of water	Projected supply (Ps) Projected demand (Pd)	Ps<Pd by 2020	Ps>(0.8)Pd
Hierarchy of use	Regulated levels for users	15 regulated user levels in Water Law	Total empowerment of governance agents
Implementation of human right to water	Modernized legislation and agents empowerment	Inclusion in National Constitution (2012)	National Water Law
		Initial legal cases	Full legal implementation

[8]Table 1 indicates an expected 6% growth in demand by 2020, but previous sections of this paper make it clear that this supply policy is heading toward a crisis—it could be said that it is approaching the threshold between phases K and Ω in a Holling cycle.

Drought policy	Program	Pronacose, 2015	Resilience Program
	Actions	Climate monitoring	Detailed plans for user
			Developed alternative water supply
Issue: Financial mechanisms			
Local aspect	Variables	Status	Goal
Self-sufficient tariff system	Tariff (T); Cost of production (C)	T=(.75)C	T>=1.1C
Benefits for vulnerable groups	Low-income group (LigT) and Retirement (RT) tariff as percentage of regular domestic users' rate.	LigT: 0.15%	LigT: 3%
		RT: 13%	RT: 10%
Drought tariff	Dynamic tariff for drought periods (DT)	None	DT validated in governance
Issue: Organization and Management			
Local aspect	Variables	Status	Goal
Relationships between government levels. Year of last reform	Modernized regulation of government levels and agents to respond to Human Right to Water	National Water Law, 1992 Jalisco's Water Law, 2014 Siapa's Water Law, 2014	All government regulations respect Human Right to Water
Governance assemblies, year of creation or reformation	National Water Council (NWC)	NWC, 1992	All governance assemblies respect Human Right to Water (2012)
	Basin Water Council (BWC)	BWC, 1992	
	Jalisco Water Observatory (JWO)	JWO, 2014	
	Siapa Water Tariff Council (SWTC)	SWTC, 2014	

Table 2: TRUST's Governance Issues for GMA (Source: author's own formulation based on Mexico's water legislation [www.conagua.gob.mx]; Jalisco water legislation

[www.ceajalisco.gob.mx]; Wester, 2008; Ochoa & Bürkner, 2012; Conagua, 2014; Pronacose, 2015; Salazar-Adams, 2016; SIAPA [2016])

With regard to financing, Guadalajara's water authority aspires to be self-sufficient, but it is still burdened with significant liabilities. In 2012, it formed a SIAPA Water Tariff Council (SWTC) with a majority of citizen members, and which has contributed to the creation of an approach for generating revenue to cover the system's operating and maintenance costs without affecting vulnerable user groups. However, the debate as to whether a special rate should be instituted for periods of drought, as Pronacose recommends, has not yet begun.

Finally, management and organization involve agencies from all three levels of government: the National Water Commission (Conagua), the State Water Commission (CEA), and SIAPA. The relations among the three agencies vary depending on the topic, and can be considered consolidated (K in the Holling cycle) but need to be reformed to respond to the human right to water. On the other hand, the SWTC and the Jalisco State Water Observatory (JWO) are governance assemblies whose importance has risen as of late.

The Technical Issues categories and variables are less groundbreaking, and local authorities normally monitor and report the indicators involved. The Jalisco State Water Commission is in charge of building and managing the main hydraulic infrastructure and of being aware of the quality and quantity of water supply sources (aquifers, lakes, and rivers). At the local government level, the water agency for the four main municipalities of the GMA is SIAPA, which publishes monthly online reports (SIAPA, 2016). This agency is in charge of the drinking water supply for the city, the treatment of wastewater, its reuse when possible (regulation limits the possible uses of cleaned wastewater), and asset management. Over the last five years, wastewater treatment has increased from 3% to 67% of wastewater produced.[9] Its reuse is still marginal, however: 16 liters per second (l/s) of the potential 475 l/s market estimated by SIAPA. In addition, nearly half of the eight thousand kilometers each of supply and drainage networks, are older than the recommended thirty years of service. Leaks are estimated by SIAPA to be at 10% of the total conducted amount;[10] it is not critical yet but SIAPA is already testing innovative maintenance systems.[11] Finally,

[9]Two large-scale wastewater treatment facilities started operating in 2012 and 2014 respectively, but they are not yet running at full capacity as some major sewer lines are still missing.

[10]Some academics estimate that the leaks are about 40% of the total supplied amount.

[11]The innovative technology in use is called a "sleeve"; it is like a new internal wall for the pipe that is inserted into a damaged drainage section to stop small leaks. It is faster and less expensive than the normal procedure which entails digging up damaged lines.

the water supply capacity is reaching current limits. As the bottom of Table 1 illustrates, new supply projects are in process but this strategy is generating ever-greater social conflicts and needs to be complemented.

Issue: Water supply			
Local aspect	Variables	Status	Goal
Regular system	Supply (S); Demand (D) (m^3/s)	S:11; D:10.5	S>=(0.8)D
Groundwater management	Extraction – Recharge Balance (B) (Hm^3/year)	B: -80	B>0
Alternative sources	Rain harvesting (RH) (m^3/s)	No data	RH>=1
Issue: Urban drainage			
Local aspect	Variables	Status	Goal
Regular system	Storm water flow control: conflict points with more than one hour of retention	106	No data
Issue: Wastewater treatment			
Local aspect	Variables	Status	Goal
Municipal facilities	Percentage of wastewater treated	67%	100%
Reuse	Amount of wastewater reused (l/s)	16	475
Issue: Asset management			
Local aspect	Variables	Status	Goal
Supply / drainage networks	Percentage of the network not older than 30 years	About 50%	100%
Innovative maintenance	Speed of network repairs (km/year)	60	300

Table 3: TRUST's Technical Issues for GMA (Source: author's own formulation based on SIAPA [2016] and Jalisco State Water Commission's page: www.ceajalisco.gob.mx)

Once the variables' status is established, it is possible to consider a first attempt to assign each one a moment in the Holling cycle

(Table 4 summarizes the attempt). For the Governance Issues, the policies oriented toward responding to the human right to water are connecting elements and gaining operative capital (see Figure 4); consequently, it is feasible to assign a τ to this local aspect. Drought policy implementation efforts are at the same point, and get a τ as well. On the other hand, the traditional policy of increasing the water supply is mature but reaching the saturation point. It is conceivable that it will enter into a crisis soon, and that a restructuring will be necessary (release and reorganization of its elements in the Holling framework). Thus, it makes sense to describe it with a 'K' in transition to 'Ω' (K - Ω in Table 4[12]). The rest of the moments identified have a similar rationale. While the organizational levels of water government and the hierarchical uses of water are well established (K), the tariff system, the benefits for vulnerable groups, and the governance assemblies are in development (τ). Finally, the drought tariff is included in the Pronacose (2015) proposal but has not yet been discussed in the SWTC; it therefore merits α.

The identification of the moments of the technical issues is easier because their variables have a clearer metric between their status and the defined goals. With the exception of storm water flow control (which is dicussed in the hydraulic engineering area), the rest of the problems are about meeting a desired relation between demand and supply, or reaching the full potential point of a certain aspect (like the 475 l/s estimated by SIAPA as the maximum size of the potential local market for treated wastewater reuse). As for storm water, filtration experts on one hand propose taking advantage of such with rain harvesting and natural filtration facilities. On the other hand, water flow control experts insist that the amount of liquid is too concentrated within a short period of time, and that the most feasible solution is to build facilities to deal with the excess water that overwhelms the regular drainage system during the rainy seasons. The debate is still underway and at the moment there is no clear goal for this local aspect (Table 3). At any rate, it is clear that the drainage system is overloaded and in danger of collapse (K - Ω).

Governance Issues		
Issue	Local aspect	Cycle moment
Policy and regulation	Implementation of human right to water	t
	Pronacose program	t
	Increasing supply of water	K- Ω
	Hierarchy of use	K

[12]It is important to understand that the cycle moments are indicative expressions and not mathematical equations.

Issue	Local aspect	Cycle moment
Financial mechanisms	Self-sufficient tariff system	t
	Benefits for vulnerable groups	t
	Drought tariff	α
Organization and management	Relationships between government levels	K
	Governance assemblies	t
Technical Issues		
Issue	Local aspect	Cycle moment
Water supply	Regular system	K- Ω
	Alternative sources	t
Urban drainage	Regular system	K- Ω
Wastewater treatment	Municipal facilities	t -K
	Reuse	α - t
Asset management	Supply / drainage networks	K- Ω
	Innovative maintenance	t

Table 4: Resilience and transitions in Guadalajara's water sector (TRUST) (Source: author's own formulation based on Allen et al., 2014 and Smith et al., 2015)

THE NEXT STEPS

To turn these assessments and studies into actual public policies for managing Guadalajara's urban water system in the face of its own saturation and impending drought, the next step is to submit the proposals developed in this article to consultation in different forums where academics discuss water-related topics with public authorities and political decision-makers. These arenas already exist: the Jalisco Academic Water Council, the JWO, the SWTC, and the Pronacose follow-up commission of the Santiago River Watershed Council (the watershed to which Guadalajara belongs). These debates about building urban water resilience will meet the more comprehensive debates of the 100 Resilient Cities Network to deal a GMA plan. The Jalisco State Government's resilience workshops are proposed for 2017.

The discussion will have to touch not only on the elements of Figures 2 and 3 and the assessment of their current status within the cycles (Tables 1 to 4), but also their hierarchical relations in time and space. The expectation is that these debates will lead to the conception of new combinations of elements and new water management models at different levels. Another desirable outcome would be better informed

social agents who take a more active role in what up to now has been the exclusive domain of a highly-specialized and closed water bureaucracy.

There is a lack of sound research about community-level resilience in the GMA. A local study (Bürkner & Zehner, 2012) and a national survey (Ramírez-Fuentes & Soto-Montes de Oca, 2012) suggest some community strategies to deal with water shortages, but it is necessary to generate a more complete catalog of practices to deal decisively with urban droughts.

In the end, the aim is to develop effective water management at different levels, assuring the human right to water in the city and in its surrounding region, even in times of drought.

CONCLUSIONS

After this first exercise in evaluating the Guadalajara Metropolitan Area's resilience in the face of droughts, the following conclusions can be drawn concerning its theoretical-methodological basis and its usefulness for formulating public policies.

Regarding the concept of resilience, it is clear that the discussion is ongoing. Contributions such as those of Bahadur and colleagues (2010) continue to report wide diversity when they attempt to summarize trends and identify common elements. While certain elements do stand out clearly, Bahadur reports that the statistics are scattershot when it comes to the centrality that these elements should assume within a given model and the use that should be made of them. Furthermore, it is not clear with some concepts (such as equity and democratic governance) whether they are inputs for good resilience or desired outcomes of resilience. This is what makes the visualizations proposed by projects like TRUST (Smith et al., 2015) so valuable. While governance in these proposals is still very much centered on government and its collaboration with the governed, at least a discussion is opened about topics other than technical specifications.

As for the Resilience Alliance's model (2010), it should first be pointed out that it is a handbook of concepts used to assess the resilience of a given system. It offers an operational model, although it leaves out some of the elements that other authors consider useful (Bahadur et al., 2010; Uriarte, 2013; Soares de Moranes, 2014), which means it must be complemented with other analyses. What tends to be missing is a more concrete guide about how the critical elements of the system are related

to each other. In this case study, the complement was provided by the TRUST approach and frameworks. At the same time, however, the Alliance's model is interesting because it enables the analyst to visualize at a single glance multiple elements that are seen as having an impact on both the system as a whole and the focal theme being examined, but whose interconnections are not easily discerned. The methodological proposal offers guidelines for locating them within the whole, and even for differentiating among them. For example, it is very useful to distinguish between disruptive events that affect the system in spurts and those that exert continuous pressure (perhaps less intense than a spurt, but constant and increasing). Both can push the system to the catastrophic threshold, but they need to be managed differently.

Finally, about the system itself that was analyzed—the Guadalajara Metropolitan Area's resilience in the face of droughts and from the focal perspective of the water supply—it can be said that while no new data were obtained in this first exercise, new relationships were perceived among the data which genereated new perspectives. As far as the Drought-readiness Program (Pronacose, 2015) goes, the analysis shows that the focus needs to be regional, not local, since most of the surface water that the city uses falls as rain on, and runs off of, the lands along the Lerma River, where it is disputed by large-scale users before it even becomes available to Guadalajara in Lake Chapala. Complementary hydraulic infrastructure projects are already being built to the north of the city, but this will only duplicate the battleground of watershed councils for water allocation.[13] This relationship between watersheds as water suppliers and the big growing cities requires additional exploration with a more complex approach.

At least two more issues will take on importance within the system. The first is groundwater. There is not enough information now, but it is clear that local aquifers are being severely overexploited (Peñuela-Arévalo & Carrillo-Rivera, 2013). In the event of severe or prolonged drought, or subsequent events that dry up bodies of surface water and prevent their recovery, the region's aquifers will be the last resort (Pronacose, 2015; Smith et al, 2015). If they are depleted, and poorly monitored by regional authorities, they can hardly be expected to safeguard the city's quality of life.

The perspectives proposed by TRUST (Smith et al., 2015) suggest a second issue: the preparedness of the city itself. Is water being used

[13]The Santiago River Watershed Council will join the Lerma-Chapala Watershed Council to act as an arena for water allocations since the Santiago River (of which the Verde River is a tributary) will also be in dispute.

as equitably and as efficiently as possible? Are authorities and citizens being prepared to deal with drought conditions in an orderly way, with respect for the human right of access to drinking water? At present, the answer is no, and so the hope is that the communication and discussion of resilience-based models will help to establish a common sense that will promote sound water-use measures.

To conclude, it is worth pointing out a couple of areas of opportunity that have not been fully addressed. The first has to do with the socio-economic subsystem which is in constant transformation. The ideal scenario is that water-intensive businesses would not compete for the urban water supply; the question is how to motivate these businesses to use less water, or even to move, without driving up unemployment in the subsystem. The other is the opportunity to rethink how we define prosperity. Can we reformulate the currently accepted components (UN-Habitat, 2015) and shift them toward a different socio-ecological cycle that might come closer to the kind of world we want to build?

REFERENCES

Adger, W. N. 2000. Social and ecological resilience: Are they related? ***Progress in Human Geography,*** 24(3): 347–364. Available at http://phg.sagepub.com/content/24/3/347 (accessed December 18, 2015).

Allen, C. R., Angeler, D. G., Garmestani, A. S., Gunderson, L. H., & Holling, C. S. 2014. Panarchy: Theory and application. ***Nebraska Cooperative Fish & Wildlife Research Unit—Staff Publications,*** Paper 127. Available at http://digitalcommons.unl.edu/ncfwrustaff/127 (accessed December 18, 2015).

Bahadur, A. V., Ibrahim, M., & Tanner, T. 2010. ***The resilience renaissance? Unpacking of resilience for tackling climate change and disasters.*** Strengthening Climate Resilience Discussion Paper 1. United Kingdom: Institute of Development Studies, University of Sussex.

Bermejo, R. 2008. ***Un futuro sin petróleo: Colapsos y transformaciones socioeconómicas.*** Centro de Investigación para la Paz. Madrid, España: Los Libros de la Catarata.

Brooks, R., & Goldstein, S. 2004. ***El poder de la resiliencia: Cómo lograr el equilibrio, la seguridad y la fuerza interior necesarios para vivir en paz.*** México: Paidós.

Bürkner, R., & Zehner, C. 2012. Tecnological recesses y raíces locales de *place-making*: Tres estudios de caso urbanos. En H. Ochoa & J. Bürkner, ***Gobernanza y gestión del agua en el Occidente de México: La metrópoli de Guadalajara:*** 285–319. México: ITESO.

Conagua. 2011. ***Semblanza histórica del agua en México.*** México: Comisión Nacional del Agua, Gobierno de la República.

Conagua. 2014. ***Estadísticas del agua en México.*** México: Comisión Nacional del Agua, Gobierno de la República.

Davoudi, S. 2012. Resilience: A bridging concept or a dead end? ***Planning Theory & Practice,*** 13(2): 299–307.

Flores, R. 2014. ***Los Afluentes y los Ríos. La construcción social del Medio Ambiente en la Cuenca Lerma Chapala.*** México: ITESO.

Giddens, A. 1995. ***La constitución de la sociedad: Bases para una teoría de la estructuración.*** Buenos Aires, Argentina: Amorrortu.

Gunderson, L., & Holling, C. 2002. ***Panarchy: Understanding transformations in human and natural systems.*** Washington, DC: Island Press.

Holling, C. S. 1973. Resilience and stability of ecological systems. ***Annual Review of Ecological Systems,*** 4: 1–23.

ICSU, ISSC. 2015. ***Open working group proposal for the Sustainable Development Goals and Targets.*** Paris: International Council for Science (ICSU).

IMEPLAN. 2015. ***Expansión Metropolitana 1970–2045.*** Instituto Metropolitano de Planeación. Guadalajara, México: Gobierno del Estado de Jalisco. Available at https://drive.google.com/a/imeplan.mx/file/d/0B4KJF4s9aIZUY2k2SERSbENxYkE/view (accessed January 14, 2016).

Landrum, N. E., Dybzinski, R., Smajlovic, A., Ohsowski, B. M. 2015. Managing for resilience: Lessons from ecology. ***Journal of Management for Global Sustainability,*** 3(1): 75–99.

MEA. 2005. ***Millennium ecosystem assessment: Ecosystems and human well-being synthesis.*** Washington, DC: Island Press.

Melillo, A., Suárez Ojeda, E., & Rodríguez , D. 2008. ***Resiliencia y subjetividad: Los ciclos de la vida.*** Buenos Aires: Paidós.

Ochoa, H., & Bürkner, J. 2012. ***Gobernanza y gestión del agua en el Occidente de México: La metrópoli de Guadalajara.*** México: ITESO.

Peñuela-Arévalo, L. A., & Carrillo-Rivera, J. J. 2013. Discharge areas as a useful tool for understanding recharge areas, study case: Mexico Catchment. ***Environmental Earth Sciences,*** 68(4): 999–1013.

Porter, L., & Davoudi, S. 2012. The politics of resilience for planning: A cautionary note. ***Planning Theory & Practice,*** 13(2): 329–333.

Pronacose. 2015. ***PMPS para usuarios urbanos de agua potable y saneamiento. Informe parcial.*** Comisión Nacional del Agua. México: Gobierno de la República. Available at http://www.pronacose.gob.mx/pronacose14/contenido/documentos/PMPMS%20Zona%20metropolitana%20Guadalajara.pdf (accessed January 14, 2016).

Puig, G., & Rubio, J. 2011. ***Manual de resiliencia aplicada.*** España: Gedisa.

Ramírez-Fuentes, G. R., & Soto-Montes de Oca, G. 2012. ***Estimación de los factores y funciones de la demanda de agua potable en el sector doméstico en México.*** México: CIDE / Conagua.

Ramôa, A., Toth, E., Proença de Oliveira, R., di Frederico, V., Montanari, A., & Monteiro, A. 2015. Assessment of TRUST pilots. ***Guidelines for urban water strategic planning,*** Report 12.1a, TRUST D12.1a. European Union Seventh Framework Programme (FP7/2007 - 2013), agreement n. 265122. Available at http://www.trust-i.net/downloads/index.php?iddesc=148 (accessed November 10, 2016).

Resilience Alliance. 2010. ***Assessing resilience in social-ecological systems: Workbook for practitioners.*** Version 2.0. Available at http://www.resalliance.org/files/ResilienceAssessmentV2_2.pdf (accessed November 10, 2016).

Rubio, J., & Puig, G. 2015. ***Tutores de resiliencia: Dame un punto de apoyo y moveré MI mundo, prólogo de Boris Cyrulnik.*** España: Editorial Gedisa S.A.

Salazar-Adams, A. 2016. ***Fugas de agua y dinero: Factores político-institucionales que influyen en el desempeño de los organismos operadores del agua potable en México.*** México: El Colegio de Sonora.

Shaw, K. 2012. "Reframing" resilience: Challenges for planning theory and practice? ***Planning Theory & Practice,*** 13(2): 308–312.

SIAPA. 2016. ***Informe de actividades y resultados, Octubre de 2016.*** Available at http://www.siapa.gob.mx/sites/default/files/doctrans/informe_octubre_2016_-_completo_2.pdf (Accessed November 30, 2016).

Smith, H., Ramoa, A. R., Galvao, A., Monteiro, A. J., & Jeffrey, P. 2015. ***Review on flexible UWCS and transitional pathways.*** TRUST D12.1b. European Union Seventh Framework Programme (FP7/2007–2013), agreement n. 265122.

Soares de Moranes, D. (2014). ***Vulnerabilidad frente a huracanes y comunicación de riesgos de desastres en la costa de Yucatán.*** XXIII Congreso Nacional de Hidráulica, Puerto Vallarta, México.

UN-Habitat. 2015. ***Guadalajara, metrópolis próspera: Redefinición del Área Metropolitana de Guadalajara como ciudad próspera en el marco metodológico del Índice de Prosperidad Urbana de ONU-Habitat.*** México: Gobierno del Estado de Jalisco / UN-Habitat. Available at http://www.onuhabitat.org/index.php?option=com_docman&task=doc_view&gid=1172&tmpl=component&format=raw&Itemid=526 (accessed January 15, 2016).

UNISDR. 2012. ***Informe 2012: Desarrollando ciudades resilientes.*** The United Nation Office for Disaster Reduction Regional Office—The Americas, Panamá. Available at http://www.zaragoza.es/contenidos/medioambiente/onu/newsletter12/899-spa-sum.pdf (accessed October 23, 2014)

Uriarte, J. 2013. La perspectiva comunitaria de la resiliencia. ***Psicología Política,*** 47: 7–18.

Véliz Montero, F. 2014. ***Resiliencia organizacional: El desafío de cuidar a las personas, mejorando la calidad de vida de las empresas del siglo XXI.*** España: Gedisa.

Wester, P. 2008. ***Shedding the waters: Institutional change and water control in the Lerma-Chapala Basin, Mexico.*** PhD dissertation. The Netherlands: Wageningen University.

WHO. 2003. ***Human right to water.*** Geneva, Switzerland: World Health Organization.

Woo, G. 2001. ***Jalisco y sus sectores estratégicos.*** México: Gobierno del Estado de Jalisco.

World Bank. 2013. ***Turn down the heat: Climate extremes, regional impacts, and the case for resilience.*** A report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, DC: World Bank.

Available at https://openknowledge.worldbank.org/handle/10986/14000 (accessed November 10, 2016).

World Bank. 2016. ***High and dry: Climate change, water, and the economy.*** Washington, DC: World Bank. Available at https://openknowledge.worldbank.org/handle/10986/23665 (accessed November 10, 2016).

Zolli, A., & Healy, A. 2012. ***Resiliencia: Por qué las cosas vuelven a su lugar.*** Bogotá: Carvajal Edicación.

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LEADERS AS SHAMANS
WORKING TO HEAL A TROUBLED WORLD[1]

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Abstract. In a world greatly in need of healing, today's leaders acting as shamans could potentially bring the shaman's ancient wisdom to the effort to create a more sustainable, just, and equitable world. Today's shamanic leaders undertake the same roles as the traditional shaman: healing, connecting, and sensemaking in the service of a better world. From a leadership perspective, the shaman's work is that of healing the world around us and our (human) relationship with that world, which is what many leaders are already attempting to do. In this context, healing can mean making our relationships, systems, and organizations whole or sound. In a similar vein, connecting means working across boundaries of different types, such as relationships, disciplines, functions, sectors, and institutions, among others, to create collaborative initiatives or new insights that can move ideas and institutions forward in a positive way. Finally, sensemaking means helping others understand and interpret their world in new and hopefully constructive ways. It means creating a new vision of the future through tasks like developing new memes or framing new stories or narratives that help people relate to their enterprises or the world in different ways. In today's troubled world, where our dominant cultural mythologies, policies, and practices have resulted in frighteningly unsustainable conditions and divisiveness, I argue that more leaders explicitly need to (and can) take on these shamanic roles.

Keywords: leadership; shamanic leaders; sustainability; memes

[1]Some of the ideas in this paper are drawn from *Intellectual Shamans: Management Academics Making a Difference* (Cambridge University Press, 2015) and from *The Difference Makers: How Social and Institutional Entrepreneurs Built the Corporate Responsibility Movement* (Greenleaf, 2008).

All traditional cultures typically have their shamans—medicine men and women who help to heal individuals' and communities' ills. Indeed, Peter Frost & Carolyn Egri call shamanism the world's oldest spiritual tradition (1994). Krippner (2002: 970) cogently notes that shamans "appear to have been humankind's first psychotherapists, first physicians, first magicians, first performing artists, first storytellers, and even the first timekeepers and weather forecasters."

This article argues that there are leaders today who already take on the three core tasks of the shaman—healing, connecting, and sensemaking (Frost & Egri, 1994; Waddock, 2015a) in the service of a better and more sustainable world. If more did so explicitly, then the many wicked problems facing businesses and other institutions could be dealt with more effectively.

As is obvious to many observers, the world desperately needs the healing that shamanic leaders might be able to provide. Healing, connecting, and sensemaking by leaders can help more people deal with their fears about the future and be able and willing to take necessary actions. Connecting can help us heal our relationships with ourselves, with each other, and with the planet as we learn to listen better, understand more, and act collaboratively from such new bases of insight. Connecting can help bridge divides that exist and heal relationships that now seem intractably problematic. The vital role of sensemaking by leaders can help make sense of the problems of the world—from climate change to political crises to widespread lack of meaningful employment. Sensemaking can help us begin to understand not only what actions are needed but how each person can work toward positive change.

The shamanic work of today's business leaders is not just to make profits but to do the explicitly healing work needed in whatever domains, across whatever boundaries, and in whatever narratives or stories are relevant (e.g., Waddock, 2015a; Frost & Egri, 1994). We face a context where dominant cultural mythologies sometimes seem terribly askew, where politicians cannot seem to agree on much, where business and other leaders need to move their enterprises toward sustainability and cope with climate change, and where peaceful relationships seem a distant dream. In such a world, leaders acting as shamans are badly needed.

WHY THE SHAMAN?: A CONTEXT OF NEEDED CHANGE

It is the shaman's capacity for breaking down boundaries and seeing things holistically, or at least from a different perspective than usual,

that makes the leader's work as shaman particularly crucial today. New and potentially important questions and actions arise out of a way of thinking that links ancient *and* new ways of knowing, doing, and thinking with present needs. As management scholar Russell Ackoff (1974) argued, the world today desperately needs more wisdom (which seems seriously lacking in far too many domains). In most cultures, shamans are considered the wise elders of their communities, and it is this status that leaders can assume if they embrace their inner shamanic potential.

The world today is confronted with a fraught economic system that has already had one major meltdown in 2007–2008, has fragile ecosystems that are at risk of collapse, social systems where problems abound, political systems filled with divisions, and business/economic systems dominated by financial interests rather than the "real" or productive economy (e.g., Gilding, 2011; Álvarex, 2011; Ehrenfeld & Hoffman, 2013; IPCC, 2014). These conditions have resulted in popular uprisings around jobs, political instability and divisiveness, growing inequality, terrorist attacks based on misguided fundamentalism(s), and a seeming inability of major institutions and governments to deal with climate change or other significant issues, to name a few.

Such problems, which are complex and chaotic in the mathematical sense, need to be managed holistically rather than piecemeal (Waddell, Waddock, Cornell, Dentoni, McLachlan, & Meszoely, 2015) to effect change. They demand vision—a systemic understanding of the implications of the issues and creatively imagining a different path. They demand the willingness and courage to take necessary risks to change the way that individual businesses relate to the network of other businesses and institutions with whom they engage. The situation is made more complex because dealing with such wicked problems often demands collaborative approaches that cross a variety of institutional, sectoral, disciplinary, and organizational boundaries. As Ackoff (1974) pointed out, single institutions cannot solve complex or wicked problems, which he termed "messes." If leaders embraced the healing, connecting, and sensemaking roles of the shaman, and were willing to take the associated risks of doing so, the world might be in a better condition. These three roles are briefly explored below.

Healer

The shaman is, most fundamentally and centrally, a healer (Eliade, 1974; Frost & Egri, 1994; Dow, 1986). The word "healing" has the same root as the words "whole," "healthy," and "holy," meaning to make sound, whole, or have integrity. Traditional shamans typically do their

healing at the level of the individual patient who is dis-eased (the hyphen is added to suggest a distinct unease with something in the world) or dis-ordered (out of order) in some way that manifests itself as illness.

Leaders as shamans might work to make whole and evidence integrity, to heal their teams, enterprises, communities, other types of institutions, and even the world at large. Particularly in need of such healing are human beings' and their enterprises' relationships with nature, which as the climate change and sustainability crises suggest are highly problematic. The idea of the healing function, then, is that it is purposively directed at making something healthier, better, or more "whole," i.e., having integrity.

The central task of healing for the leader as shaman is supported by the other two functions of connecting and sensemaking.

Connector

To do their healing work, traditional shamans "journey" to different (mostly spiritual) realms and connect across them, often believing that they are connecting with a universal spirit (or specific spirits, guides, or gods) to get information (e.g., Harner, 1990; Villoldo, 2007; Walsh, 2014). Shamans go to these other realms to gather and bring back information, insights, and knowledge for healing purposes, and in doing so they span boundaries of different types. Perhaps, in more psychological terms, they are tapping into what psychologist Carl Jung called the collective unconscious (Jung, 1936, 1981). Perhaps they are tapping into their intuitions, instincts, and creative impulses for inspiration, connections that others have not yet made, along with new ideas that can be used in a variety of ways. Leaders in enterprises do this boundary-spanning when they engage with stakeholders to learn about their interests and needs. They do it when they integrate across functions to gain multiple inputs from projects, services, and products, and when they create alliances of various sorts.

Shamans as connectors are what Frost & Egri (1994) called mediators of realities—they bridge across different "non-ordinary" worlds. These realms are spiritual for traditional shamans, and tend to be intellectual or disciplinary for intellectual ones (Waddock, 2015a). For leaders acting in the so-called real world, boundaries between realms can be interpersonal, intrapersonal, sectoral, functional, organizational, and institutional.

The connecting function takes leaders as shamans to non-ordinary realms in that they have to enter into the worlds or perspectives of others

quite different from themselves. There they try to understand those different perspectives, and bring back new information, insights, and connections that might not otherwise be made. Thus, by "connecting the dots" across boundaries, leaders as shamans take a systemic or holistic perspective on situations. They make linkages across ideas, insights, and institutions. They quite deliberately go out into worlds that are "different" from their own to experience new things and gain insights not available to them in their "ordinary" realms.

Through connecting activities, traditional shamans seek and bring back information that helps heal a sick patient. They often accomplish this task by healing or reframing the cultural mythologies that help to frame the community's understanding of the world about them. These myths, when problematic, are believed to be the source of dis-ease and dis-order in the community (Dow, 1986).

Today's leaders as shamans also need to bridge realms of practice in various ways to gather and bring back information that provides new insights, helps heal rifts, or builds new narratives and stories, i.e., new cultural myths (Dow, 1986). Such bridging provides for new insights that are gained by understanding and integrating multiple perspectives. For business leaders to truly understand stakeholders' perspectives, for example, means to enter into the world and mindsets of people different from the self to better understand what is meaningful and important to them, and then acting on the basis of that new understanding.

Business leaders operating as shamans today may need to find ways to develop cross-sector collaborations with activists to bring new information and points of view into their enterprises and help them avoid problems. They may need to work with multiple stakeholders to get the latter's perspectives on the company and its products or services. Or they may integrate strategies and ideas across multiple functional areas to ensure new products and services are developed effectively, or work with other leaders in coalitions to begin to cope with the types of big social concerns that are represented, for example, by the wicked problems of sustainability, inequality, and climate change, among others (Churchman, 1967; Rittel & Webber, 1973). By their nature, such issues demand more integrated and holistic approaches (e.g., Ackoff, 1974; Waddell et al., 2015). Such approaches tend to be cross functional, multi-disciplinary, or multi-organizational, demanding the systemic or holistic perspective characteristic of the shaman (Frost & Egri, 1994; Waddock, 2015a).

Sensemaker

Since the shaman in traditional cultures believes that people get sick when there is something wrong in the mythologies that help frame that culture, the mythology or dominant cultural narrative needs to change to enable the patient to get well (Dow, 1986). Shamans (and, not incidentally, leaders as strategists) are also sensemakers, serving in a sense as spiritual leaders by providing guidance and helping frame things for others (Frost & Egri, 1994; Weick, Sutcliffe, & Obstfeld, 2005). Through sensemaking, leaders as shamans shape new narratives and the memes that support them (Blackmore, 2000; Waddock, 2015a). For instance, new narratives are often needed for reframing a leader's activities for the organization, creating new visions and strategies, or helping others understand where the enterprise stands. Sometimes sensemaking brings new ideas to light.

Changing cultural narratives, especially when they are causing problems, is a central task of the shaman as sensemaker (see Dow, 1986) and of many of today's leaders. Acting as shamans, they could be the ones who take and synthesize information from different realms (which could be sectors, different types of institutions or organizations, or different stakeholders) in new ways. Using this information gathered from different sources (and connecting these ideas in new or insightful ways), they can begin to generate creative new insights that can be used to heal broken cultural myths (such as those of institutions, ideas, narratives, and strategies). Through sensemaking activities from a sustainability perspective, for example, such leaders are acknowledging the narratives whose influences are making our economic and social systems "ill" and impeding the planet's ability to support human civilization (e.g., Gilding, 2011; Ehrenfeld & Hoffman, 2013; IPCC, 2014).

Many of the issues facing businesses and societies need new and innovative approaches that are holistic and collaborative, which are core aspects of the way shamans as leaders operate in the world. Creating significant change, for example, can mean using the sensemaking capacity to develop new memes (Dawkins, 2006) that support new narratives which shape perspectives and worldviews that are different from currently dominant ones. Memes—phrases, words, images, and symbols—are the foundational units of cultural norms, and can help shape attitudes, belief systems, and narratives that frame how people see the world (or enterprises) (Blackmore, 2000; Dawkins, 2006; Waddock, 2015a). Ideas as memes, which replicate themselves when successful, can be powerful ways to begin a change process (Waddock, 2015b), particularly when they are holistic yet concise. They can inspire and reshape understanding of the world (or of local mythologies).

Ultimately, memes and narratives shape behaviors and practices in important ways (Waddock, 2015b; Dawkins, 2006) because they shape perspectives on what our relationship with and place in the world is (Blackmore, 2000).

Consider how the meme of sustainable development was launched by the Brundtland Commission's "Our Common Future" report (World Commission on Environment and Development, 1987), and then think about how that new understanding is reiterated in memes related to sustainability, sustainable enterprise, and initiatives like the UN's Sustainable Development Goals. Or consider how the term stakeholder has gained managerial traction since Freeman's (1984) publication of his seminal book, *Strategic Management: A Stakeholder Approach*, as a counterpoint to the dominant shareholder-based perspective of the firm. Contrast these emerging memes with today's dominant economic narrative and memes, which are shaped by what is known as neoclassical economics and the underlying neoliberal narrative (e.g., Hartwell, 1995). This narrative contains memes of maximizing (only) shareholder wealth, free markets, free trade, self-interest, and the like. The reshaping of these memes and the narratives they support thus becomes an important part of the sensemaking role of the shamanic leader.

Healer of Relationships

Performing the three functions of the shaman—healing, connecting, and sensemaking—arguably enables leaders to operate from a more systemic and holistic point of view. They may even tackle issues that other leaders may be hesitant to grapple with, because shamans are also risk-takers. Frost & Egri (1994) point out that shamans strive for holistic balance. Such leaders seek an integrated mind, body, heart, soul, and spirit connection at the individual level (see, e.g., Leonard & Murphy, 1995; Wilber, Patten, Leonard, & Morelli, 2008) and a holistic, sustainable, and socially just business or world at a more macro level. That is, leaders as shamans seek balance that is much needed at all levels of analysis in today's world.

Consider this definition: "A shaman is a healer of relationships between mind and body, between people, between people and circumstances, between humans and Nature, and between matter and spirit" (Kahili King, 2009: 14). Furthermore, the shaman "describes a particular type of practitioner who attends to the psychological and spiritual needs of a community that has granted that practitioner privileged status" (Krippner, 2002: 963) much in the same way as privileged status is granted to today's leaders. Shamanic practitioners

"use this [privilege] in attempts to meet the needs of this group and its members" (Krippner, 2002: 963), just as leaders are expected to do when they are operating in difficult contexts. Many leaders are already taking on these roles; being a shamanic leader simply means doing so explicitly.

Some people have negative connotations associated with shamans. Early researchers and scholars, for instance, thought that they were mentally ill or tricksters. On the contrary, however, traditional shamans have been found to be healthier (Boyer, Klopfer, Brawer, & Kawai, 1964), more creative and freer (Fabrega & Silver, 1973), highly skilled and talented (Walsh, 2001; Basilov, 1997; Sandner, 1997), and less anxious (Van Ommeren et al., 2002) than non-shaman counterparts (all reported in Krippner, 2002). If such attributes also apply to shamanic leaders, they might be something that leaders should strive to acquire, because the world arguably needs many more leaders to work toward healing its many fractures and rifts.

LEADER AS SHAMAN

Modern Western cultures tend to draw on the Cartesian split between mind and body, material and spiritual, and focus in on atomistic and fragmented forms of understanding rather than on the shaman's more holistic, nature-based, and connected sense of spirit in all. Business as well as academic perspectives are often rooted in narrow conceptions of science, disciplinary specialization, and atomistic thinking. Such perspectives seem to have little room—or tolerance—for the ways of the shaman, who tends to be purpose/healing driven, holistic, and integrative of multiple ways of seeing and knowing, crossing numerous boundaries in the process (Waddock, 2015a). Thus, while shamans have been found in virtually all cultures of the world (Eliade, 1974), they are in little obvious evidence in most modern institutions. The idea of shaman is hardly accepted in mainstream business today, despite the healing that they may provide. There are, however, numerous popular books on the topic (e.g., Harner, 1990; Villoldo, 2007; Kahili King, 2009; Walsh, 2014), a rich and deep body of anthropological and sociological literature, and a widespread interest in the idea of shamanism among spiritually-oriented individuals. We all probably know some leaders who already perform the healing, connecting, and sensemaking roles of the shaman to serve their enterprises and the world, each in their own ways.

Shamanic leaders in all sectors, explicitly aiming to heal and make the world a better place, keep the idea of building a better world firmly in mind as part of their enterprises' core purpose. Through the connecting

function, they bridge into new territories by crossing a variety of boundaries, engaging with different stakeholders. They creatively bring actors together in new ways that can lead to new business models and ideas, product innovations, and organizational developments which others cannot achieve. Through developing and inspiring new visions, they help others make better sense of the world.

One person who seems to fill shamanic roles is Unilever's chief executive officer, Paul Polman, who is noted for his transformative efforts in moving the giant consumer goods company toward sustainability. Polman, whatever flaws he might have as a human being, is termed by Gareth Bell as "the archetypal modern leader [who] … combines an astuteness derived from a quarter century at Proctor and Gamble … with a social conscience and sense of duty …" (Bell, 2013: 38). He can also be considered a shamanic leader, even though he might not recognize the term.

By shifting memes and the company's internal narrative, not to mention the way it is perceived by external observers, Polman eliminated quarterly reporting to discourage short-termism and an overemphasis on shareholders to the detriment of other stakeholders. He re-focused the company on improving the lives of its customers sustainably and equitably, and has aimed at making it a sustainable enterprise through development of what the company calls its "Sustainable Living Plan" (Bell, 2013; Bansal & DesJardine, 2014). The visionary CEO understands the complexities of the future, and clearly understands the connections between how the company operates and the wellbeing of its customers, stating in print that as "a company we need to focus ruthlessly on improving the lives of consumers in a sustainable and equitable way. If we do that well, shareholders will be rewarded" (quoted in Bell, 2013: 38).

Furthermore, Polman is clear about the roles companies need to play in healing the world, as well as the connections that need to be made in doing so. In an interview, he pointed out that Unilever is

> … creating a much stronger ecosystem that takes our risk away, but it also creates enormous opportunities to broaden our products. Because once you work in partnerships often with governments or with civil society, it creates other opportunities to grow your business. We look at products that we otherwise would not be able to sell … technologies in our own value chain … [that generate] their own renewable energy …. (Polman, 2015)

Given his ability to make sense of them in ways that other business leaders want to emulate and because they make ecological and business

sense, the shifts that Polman initiated have systemic consequences. As he comments, "So from wherever you look—from your value chain with your suppliers, from your cost structure, from your motivation with your employees, from your innovation program—there is an angle of positive growth that is connected to climate change" (Polman, 2015: 16). Furthering the connecting function of the shaman, Polman argues that part of what needs to happen is the creation of "coalitions of like-minded people that are able to create a tipping point" (Polman, 2015: 17). Such a tipping point would enable other companies and their supply and distribution chains to join in, creating holistic or systemic change in the process.

By crossing traditional boundaries, be they spiritual or the sectoral, functional, and cultural boundaries crossed by leaders like Polman, shamans (and shamanic leaders) have opportunities to create new ways of viewing old problems that have potential for healing. Since shamans focus on healing relationships of all sorts (Kahili King, 2009), shamanic leaders are, like Polman, focused on creating holistic balance (Frost & Egri, 1994) among different stakeholders. They emphasize better relationships with stakeholders and the Earth itself (Kahili King, 2009) for their enterprises, and not just competitive but collaborative or cooperative approaches as well. In other words, the holistic focus of the leader as shaman precludes a narrow perspective on the roles and functions of the firm. For that matter, it also precludes a strict focus on maximizing shareholder wealth which seems to be expected by financial markets today, and inherently enables the leader to see the firm in its bigger context and thus with bigger purposes.

DEVELOPING SHAMANIC LEADERS FOR A BETTER FUTURE

What does it take to become a shamanic leader? While a complete answer to that question is of course beyond the scope of this article, a wisdom perspective may provide insight to help enact in practice the three functions of healing, connecting, and sensemaking. Wisdom has been defined as the integration of moral imagination, systems understanding, and aesthetic sensibility in the service of a better world (see Waddock, 2015a). Developing practices that enhance the attributes of wisdom is therefore one way of also enhancing the skills needed by the leader as shaman. These skills include broadening perspectives and moral imagination through exposure to new situations, mindfulness practices that ask leaders to "journey" to new realms, exposure to systems thinking, and aesthetic sensibility through enhanced storytelling and other creative skills.

Broadening Perspectives and Moral Imagination

The question is: how do we expand the wisdom of present and future leaders so that they can tackle problems facing their enterprises as well as issues in their enterprises' contexts more holistically as shamans do? This means acquiring moral imagination, i.e., the ability to see the ethical implications of a situation (Werhane, 1999, 2002, 2008). Shamans in traditional cultures often gain their understandings and insights through what are called shamanic journeys. They enter into meditative, trance, or altered states of consciousness (e.g., Eliade, 1974; Harner, 1990; Frost & Egri, 1994; Krippner, 2002; Walsh, 2014) which are induced in a variety of ways. In the trance, the shaman travels to spiritual realms where information that is used for healing, connecting, and sensemaking purposes is accessed. As noted earlier, leaders as shamans travel—either physically, intellectually, or through interactions—across multiple boundaries as well to gain information and potential insights.

One obvious way of broadening perspectives and enhancing moral imagination is to deliberately expose future leaders (or have them expose themselves) to differences in perspectives in a variety of ways, including hands-on, experiential, and work-based learning (Raelin, 1999; Kolb, 1984). Such perspective-enhancing experiences are not particularly new, and include travel, living in and exposure to different cultures, working side-by-side with people very different from themselves, multi-stakeholder engagements and dialogues, and similar strategies. They also include understanding management as a humanistic and not just business calling (e.g., Amann, Pirson, Dierksmeier, Von Kimakowitz, & Spitzeck, 2011). The key is turning these experiences from simply being fun and interesting to something more shamanic and oriented toward healing, and may lie in having the individuals who experience them reflect on them either individually or in groups of people who have experienced similar things, developing what Raelin (2003) called leaderful practice.

Leaders may need to be exposed to the three tasks of the shaman—healing, connecting, and sensemaking—and explicitly work to develop their skills in these arenas, just as traditional shamans do through their apprenticeships and related experiences. Many popular books on shamanism ask would-be shamans to engage in a variety of meditative and mindfulness practices to develop their shamanic journeying practices and related insights (e.g., Villoldo, 2007; Walsh, 2014). Such practices are aimed at healing and broadening relationships with the self, others, the community, and the world, and research today is showing that various forms of mindfulness practices can have powerful results in helping enhance awareness, health, happiness, and openness (e.g., to ideas) (e.g.,

Kabat-Zinn, 1994; Langer, 1997, 2014). They also broaden perspectives in a variety of ways, including developing a more ethical and sustainability-focused orientation among managers (Crilly, Schneider, & Zollo, 2008). Indeed, Crilly et al. (2008) showed in a field experiment that mindfulness practice was successful in enhancing ethical attitudes and orientation toward corporate responsibility while traditional classroom-based approaches were not.

Being a shamanic leader is based partly on practice over time and what amounts to a lifelong journey toward enhanced awareness and healing. That can happen through the practice of mindfulness techniques of different types, or practice in the field, with others, that broadens awareness and fosters healing. In fact, while such approaches are a far cry from the traditional functional specializations offered in schools of management, there is some evidence of increasing receptiveness to such ideas (e.g., in the emergence of ideas about spirituality at work [e.g., Neal, 2013]), and thus no reason why shamanic practices of various sorts might not be included in business school curricula.

Systems Thinking

Perhaps the most important attribute of the shaman for coping in and with today's troubled leadership context is holistic or systems understanding. This skill is related to the connecting function of the shaman since it integrates information from a variety of realms, and is of course linked to enhancing the breadth of perspectives and the ability to see ethical issues in situations, i.e., what is called moral imagination (Werhane, 1999). Systems understanding can potentially enhance awareness of the issues not just within a given enterprise but also in broader institutional, societal, and ecological contexts.

Senge (2006) termed this skill "systems thinking" in the 1990 edition of his seminal book, *The Fifth Discipline*, and others have since argued that management education and development programs need to emphasize the holistic approaches of systems thinking and understanding (Muff, Dyllick, Drewel, North, Shrivastava, & Haertle, 2012). In traditional cultures, the shaman is sometimes initiated through apprenticeship, sometimes receives a "calling" to shamanism, or sometimes experiences some sort of life trauma that brings him or her to the practice (Eliade, 1974). In today's culture, leaders as shamans can follow much of the same pathways. For example, a "calling" to serve the world, traumatic experiences, and apprenticeship/educational experiences can help foster a sustainability (Rimanoczy & Laszlo, 2013) or global (Aggarwal, 2011) mindset, both of which offer systems understanding potential. Such

holistic, integrated, and systemic ways of thinking are hallmarks of the shaman (Walsh, 2014; Waddock, 2015a), and are demanded much by both enterprises and critics of management education (e.g., Muff et al., 2012).

Just as it means connecting across different domains, becoming a shamanic leader definitely requires developing a healing orientation toward the world, the organization, and its stakeholders, as well as healing the self (Waddock, 2015a). This means that leaders need to be educated about issues facing the system. They need to have a realistic understanding of the ways in which their particular institutions influence the system both positively and negatively. Leaders need to understand their own role(s) in the current system and in the desired one. Such an integrated perspective can help in developing a more holistic understanding of how the system works. It can illuminate what the dynamics, pressures, and forces are that cause the system and its various enterprises to behave the way they do, and where leverage points for change (Meadows, 1999; Senge, 2006) can be developed. Here the connecting function of the shaman can be helpful. By going outside of their everyday reality and discovering what people in different types of enterprises or institutions perceive and think, and by incorporating those new realities into their thinking, leaders can broaden their vision and begin to see things in new ways.

Storytelling/Narrative Development

Aesthetic sensibility clearly relates to the creative demands on leaders today to articulate new visions for their enterprises, help frame new understandings when changes are needed, and design enterprises and whole systems that are things of beauty. The art associated with sensemaking is clearly implicated here, as well as a sense in which leaders today need to understand the importance (and learn the skill) of storytelling, of narrative, in shaping how stakeholders perceive their enterprises. That, in effect, is what visioning and strategy-making is all about. It is the core element in the sensemaking function of the shaman. For example, visioning and storytelling skills, part of aesthetic sensibility, are clearly evident in the ways Paul Polman speaks about his vision for Unilever, notable even in the short quotes above.

In the context of the sustainability and climate change crises, many stakeholders, including employees, customers, activists, and government representatives, may no longer be satisfied by the "story" that the sole and whole focus of a firm is to "maximize shareholder wealth." They may want to see some sort of new narrative or story about the firm that identifies a broader purpose. Of course, such a narrative needs to be backed up by the kinds of actions that Polman is taking at Unilever,

one which places the firm at the forefront of change toward a more sustainable enterprise or dealing more effectively with carbon emissions.

CONCLUSION

Business as usual will not suffice in today's troubled context, and so leaders acting as shamans are arguably needed more than ever. Today's leader as shaman needs to be oriented to today's world and needs, and not just to traditional business concerns. The needs of the present are different from what humanity has ever experienced before, and the problems—e.g., climate change, sustainability, species extinction, materialism and excessive consumption, the role of financial institutions—are too frequently beyond the scope of any one institution to resolve. Thus, today's accepted ways of thinking and acting will not move the world toward the sustainability and wellbeing embedded in the shaman's vision. Ironically, practices rooted in ancient traditions just might be able to help—and they are not so far from the ways which many leaders are already practicing. They simply need to be made explicit. The world needs, in short, more leaders to act as shamans by taking on the healing, connecting, and sensemaking tasks in the service of a better world.

REFERENCES

Ackoff, R. 1974. ***Redesigning the future***. New York: Wiley.

Aggarwal, R. 2011. Developing a global mindset: Integrating demographics, sustainability, technology, and globalization. ***Journal of Teaching in International Business***, 22(1): 51–69.

Álvarex, P. (Ed.). 2011. Healing a broken world: Task force on ecology. ***Promotio Iustitia***, No. 106, 2011/2. Available at http://www.sjweb.info/documents/sjs/pjnew/PJ106ENG.pdf.

Amann, W., Pirson, M., Dierksmeier, C., Von Kimakowitz, E., & Spitzeck, H. 2011. ***Business schools under fire: Humanistic management education as the way forward.*** New York: Palgrave Macmillan.

Bansal, P., & DesJardine, M. R. 2014. Business sustainability: It is about time. ***Strategic Organization***, 12(1): 70–78.

Basilov, V. 1997. Shamans and their religious practices from shamanisms among the Turkick peoples of Siberia. In M. M. Balzar (Ed.), ***Shamanic worlds: Rituals and lore of Siberia and Central Asia:*** 3–48. Armonk, NY: North Castle Books.

Bell, G. 2013. Doing well by doing good: An interview with Paul Polman, CEO of Unilever, part 1. ***Strategic Direction,*** 29(4): 38–40.

Blackmore, S. 2000. ***The meme machine*** (vol. 25). Oxford, UK: Oxford Paperbacks.

Boyer, L. B., Klopfer, B., Brawer, F. B., & Kawai, H. 1964. Comparisons of the shamans and pseudoshamans of the Apaches of the Mescalero Indian Reservation: A Rorschach study. ***Journal of Projective Techniques & Personality Assessment,*** 28(2): 173–180.

Churchman, C. W. 1967. Wicked problems. ***Management Science,*** 14(4): B141–B142.

Crilly, D., Schneider, S. C., & Zollo, M. 2008. Psychological antecedents to socially responsible behavior. ***European Management Review,*** 5(3): 175–190.

Dawkins, R. 2006. ***The selfish gene.*** London: Oxford University Press.

Dow, J. 1986. Universal aspects of symbolic healing: A theoretical synthesis. ***American Anthropologist,*** 88(1): 56–69. Available at http://www.jstor.org/stable/679279.

Ehrenfeld, J., & Hoffman, A. 2013. ***Flourishing: A frank conversation about sustainability.*** Palo Alto: Stanford University Press.

Eliade, M. S. 1974. ***Archaic techniques of ecstasy.*** Princeton: Princeton University Press.

Fabrega, H., & Silver, D. B. 1973. ***Illness and shamanistic curing in Zinacaantan: An ethnomedical analysis.*** Stanford, CA: Stanford University Press.

Freeman, R. E. 1984. ***Strategic management: A stakeholder approach.*** Boston: Pitman. Republished 2010. Cambridge, UK: Cambridge University Press.

Frost, P. J., & Egri, C. P. 1994. The shamanic perspective on organizational change and development. ***Journal of Organizational Change Management,*** 7(1): 7–22. DOI: http://dx.doi.org/10.1108/09534819410050777.

Gilding, P. 2011. ***The great disruption: How the climate crisis will transform the global economy.*** London/New York: Bloomsbury Publishing.

Harner, M. 1990. ***The way of the shaman.*** New York: HarperOne.

Hartwell, R. M. 1995. ***A history of the Mont Pelerin Society.*** Indianapolis, IN: Liberty Fund.

IPCC. 2014. Summary for policymakers. In C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, & L. L. White (Eds.), ***Climate change 2014: Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects.*** New York: Cambridge University Press.

Jung, C. G. 1936. The concept of the collective unconscious. ***Collected Works,*** 9(1): 42. Available at http://www.bahaistudies.net/asma/The-Concept-of-the-Collective-Unconscious.pdf.

Jung, C. G. 1981. ***The archetypes and the collective unconscious*** (No. 20). Princeton, NJ: Princeton University Press.

Kabat-Zinn, J. 1994. ***Wherever you go, there you are: Mindfulness meditation in everyday life.*** New York: Hyperion.

Kahili King, S. 2009. ***Urban shaman.*** New York: Simon and Schuster.

Kolb, D. A. 1984. ***Experiential learning: Experience as the source of learning and development***, vol. 1. Englewood Cliffs, NJ: Prentice-Hall.

Krippner, S. C. 2002. Conflicting perspectives on shamans and shamanism: Points and counterpoints. ***American Psychologist,*** 57(11): 962–972.

Langer, E. J. 1997. ***The power of mindful learning.*** Addison-Wesley/Addison Wesley Longman.

Langer, E. J. 2014. ***Mindfulness.*** Boston: Da Capo Press.

Leonard, G., & Murphy, M. 1995. ***The life we are given: A long-term program for realizing the potential of body, mind, heart and soul.*** New York: Tarcher (Putnam).

Meadows, D. 1999. ***Leverage points: Places to intervene in a system.*** Harland, VT: The Sustainability Institute. Available at http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/.

Muff, K., Dyllick, T., Drewel, M., North, J., Shrivastava, P., & Haertle, J. 2012. ***The 50+20 agenda: Management education for the world.*** Available at http://50plus20.org/wp-content/uploads/2012/06/5020_AGENDA_PRINT_a4_English.pdf.

Neal, J. A. 2013. ***Handbook for faith and spirituality at work.*** Berlin: Springer-Verlag.

Polman, P. 2015. The business of climate change. ***The Fletcher Forum of World Affairs,*** 39: 13–18.

Raelin, J. A. 1999. ***Work-based learning: The new frontier of management development.*** Reading, MA: Addison-Wesley.

Raelin, J. A. 2003. ***Creating leaderful organizations: How to bring out leadership in everyone.*** San Francisco: Berrett-Koehler.

Rimanoczy, I., & Laszlo, E. 2013. ***Big bang being: Developing the sustainability mindset.*** Sheffield, UK: Greenleaf Publishing.

Rittel, H. W., & Webber, M. M. 1973. Dilemmas in a general theory of planning. ***Policy Sciences,*** 4(2): 155–169.

Sandner, D. F. 1997. Introduction: Analytical psychology and shamanism. In D. F. Sandner & S. H. Wong (Eds.), ***The sacred heritage: The influence of shamanism on analytical psychology:*** 3–11. New York: Routledge.

Senge, P. M. 2006. ***The fifth discipline: The art and practice of the learning organization.*** New York: Broadway Business.

Van Ommeren, M., Komproe, I., Cardena, E., Thapa, S. B., Prasain, D., de Jong, J. T. V. M. et al. 2002. ***Psychological profile of Bhutanese shamans.*** Paper presented at the annual conference of the Society for the Anthropology of Consciousness, Tuscon, AZ. Reported in Krippner (2002).

Villoldo, A. 2007. ***Shaman, healer, sage: How to heal yourself and others with the energy medicine of the Americas.*** New York: Harmony (Random House).

Waddell, S., Waddock, S., Cornell, S., Dentoni, D., McLachlan, M., & Meszoely, G. 2015. Large systems change: An emerging field of transformation and transitions. ***Journal of Corporate Citizenship,*** 58: 5–30.

Waddock, S. 2015a. ***Intellectual shamans: Management academics making a difference.*** Cambridge, UK: Cambridge University Press.

Waddock, S. 2015b. Reflections: Intellectual shamans, sensemaking, and memes in large system change. ***Journal of Change Management,*** 15(4): 259–273.

Walsh, R. 2001. Shamanic experiences: A developmental analysis. ***Journal of Humanistic Psychology,*** 41(3): 31–52.

Walsh, R. 2014. ***The world of shamanism: New views of an ancient tradition.*** Woodbury, MN: Llewellyn Publications.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 2005. Organizing and the process of sensemaking. ***Organization Science,*** 16(4): 409–421.

Werhane, P. H. 1999. ***Moral imagination and management decision making.*** New York: Oxford University Press.

Werhane, P. H. 2002. Moral imagination and systems thinking. ***Journal of Business Ethics,*** 38: 33–42.

Werhane, P. H. 2008. Mental models, moral imagination and system thinking in the age of globalization. ***Journal of Business Ethics,*** 78: 463–474.

Wilber, K., Patten, T., Leonard, A., & Morelli, M. 2008. ***Integral life practice: A 21st century blueprint for physical health, emotional balance, mental clarity and spiritual awakening.*** Integral Books.

World Commission on Environment and Development. 1987. ***Our common future.*** Oxford: Oxford University Press, 1987.

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MANAGEMENT EDUCATION FOR SUSTAINABLE DEVELOPMENT

INTEGRATING ECOLOGY AND COMMUNITY VALUES IN SOCIAL IMPACT PRACTICUMS

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Abstract. This study explores a management education model to help integrate sustainable development ideas into university curricula and programs. This pedagogical model emphasizes a community-based approach along with other proven methods for university-community collaborations and course-based social impact analysis. The *Laudato Si'* encyclical's notion of integral ecology, along with the need to create

community-benefit academic programs, inspired the establishment of a partnership between the University of San Francisco's Master of Nonprofit Administration program and the Foundation for Sustainability Development. This partnership experience expanded into development practicum courses and solidified into strategies for integrating experiential learning and organizational development through community-based analysis. The graduate level pedagogical models discussed here are relevant to other academic institutions and programs that would like to educate students with a community-centered approach.

Keywords: integral ecology; praxis; methods; practicum; sustainable development education

INTRODUCTION

> If we want to bring about deep change, we need to realize that certain mindsets really do influence our behavior. Our efforts at education will be inadequate and ineffectual unless we strive to promote a new way of thinking about human beings, life, society and our relationship with nature. — Francis, *Laudato Si'* 47

The University of San Francisco's School of Management created a Development Practicum Program that gives students the opportunity to consult with selected nonprofit organizations. Inspired by Jesuit teaching, sustainability values, and grounded in community-based development methods, the goal of the course is to train students to provide capacity development services to organizations in order to improve their performance and impact. Since its pilot in the spring of 2015, the program has evolved into a required graduate level practicum course where students consult in teams that provide some level of capacity development through analysis to a nonprofit.

One of the initial partners of the program was the Foundation for Sustainable Development (FSD), who sought to assess the effectiveness of their community-based projects in several countries (FSD, 2017). The pilot stage of the assessment involved their teams and partners in Uganda; the project then expanded to other countries who utilized the assessment tools and methods elaborated during the pilot. Subsequent student teams then worked on the analysis of worldwide data, the identification of community-based and regional priorities, and the reporting of common trends relevant to the Foundation's priorities.

The integrative models that emerged from the analysis of university-community partnerships, as well as the methods embedded in the design of a social impact analysis practicum course, provided crucial lessons for integrating sustainable development values into management education. The graduate students who worked in these partnerships, guided by the instructor and the learning modules of the course, were able to provide relevant tools and methods for FSD, and their experience also provided a platform for reflecting on the necessary methods and perspectives that can be employed and adapted by other academic programs interested in designing sustainable management education practicum courses. The lessons and models presented here thus aim at stimulating design thinking for value-based management education programs interested in developing sustainability education and globally responsible graduates.

In this article, the analysis of the practicum experience first introduces the design of the course. Second, we explain how the notion of integrated sustainability inspired the design of the development practicum, and also introduce literature relevant to the concepts of integral ecology and management education for sustainable development. Third, we review the methodologies integrated into the FSD project as they were adapted to the purpose of using community-centered approaches and performing social impact analysis within the scope of the project. Finally, we analyze the pedagogical lessons of the university-foundation-community collaborative project and propose an extended and adapted version of the Ignatian Pedagogical Paradigm (IPP) (Jesuit Institute, 1993). The conclusions highlight some lessons learned in this process that can be applicable to other curricula designs. These lessons are also relevant for strategically embedding sustainability integrated values and methods to assure that the community benefits through this experiential learning experience.

DEVELOPMENT PRACTICUM DESIGN

The University of San Francisco's School of Management has been strategically providing numerous opportunities to focus their value education into experiential learning. One of the strategies has been to integrate a required practicum course into leadership and management programs such as the Master of Nonprofit Administration (MNA), the first program of this kind in the world. Founded in 1983, the MNA Program has been at the forefront of social sector innovation for nonprofit management education and community benefit. The integration of a consulting-based course, as illustrated in this Social Impact Analysis-Practicum course, is a manifestation of the program's, school's, and

university's commitment toward stakeholder engagement, community development, and a sustainable future. In other words, the design and integration of the practicum is aligned with the Jesuit values and social mission of our university, and is based in one of the most innovative eco-systems in the world.

The course description reflects its practical, experiential, and consultancy values that are provided along with the learning of social impact analysis tools and program evaluation methods.

> The Practicum Course provides the essential tools for program evaluation, impact analysis and consulting for assessment and organizational learning. These include methodologies of measuring performance in nonprofit organizations and approaches for appreciative, asset based and participatory evaluations. Accompanied by expert faculty and cross-sector professionals, the course provides capacity development services to partnering organizations while offering invaluable experiential opportunities to our students. It includes hybrid class meetings, teamwork consultation activities, one-on-one mentoring, and integration of multidisciplinary perspectives for social benefit. (MNA Program, 2017)

The practicum includes learning outcomes such as 1) the capacity to identify and review organizational information gaps—expressed in the design, peer review, and final submission of a project plan; 2) the capacity to compare and contrast evaluation approaches and understand best practices—expressed in the in-class case studies, group activities, and discussions; 3) the capacity to apply select evaluation methods and techniques to aid data-driven decision-making in organizations and programs—demonstrated in the project report assignment; 4) the capacity to summarize and interpret data typically gathered for program evaluation—demonstrated in the students' out of class preparations in the readings and team-based project coordination reports. In addition, the course aims to develop professional and analytical capacities expressed in students' capacity to gather data, identify appropriate methods for the collection, and in their written and presentation communication capacity in the reporting of the analysis and relevant recommendations for the partnering organizations.

The practicum's learning outcomes represent real-world methods needed for educating sustainable development management and leaders. The inquiry, collaboration, and real-world dimensions of learning are some of the essential elements in the UNESCO's Education for Sustainable Development (ESD) model:

> To develop the higher-order skills they now need, individuals must engage in meaningful inquiry-based learning that has genuine value and relevance for them personally and their communities. Real-world experiences merged with sustained engagement and collaboration offer opportunities for learners to construct and organize knowledge; engage in detailed research, enquiry, writing and analysis; and communicate effectively to audiences. (UNESCO, 2002: 1)

The consulting methods and sustainability values of the course indicate that traditional lecture, or transmission-style teaching, is not sufficient in developing leaders for the twenty-first century. Collaborations existed in the Development Practicum on many levels, reaching far beyond the traditional student-teacher model. The aim was for students to develop an attitude of respect and service toward the community partnering organizations. The course structure enabled students to avoid a researcher-centered approach, fostering collaboration where every community stakeholder had a voice in the process. The experiential learning style of this course also offered students the opportunity to interact with the integrated social, environmental, and prosperity frameworks of sustainability along its dimensions at the personal, community, organizational, and institutional levels.

The design of the practicum course is a blend of sustainable development methods and responsible management education principles centered on experiential learning and organizational capacity development. For each of the courses, the instructor team selects about five nonprofits, social enterprises, or businesses with clear social benefit scope, and that have expressed a need for social impact analysis and capacity development. Small classes of about 20–25 students work in teams of four or five per project. Here it is worthy of note that the consultative project with FSD was one of the first groups of organizational partnerships that helped to solidify the methods and approaches of the university-community collaborations. The FSD project, in its first stage, provided a blueprint for how to best integrate analytical service projects with local community needs and international cross-cultural perspectives. The FSD's value for asset-based community development and community participation in the decision-making process of their priorities clearly aligned with the sustainability values and integral ecology notions of the academic program.

The course design was further guided by the definition of collaboration by Perrault et al. (2011), which emphasizes the goal for the academic-community-organization partnerships to be "a durable relationship that brings previously separate organizations into a new structure with commitment to a commonly defined mission, structure,

or planning effort" (Perrault, McClelland, Austin, & Sieppert, 2011: 283), where organizations pool their resources and achieve a product greater than either could accomplish alone. In their research on academic and community collaboration, Giffords and Calderon (2015) are careful to point out that different perspectives in collaborations, such as those developed in this practicum course, can mire the process. "For example, an academic values the collaboration as an opportunity to further a research agenda, whereas the community partner focuses on the application of practice" (Giffords & Calderon, 2015: 399). Collaboration literature puts forth several common approaches to ensure productive university-community partnerships, including: open formal and informal communication among all levels and stakeholders; mutual respect, understanding, and trust; and shared vision, leadership, and learning purpose (Armistead, Pettigrew, & Aves, 2007; Giffords & Calderon, 2015; Perrault et al., 2011). Marullo and Edwards (2000) state that failed university-community partnerships have the potential to further alienate and disenfranchise the community; therefore, the goals of those involved in such a partnership should be to empower the community organization to no longer depend on the collaboration. In this course, therefore, collaborations took the form of consultative relationships between the student and the community-based organization. The students were challenged to engage collaboratively in the capacity building of the community organization to foster conditions that strengthen their ability to plan, develop, and implement sustainable community programs (Poole, 1997).

INTEGRAL SUSTAINABLE DEVELOPMENT EDUCATION

At the time of the design of the practicum, our university was inspired by Pope Francis' notion of integral ecology (Ramage, 2015). Holy Father Pope Francis, in the encyclical *Laudato Si' (praise be to you): On Care for Our Common Home* (Francis, 2015), recognizes the interconnectedness of our local and global societies with nature and everything in our world. His perspectives have helped us to reflect on the centrality of the communities in need and have inspired us to develop appropriate methods and approaches to have their voices heard. The methods selected for the collaborative university-foundation-community project were designed therefore to promote sustainable development leadership education that simultaneously benefits community-based organizations through the adoption of methods representing human dignity, asset-based, participatory, and rights-based approaches.

Applying the concept of integral ecology in the course design was an opportunity to move beyond the traditional academic perspective

in community-based collaborations and place emphasis on sustainable development practices. Integral ecology invites academic institutions and students to have a positive impact on the world through sustainable value creation and responsible management education for the benefit of people, planet, and prosperity. Pope Francis asks us to consider the concept of integral ecology—a perspective that respects the human and social dimensions of sustainability—to effectively engage in solving the global crisis of poverty and environmental degradation (Francis, 2015: 137). He also reminds us that while some may interpret "sustainability" only by its "green" dimension, the very ideas of "sustainable development" and "sustainable capitalism" must integrate environmental with social and economic concerns (Tavanti, 2014). Institutions of higher education, especially Jesuit business schools, thus have the challenge and the opportunity to heed Pope Francis' call of enacting "deep change" based on their espoused values (Francis, 2015: 60). This is well within their reach if they begin by developing ethical leaders who understand the complexity of global challenges and are equipped to work collaboratively with a diverse set of stakeholders. In fact, the concept of integral ecology reflects principles already being applied in responsible management education, such as those articulated in integrated triple bottom line and sustainability reporting (Stachowicz-Stanusch, 2015; PRME, 2013).

The integration of sustainability values and practices in higher education programs and institutions is a growing phenomenon (Chase & Barlett, 2013). Many recommend that the integration of sustainability with management and leadership education should require the development of sustainability values, competencies, and mindset (Gauthier & Daudigeos, 2015; Cseh, Davis, & Khilji, 2013). Others have argued that a successful integration would require the formulation of new models, methods, and metaphors inclusive of the economic, social, environmental, and political dimensions of sustainability (Setó-Pamies & Papaoikonomou, 2016; Audebrand, 2010). As integrated sustainability frameworks for environmental, social, and governance (ESG) concerns are becoming standards in CSR and sustainability reporting (Tavanti, 2015), education is challenged to adopt more integrative educational models, including teaching and learning methods. This is why, inspired by its Jesuit mission and strategic efforts for social innovation, social impact, and social entrepreneurship, the University of San Francisco's School of Management supported the Development Practicum pilot course.

The course integrated the existing co-curricular organizational consulting practices applied across the School's masters degree programs representing business, public, and nonprofit administration. It also introduced students to the competencies and values related to sustainable development, social impact, and integral ecology. In particular, the notion

of integral ecology effectively illustrates the sustainability-integrated elements of people, planet, and prosperity, and reflects the values of Roman Catholic Social Teaching (CST) for the promotion of human dignity at all levels—global, national, local, and personal (Annett, 2015). Thus, the integration of personal-professional concerns with engagement in the local-global community was designed to develop meaningful and competent education for sustainable development. Pedro Walpole (2015) recognizes how Pope Francis emphasizes the importance of education for developing solidarity, responsibility, compassion, and solutions to our global crises: "An important way in which we must go deeper is in looking to the future by transforming education for all" (Walpole, 2015: 15).

To implement sustainable practices on a global scale and with an integral ecology approach, a value-shift in education must occur (Schein, 2015). Pope Francis states:

> Environmental education should facilitate making the leap towards the transcendent, which gives ecological ethics its deepest meaning. It needs educators capable of developing an ethics of ecology, and helping people, through effective pedagogy, to grow in solidarity, responsibility and compassionate care. (Francis, 2015: 210)

This exhortation to embrace an integrated deeper ecological perspective is similar to UNESCO's Higher Education for Sustainability Initiative (HESI), which emphasizes this integrated, values-based holistic approach.

> Education for sustainable development has come to be seen as a process of learning how to make decisions that consider the long-term future of the economy, ecology and equity of all communities … This represents a new vision of education, a vision that helps people of all ages better understand the world in which they live … This vision of education emphasizes a holistic interdisciplinary approach to developing the knowledge and skills needed for a sustainable future as well as changes in values, behavior, and lifestyles. (UNESCO, 2002: 4)

Yet only a few academic institutions worldwide have successfully integrated education for sustainable development (ESD) into their curriculum, let alone implement it as the basis for transforming education (Landorf, Doscher, & Rocco, 2008). Responsible management education programs and institutions thus have the opportunity to lead the way to effectively integrate ethical leadership education (values and purpose) with ESD.

The choice to include community partnerships as the focus of the Development Practicum course was guided by the concept of integral ecology, UNESCO's Twenty-First Century Pedagogy (2015),[1] and the IPP (Kolvenbach, 1987). These three frameworks share the common themes of experiential learning through authentic real-world contexts, inclusive collaborations, and culturally appropriate, participatory tools for the promotion of a community-based sustainable development process. Both the course design and the selection of partnerships were done in line with the sustainability and social responsibility values of education represented in the Principles of Responsible Management Education (Tavanti & Wilp, 2014). The objective was to build capacity in the partnering organizations while also developing professional and analytical competencies for the students and encouraging community engagement and global social responsibility. The collaborative activities were designed to reinforce the "set of values leading to life decisions that go beyond 'self': that include a concern for the needs of others" (Kolvenbach, 1987: 7) and relate to the human dignity and human rights values of individuals and communities. In the words of *Laudato Si',* the teaching and learning methods adopted were to embrace the value of "respect for the human person as such, endowed with basic and inalienable rights ordered to his or her integral development" (Francis, 2015: 157).

SOCIAL-COMMUNITY SUSTAINABLE DEVELOPMENT

The well-being of our local-global communities is the primary focus of our sustainable development efforts. Management education for sustainable development emphasizes the idea that the personal, organizational, and institutional levels of our sustainability values need to center around the well-being of communities. The Development Practicum course thus incorporated these integrated framework ideas for sustainability in an attempt to promote students' capacity to engage and assess social impact. The values of integral ecology were important in demonstrating methods and approaches designed to value the community's voice and active participation of its stakeholders. It was also necessary to include community-based organizations in these partnerships because the values of sustainability must be embraced from the "bottom up" in addition to from the "top down" to have impact (Rogers & Ryan, 2001).

[1]See Scott, C. L. 2015. The futures of learning 1: Why must learning content and methods change in the 21st century? Education Research and Foresight: Working Papers. UNESCO. Available at http://unesdoc.unesco.org/images/0023/002348/234807e.pdf.

These communal and societal principles are outlined in chapter four of the *Laudato Si'* call for a global response to halt not only the degradation of our planet but also the suffering of those on the margins of society who are most affected by climate change. Pope Francis acknowledges that the collapse of the environment is rooted in generations of human consumption without concern for the impact on people and planet (Francis, 2015: 109). To break this negligent cycle of behavior, Pope Francis appeals to the "whole human family" to come together as a global community to seek sustainable and integral development solutions "to protect our common home" (Francis, 2015: 12).

The social and human elements of environmental sustainability were originally indicated by the World Commission on Environment and Development (WCED)'s seminal work *Our Common Future* (aka the Bruntland Report [UN-WCED, 1987]) and the concrete call to action known as Agenda 21 (UNCED, 1993). The WCED report supports addressing sustainability at the local level to solve issues of poverty and environmental degradation. However, it does not recognize the need for community participation in sustainable development to ensure its success. In the *Laudato Si'* encyclical, Pope Francis goes a step further in his view of sustainability by stating that the world's most disadvantaged should be full participants in building a sustainable future for their communities. "The solution [to our social and environmental crisis], according to Pope Francis, lies in integral and sustainable human development. This means prioritizing not merely economic growth, but also social inclusion and environmental sustainability" (Annett, 2015: 20).

For global sustainability to occur, we need to integrate triple bottom line approaches and sustainability performance measurements for people, planet, and prosperity (Savitz, 2006). These priorities must exist at the interpersonal and community levels. They also need to be integrated with standardized targets of the Sustainable Development Goals (SDGs) (United Nations, 2015) and recognized methods such as Asset-Based Community Development (ABCD) (Montaldo, 2013).

The integrated ecology and community-centered approach implemented during the Development Practicum is helpful in identifying priorities for institutions, organizations, and communities partnering to create solutions based on the intersecting priorities of people, planet, and prosperity (Fig. 1). This model represents the community-centered and cross-sector solutions that our university program seeks to provide for the current global problems, and for the development of competent sustainability leaders. It has also been relevant to USF School of Management's identification of its core competencies in educating socially innovative, conscious leaders and globally responsible managers.

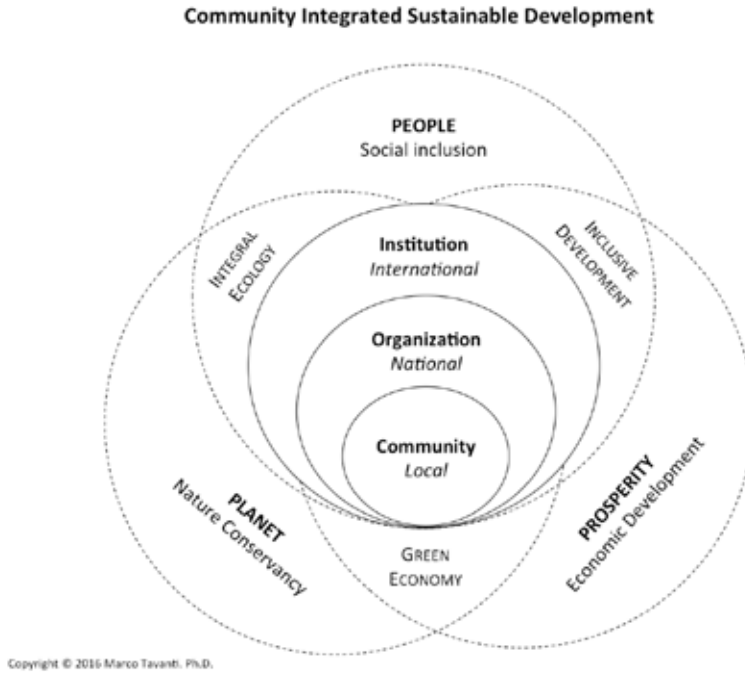

Figure 1: Integrated Sustainability Model

SUSTAINABLE SOCIAL IMPACT METHODS

The Community Integrated Sustainable Development Model was informed by *Laudato Si'* as well as the following methods, which were then provided to the Development Practicum course students as guidelines for conducting their consulting partnerships. The integration of these methods reflecting appreciative, participatory, rights-based, and social impact-based approaches into analysis was helpful in fulfilling the university-organizational-community levels of collaboration. In fact, FSD already had some of the values represented by these methods in their organization's mission statement: "FSD achieves community-driven goals through asset-based development and international exchange in Africa, Asia, and Latin America" (FSD, 2017a). They requested the assistance of USF to design sustainable social impact analysis instruments to assess community priorities for sustainable development projects. Despite emphasizing the importance of community-based sustainable development in their mission statement, FSD had never devised a strategy to discover the community goals of the local people at their program sites. Instead, they relied on their local partner organizations to identify and propose these goals for their projects.

Phase 1 of the project was implemented during the fall of 2015 Development Practicum course, with the objective of constructing an effective method and strategy for capturing sustainable development community priorities. Although the pilot community was in Jinja, Uganda, the goal was to develop tools that would be flexible enough to be applicable and culturally relevant to other communities where they operate in Africa, Asia, and Latin America. FSD has overseen international development programs for twenty years, but sought to achieve a better system for implementing accurate data and tracking mechanisms for their social impact analysis. The organization's overall goal was to measure and report on its impact and social return on investment (SROI). FSD therefore agreed to be a part of the practicum course with the expectation that the university-organizational partnership would create solutions to address this need.

After a series of expert interviews and archival data analysis, the student team worked to catalogue concerns, challenges, and limitations. The Executive Director of FSD emphasized the importance of understanding and measuring the local residents' progress toward attaining their community-driven goals. In Phase II (worldwide data collection) and Phase III (analysis of priorities) of the project, the provided tools for the assessment could be adapted to measure, track, and analyze impact in eleven international program locations spanning across Argentina, Bolivia, India, Kenya, Nicaragua, and Uganda.

The first priority of the student team and FSD was ensuring that the *Participatory Community Goal Identification Process* and supplemental *Facilitator Handbook* was empowering for the local people served by the organization. Their success at this task is reflected in the comments made by the community and collected during the evaluation of their experience of the goal identification process. The values of the student team were rooted in their Jesuit education, with the guiding words in USF's mission statement to take "action against the things that degrade human dignity" having particular influence during the research phase of the project (USF, 2016). Studying the concept of "integral and cultural ecology" in the *Laudato Si'* encyclical also provided additional insights into the effects that development can have on a society if not conducted in a manner that values all cultures. Thus, it was of utmost importance for the student team to respect the local community members and staff engaging in their goal-identification process. The students took special care in attempting not to impose their Western cultural norms and ideals on the community and the process, leading them to develop a culturally intelligent tool that was representative of stakeholders and grounded in best practices of established methodologies.

The Integrated Methodology for Sustainable Social Impact (Fig. 2) presents a blend of existing approaches, methods, and tools that, when combined, produce a methodology and set of tools for building university-community partnerships that facilitate Community Integrated Sustainable Development. In creating this model, the professor and student team were influenced by the words of Ingrid Burkett (2011), who expressed the belief that there is a danger in highlighting techniques and tools above methodology and stressed the need for combining approaches and finding points of intersection. Burkett stated that without "an intentional articulation of the processes and principles that guide developmental work, such tools may only be partly useful" (576).

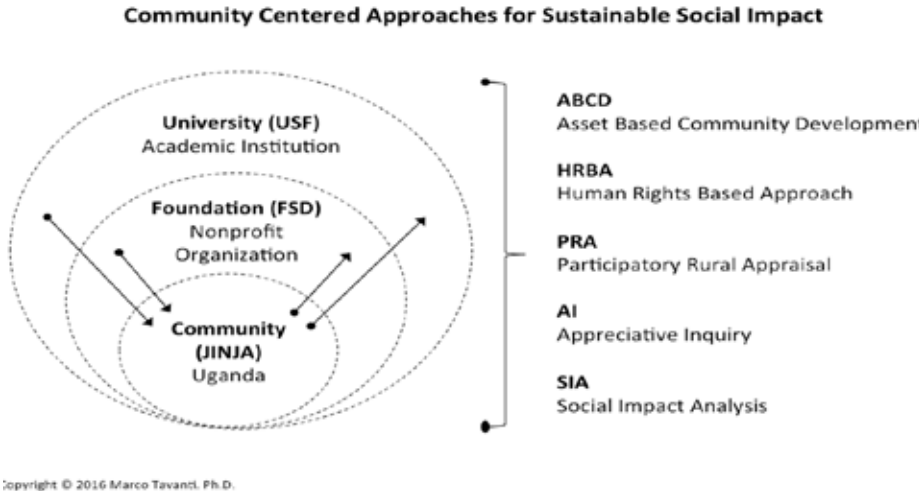

Figure 2: Integrated Methodology for Sustainable Social Impact

The methods that were integrated into the development of the social impact analysis tool were presented to the students in the Community Centered Approaches for Sustainable Social Impact model. This was provided at the outset of the course to guide the students' partnership development with FSD in the following areas: Asset-Based Community Development (ABCD), Human Rights-Based Approach (HRBA), Participatory Rural Appraisal (PRA), Appreciative Inquiry (AI), and Social Impact Analysis (SIA).

1. Asset-Based Community Development. The student team incorporated Asset-Based Community Development (ABCD) to include a positive focus on the strengths of the communities where the goal setting process was applied as required by FSD's mission (Kretzmann & McKnight, 1993, 1996). Approaches and methods that include positive

psychology, such as ABCD, have proven to be more sustainable in gaining and maintaining the community commitment and genuine engagement required for the long-term benefit of a development project (Mathie & Cunningham, 2003). ABCD nurtures strengths and assets, leading to a common vision created by community members who then take positive action to improve their lives (Mathie & Cunningham, 2003). It combines the concepts set forth in *Laudato Si'* that require social engagement as a component of sustainability in addition to environmental and economic elements.

The five building blocks of ABCD are: 1) mapping a community's assets and capacities, 2) convening a broadly representative community group, 3) building relationships, 4) mobilizing community assets, and 5) leveraging activities, resources, and investments from external sources (Community Assets, 2010). During implementation, the outsider (an NGO in FSD's case) facilitates the process of community driven development through trainings and support (Butterfield & Yeneabat, 2012). When the outsider listens, they can then learn what financial, human, and technological resources are available (Green, 2006). Finally, ABCD is considered to be an ongoing process, not just a means to an end. It is a process composed of a number of methods, such as appreciative inquiry and community organizing (Mathie & Cunningham, 2003).

2. Human Rights-Based Approach. The student team used a Human Rights-Based Approach (HRBA) to frame the *Participatory Community Goal Identification Process* in a way that linked back to *Laudato Si'*s vision of recognizing the dignity and rights of all human beings to be active participants in their own development. The principles of HRBA include: recognizing that the fulfillment of human rights is the goal of development; people are recognized as agents of their own development; participation is a means as well as a goal; strategies must be empowering; monitoring and evaluation are required; programs must focus on marginalized groups; development should be owned by the local people; development programs should reduce disparities; identification and analysis of root causes is necessary to solve development issues; analysis should involve all stakeholders; programs must build strategic partnerships; national accountability must be built to support human rights; and human rights should guide measurable targets, goals, and indicators (UNDG, 2016; UN-OHCHR, 2007).

3. Participatory Rural Appraisal. The student team selected Participatory Rural Appraisal (PRA) as the foundational framework for the *Participatory Community Goal Identification Process* based on the insights provided by FSD staff with regard to the varied populations living in their program sites. In addition, they felt that PRA closely aligned with

the concept of "integral ecology" and the emphasis on human dignity and environmental principles outlined in *Laudato Si'*.

PRA is defined as an "intensive, systematic but semi-structured learning experience carried out in a community by a multidisciplinary team which includes community members" (Theis & Grady, 1991: 23). It refers to a family of methodologies that enable local people in both rural and urban areas to share, discuss, define, and analyze knowledge of their own lives and conditions. PRA can thus facilitate the process for local people to plan and take action to improve their communities (Chambers, 1994). Its methods emphasize principles that are the exact opposite of its predecessor's practices—from "top-down to bottom-up, from centralized standardization to local diversity, and from blueprint to learning process" (Chambers, 1994: 953). The paradigm behind PRA is that local people must be the dominant participants in all stages of the method and own the entire process. PRA is thus a key methodology in enacting sustainable development practices.

4. Appreciative Inquiry. The student team made an effort to blend the components of existing approaches, methods, and tools by choosing Appreciative Inquiry (AI) as the underlying methodology for the *Participatory Community Goal Identification Process: Facilitator Handbook*. Developed in the 1980's by David Cooperrider under the tutelage of Suresh Srivastva at Case Western Reserve University in Cleveland, Ohio (Cooperrider & Srivastva, 1987), AI is a strengths-based methodology rooted in positive psychology. It is defined by the five D's of Define, Discovery, Dream, Design, and Delivery, and mobilizes capacity development beyond problem solving (Barrett & Fry, 2012).

Appreciative Inquiry provided a framework for creating questions from an asset-based perspective. The Discovery phase guides the creation of questions that seek to define what is the best of what is and what has been. The Dream phase facilitates the creation of questions that can foster visioning of a positive future. The Design phase encourages participants to develop innovative ideas of what should be. The Delivery phase involves the creation of an action plan to make the participants' dream a reality; facilitation questions are formulated around the theme of "What will we do?" (Cooperrider, Whitney, & Stavros, 2003). This method thus complements the values and approaches highlighted in the ABCD and PRA approaches.

5. Social Impact Analysis. For FSD, the purpose of conducting a social impact analysis (SIA) was to identify if a development project has succeeded in creating a positive sustainable change in specific communities and for society as a whole (FSD, 2017b). The development

of the *Participatory Goal Identification Process* intended to provide a baseline that would allow FSD to identify the indicators connected to the community-driven development projects conducted in their program locations. Once the goals of the community are identified, FSD will know what to measure in their longitudinal evaluation process to ensure the sustainability of the partner projects they support and to track whether the changes that occur support the mission of the organization. "The goal of impact assessment is to bring about a more ecologically, socio-culturally and economically sustainable and equitable environment. Impact assessment, therefore, promotes community development and empowerment, builds capacity, and develops social capital (social networks and trust)" (Vanclay, 2003: 6). Fundamental to SIA, therefore, are the principles that "in all planned interventions and their assessments, avenues should be developed to build the social and human capital of local communities and to strengthen democratic processes" and that "local knowledge and experience and acknowledgment of different local cultural values should be incorporated in any assessment" (IAIA, 2016). These core concepts mirror the values Pope Francis presses within his view of integral ecology and respecting every human being in *Laudato Si'*.

A COMMUNITY-BASED PRAXIS MODEL

Organizations and programs that claim to be socially responsible, sustainable, and beneficial to the community need to promote adequate methods to assess their actual performance in these values. The FSD is one of those organizations that wanted to verify if their values aligned with their practices. They wanted to understand if the community needs were clearly expressed and met. They needed adequate methods for measuring how the communities, especially women, children, and elderly, really perceived their needs and if their voices were heard in the decision-making process. The university-community partnership thus provided the integrated models and methods that guaranteed that all members of the targeted communities had a voice. The student team in turn was able to understand their needs and provide adequate responses to their expectations.

The analysis of the FSD project in Phase I (pilot communities in Jinja) highlighted four challenges and recommendations for future international collaborative projects of this kind:

1. Clarity of objectives, purpose, and deliverables—ensuring project goal alignment between organization headquarters and the field office;

2. Awareness of cultural and geographical distances—cultural diversity, distances of community sites, and diversity of project stakeholders;

3. Awareness of power dynamics—the need to understand community power dynamics, and creating a feasible process based on the site location;

4. Reducing the use of technical language for instruments—adapt the academic and organizational perspective to community-appropriate processes and instruments.

In addition, the FSD project team found it beneficial to have a comprehensive literary review of participatory and community-relevant development approaches and methods. This gave them the confidence to develop appropriate and adapted tools, as well as leadership competencies in communication, collaboration, and cultural sensitivity.

The university-foundation-community partnership integrated in the development practicum courses and consulting activities stipulated an adapted pedagogical model (Fig. 3) that expands on the IPP model. This integrated model centers on community needs and assets, and engages learners in experience (see), reflection (judge), and action (do) while embedding them in a value-based, evaluative, and contextual process. It can be applied in cultivating a partnership at both the organizational and the community levels.

The cyclical process of the praxis of IPP begins with listening and learning with the community (the Experience stage). The next stage is where community priorities and patterns are analyzed (Reflection). The final step, Action, is where community-driven priorities are applied. As such, this process may be viewed either as a model for planning and executing community development projects or as a means by which students and professors may interact with organizations to ensure sustainable social impact results from their university-organization-community partnerships.

The Community-Based Integrated Praxis model follows the classic IPP by depicting a cycle of Experience, Reflection, and Action encompassed by Context, Evaluation, and Values. However, it has been adjusted to serve the purpose of collaborating with a community, as well as integrating the framework of integral ecology and community-based approaches to create a model that will foster healthy university-community relationships that result in sustainable social impact. The process exists within the context of the social, environmental, and

economic perspectives on sustainability expressed in *Laudato Si'*. The values that guide the process are those of sustainability, human rights, and the responsibility of all citizens to ensure that everyone has access to those rights. The evaluation that is performed on the process is led by the methods and approaches of ABCD, HRBA, PRA, AI, and SIA. Communities and the methods for defining their assets, as well as what the students can provide to benefit them, are placed at the center of the process.

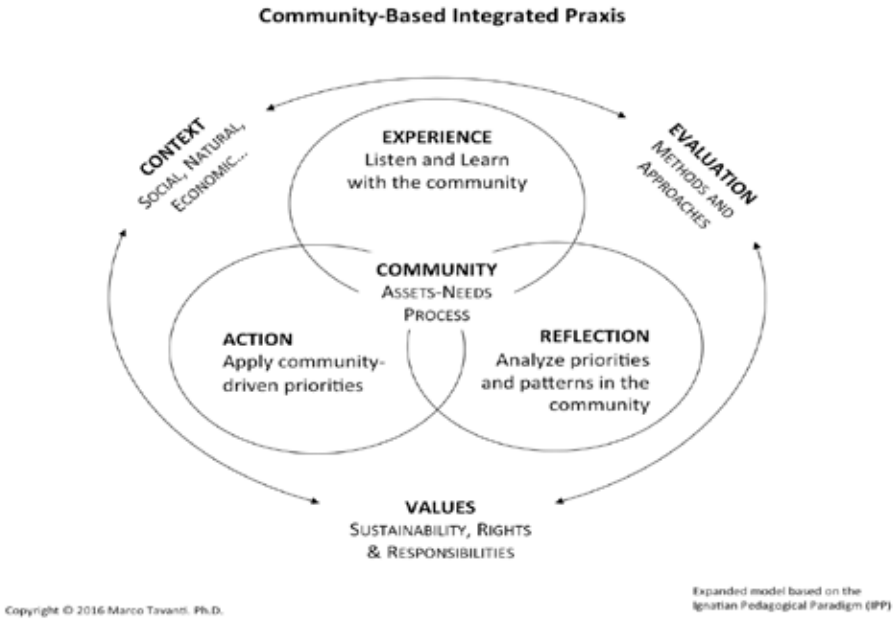

Figure 3: Community-Based Integrated Praxis Model

CONCLUSIONS

We highlighted the methods, processes, and models that resulted from USF's Master of Nonprofit Management Development Practicum course. The instructor and students participating in the course collaborated to develop a model for integrating community-centered approaches into sustainable impact analysis. The models that emerged from these collaborations can be helpful to management education programs and value-based business schools interested in integrating sustainable capacity development and experiential learning curricula solutions. The community-centered methods and perspectives that

emerged from this project can also be helpful in developing graduate students' values of community-participation, asset-based development, and social impact analysis.

The process of going through the development practicum as both teacher and learner made it possible to elicit an outcome that provided models for the application of existing community development frameworks in integrated pedagogical paradigms. The experience provided the opportunity to discover the potential for interdisciplinary synthesis between the fields of management consulting and community development. The result was a partnership model and praxis process that can authentically build relationships between universities and the community, relationships that will result in sustainable social impact. The project also generated a series of university-community recommendations and implications that build on existing collaborative literature and which can be applied to Jesuit business schools and management programs:

1. Develop Long-Term Institutional Partnerships. An institutional relationship is needed to go beyond the introductory level of student engagement, fragmented projects, or projects based solely on faculty interest and contacts. Universities and programs, therefore, need to build long-term partnerships with corporations and community organizations by having the organization share ownership of the project. In this way, a facilitator from within the community organization can provide a consistent bridge between the university and the partner organization (Allen-Meares, 2008). The institution or program, on the other hand, can continue and expand the project into its subsequent phases over time.

2. Identify Indigenous Expertise and Coordination. Collaborative projects at the international level would require identifying a coordinator and/or local organization that has knowledge of the context and the trust of the community. This gives the community contact the ability to inform students of sensitive issues and provide rationale for decisions (Giffords & Dina, 2003). This is important for guaranteeing community participation and effective local adaptation of methods and programs.

3. Manage a Transparent Application Process. Of particular importance is the application process which allows the organization interested in the university-community partnership to independently take the time to consider whether a partnership is right for them. This process should also highlight what is required to maintain a partnership as "each collaboration requires unique considerations and elements to achieve a successful endeavor" (Perrault et al., 2011: 283). For the consulting partnership to be beneficial and have a sustainable impact,

there must be buy-in from the entire organization to support and implement the project or process that the students create.

4. Negotiate and Agree on Expectations. All of the stakeholders who are required to be involved in the partnership to make it a success need to understand and agree upon expectations and commitment before the students become involved (Giffords & Calderon, 2015). Being of service to the organization is very important, but in a university-community partnership, educational goals must take precedence for the university. Therefore, for the required benefit of the students, the organization must agree to follow through on its commitments with the university.

5. Student Values and Competencies. Students are invited, challenged, and facilitated by the professor to develop their values for global engagement and social responsibility (USF, 2016). They need to engage in partnership not simply as a shared learning activity but as a career and professionally collaborative exercise where they increase their cultural competencies, communication effectiveness, analytical skills, and organizational consulting capacity (Perrault et al., 2011).

The Development Practicum course and the partnership projects for social impact analysis have also generated some important processes and initiatives currently integrated, or in the process of being integrated, in the strategic priorities graduate management programs at the University of San Francisco's School of Management. These include:

- **Core Competency—Global Social Responsibility:** Developing capacity and outcomes in relation to sustainability values, social responsibility, and global ethics are a school priority.

- **Social Impact Analysis—Practicum Course:** Designed and integrated in the Master of Nonprofit Administration, where students work in teams and consult for selected nonprofit organizations while learning about program evaluation and social impact analysis methods.

- **Graduate Professional Certificates:** Leadership courses along specialized practicum projects in the areas of social entrepreneurship, social innovation, sustainable development, and sustainability reporting.

- **UNESCO Chair on Sustainable Capacity Development:** Promoting corporate capacity for sustainability reporting

and SDG mapping for corporations and their sustainability CSR reporting.

- **Center for Sustainable Social Impact:** Promoting cross-sector collaborations and cross-programs curricula-based consulting projects and research activities for the benefit of social sector corporations.

Value-based universities and management programs that seek to effectively promote recognition of the dignity of all people, as well as community primacy and engagement in sustainable development as expressed in *Laudato Si'*, will find benefit in implementing and adapting these integrated models. They should consider designing programs that can develop both the students' competencies and values while providing quality community services for improving sustainable values and social impact. They should think about encouraging more experientially centered pedagogies and community-based partnerships to reflect the social values and integrated ecological paradigms that are portrayed in the *Laudato Si'* encyclical, represented in Roman Catholic social teaching, and reflected in the sustainability and social responsibility movements.

Academic institutions, especially those who share a Jesuit tradition of social justice, have the social and global responsibility to effectively integrate sustainability values for the future of our global leaders and managers. Community, social, and sustainable value creation can no longer be an elective in graduate management and business education. Moreover, teaching sustainable development and socially responsible management requires integrated models, methods, and approaches that respect human rights and promote social values. A curriculum that educates students on the importance, values, and methods of sustainable social impact can therefore maximize learning through experiential education that is conducted using university-organizational partnerships.

Socially responsible academic institutions can and should teach students to use community-based integrated praxis when doing consulting work in university-organizational partnerships. They have the mandate to educate students who will benefit society by equipping them with sustainable development values to apply in their interactions with partner organizations and affected stakeholder communities. The community-centered sustainability values illustrated in the curriculum and integrated models presented here should thus inspire students, faculty, and administrators to explore socially innovative models of teaching and learning with a primary purpose of benefiting the community. In doing so, our academic institutions will fulfill their responsibility to educate conscious, ethical, and socially impactful leaders for the common good.

REFERENCES

Annett, A. 2015. The next step: How *Laudato Si'* extends Catholic social teaching. ***Commonweal.*** Available at https://www.commonwealmagazine.org/next-step.

Allen-Meares, P. 2008. Schools of social work contribution to community partnerships: The renewal of the social compact in higher education. ***Journal of Human Behavior in the Social Environment,*** 18(2): 79–100.

Armistead, C., Pettigrew, P., & Aves, S. 2007. Exploring leadership in multi-sectoral partnerships. ***Leadership,*** 3(2): 211–230.

Audebrand, L. K. 2010. Sustainability in strategic management education: The quest for new root metaphors. ***Academy of Management Learning & Education,*** 9(3): 413–428.

Barrett, F., & Fry, R. E. 2012. ***Appreciative inquiry: A positive approach to building cooperative capacity.*** Taos Institute Publications.

Burkett, I. 2011. Appreciating assets: A new report from the International Association for Community Development (IACD). ***Community Development Journal,*** 46(4): 573–578.

Butterfield, A. K., & Yeneabat, M. 2012. "We can't eat a road:" Asset-based community development and the Gedam Sefer community partnership in Ethiopia. ***Journal of Community Practice,*** 20(1): 134–153.

Chambers, R. 1994. The origins and practice of participatory rural appraisal. ***World Development,*** 22(7): 953–969.

Chase, G. W., & Barlett, P. F. 2013. ***Sustainability in higher education: Stories and strategies for transformation***. Cambridge, Massachusetts: The MIT Press.

Community Assets. 2010. ***Asset based community development***. Available at http://socialdesign.org/assets/development.html.

Cooperrider, D. L., & Srivastva, J. M. 1987. Appreciative inquiry in organizational life. In W. A. Pasmore & R. W. Woodman (Eds.), ***Research in organizational change and development:*** 3–27. Greenwich, CT: JAI Press.

Cooperrider, D. L., Whitney, D., & Stavros, J. M. 2003. ***Appreciative inquiry handbook***. Bedford Heights, OH: Lakeshore.

Cseh, M., Davis, E. B., & Khilji, S. E. 2013. Developing a global mindset: Learning of global leaders. ***European Journal of Training and Development,*** (5): 489.

Foundation for Sustainable Development (FSD). 2017a. ***Foundation for Sustainable Development supports community development programs and internships around the world***. Available at http://www.fsdinternational.org.

Foundation for Sustainable Development (FSD). 2017b. ***Monitoring and evaluation***. San Francisco: CA. Available at http://www.fsdinternational.org.

Francis. 2015. ***Laudato si'.*** Available at http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.

Gauthier, C., & Daudigeos, T. 2015. Sustainability education: Crossing theory and practices. ***International Journal of Sustainability Education,*** 11(2): 27–33.

Giffords, E. D., & Calderon, O. 2015. Academic and community collaborations: An exploration of benefits, barriers and successes. ***Human Service Organizations: Management, Leaderships & Governance,*** 39: 397–405.

Giffords, E. D., & Dina, R. 2003. Changing organizational cultures: The challenge in forging successful mergers. ***Social Work in Administration,*** 27(1): 69–81.

Green, M. 2006. ***When people care enough to act: ABCD in action*** (2nd ed.). Toronto, Canada: Inclusion Press.

Jesuit Institute. 1993. ***Ignatian pedagogy: A practical approach.*** Available at https://www.rockhurst.edu/media/filer_private/uploads/ignatian_pedagogy_a_practical_approach.pdf.

International Association for Impact Assessment (IAIA). 2016. ***Social impact assessment***. Available at http://www.iaia.org/wiki-details.php?ID=23 (accessed May 23, 2016).

Kretzmann, J. P., & McKnight, J. L. 1996. Asset-based community development. ***National Civic Review,*** 85(4): 23–29.

Kretzmann, J. P., & McKnight, J. L. 1993. ***Building communities from the inside out: A path toward finding and mobilizing a community's assets***. Chicago: ACTA Publications.

Landorf, H., Doscher, S., & Rocco, T. 2008. Education for sustainable human development: Towards a definition. ***Theory and Research in Education,*** 6(2): 221–236.

Marullo, M., & Edwards, B. 2000. From charity to justice: The potential of university-community collaboration for social change. ***American Behavorial Scientist,*** 2(5): 895–912.

Mathie, A., & Cunningham, G. 2003. From clients to citizens: Asset-based development as a strategy for community-driven development. ***Development in Practice,*** 13(5): 474–486.

Montaldo, C. R. B. 2013. ***Sustainable development approaches for rural development and poverty alleviation & community capacity building for rural development and poverty alleviation.*** Available at https://sustainabledevelopment.un.org/content/documents/877LR%20Sustainable%20Development%20v2.pdf.

MNA Program. 2017. ***Master of nonprofit administration—Nonprofit administration course descriptions.*** Available at https://www.usfca.edu/management/graduate-programs/nonprofit-administration/course-descriptions.

Perrault, E., McClelland, R., Austin, C., & Sieppert, J. 2011. Working together in collaborations: Successful process factors for community collaboration. ***Administration in Social Work,*** 35: 282–298.

Poole, D. L. 1997. Building community capacity to promote social and public health: Challenges for universities. ***Health & Social Work,*** (22)3.

Principles for Responsible Management Education (PRME). 2013. ***Inspirational guide for the implementation of PRME: Learning to go beyond.*** Bradford, UK: Greenleaf.

Ramage, M. J. 2015. Integral ecology and the ecological virtues in Pope Francis's *Laudato Si'*. ***Homiletic and Pastoral Review.*** Available at http://www.hprweb.com/2015/11/integral-ecology-and-the-ecological-virtues-in-pope-franciss-laudato-si/.

Rogers, M., & Ryan, R. 2001. The triple bottom line for sustainable community development. ***Local Environment,*** 6(3): 279–289.

Savitz, A. 2006. ***The triple bottom line***. San Francisco: Jossey-Bass.

Schein, S. 2015. Ecological worldviews: A missing perspective to advance global sustainability leadership. ***Journal of Management for Global Sustainability,*** 3(1): 1–24.

Setó-Pamies, D., & Papaoikonomou, E. 2016. A multi-level perspective for the integration of ethics, corporate social responsibility and sustainability (ECSRS) in management education. ***Journal of Business Ethics,*** 136(3): 523–538.

Stachowicz-Stanusch, A. (Ed.). 2015. ***Corporate social performance: Paradoxes, pitfalls and pathways to the better world***. Charlotte, NC: Information Age Publishing.

Tavanti, M. 2014. Sustainable development capitalism: Changing paradigms and practices for a more viable, equitable, bearable and just economic future for all. In H. H. Kazeroony & A. Stachowicz-Stanusch (Eds.), ***Capitalism and the social relationship: An organizational perspective:*** 163–182. New York: Palgrave-MacMillan.

Tavanti, M. 2015. Global sustainability reporting initiatives: Integrated pathways for economic, environmental, social, and governance organizational performance. In A. Stachowicz-Stanusch (Ed.), ***Corporate social performance: Paradoxes, pitfalls and pathways to the better world:*** 301–323. Charlotte, NC: Information Age Publishing.

Tavanti, M., & Wilp, E. A. 2014. Globally responsible management education: From principled challenges to practical opportunities. In D. E. Palmer (Ed.), ***Handbook of research on business ethics and corporate responsibilities:*** 196–220. Charlotte, NC: IGI Global.

Kolvenbach, P. 1987. ***Go forth and teach: The characteristics of Jesuit education***. Available at https://www.muhs.edu/uploaded/Admissions/Go_Forth_and_Teach_-_Characteristics_of_Jesuit_Education.pdf.

Theis, J., & Grady, H. M. 1991. ***Participatory rapid appraisal for community development: A training manual based on experiences in the Middle East and North Africa.*** London: Save the Children and IIED.

UN-OHCHR. 2007. ***Principles and guidelines for a human rights based approach to poverty reduction strategies***. Available at http://www.ohchr.org/Documents/Publications/PovertyStrategiesen.pdf.

United Nations. 2015. ***Transforming our world: The 2030 agenda for sustainable development***. Available at http://www.un.org/pga/wp-content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-of-the-post-2015-development-agenda.pdf.

UNCED. 1993. ***Agenda 21: Programme of action for sustainable development, Rio declaration on environment and development***. Geneva: UNCED. Available at https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf.

UNDG. 2016. ***United Nations Common Learning Package HRBA to Programming***. Available at http://hrbaportal.org/common-learning-package-on-hrba.

UNESCO. 2002. ***Education for sustainability—from Rio to Johannesburg: Lessons learnt from a decade of commitment,*** 39–40. Paris: UNESCO and the UN

Commission on Sustainable Development. Available at http://unesdoc.unesco.org/images/0012/001271/127100e.pdf.

UN-WCED. 1987. ***Our common future: From one earth to one world.*** Available at http://www.un-documents.net/ocf-ov.htm.

University of San Francisco (USF). 2016. ***Our values***. Available at https://www.usfca.edu/about-usf/who-we-are/our-values.

Vanclay, F. 2003. International principles for social impact assessment: Their evolution. ***Impact Assessment and Project Appraisal,*** 21(1): 3–4.

Walpole, P. 2015. Do not be afraid: *Laudato si'* and integral ecology. ***The Way,*** 54(4): 9–22.

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MODERATING THE IMPACT OF CLIMATE CHANGE ONE UNIVERSITY AT A TIME

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Abstract. A sufficient response to the threats posed by climate change presents a leadership challenge proportional in scale with the urgency and complexity of wartime mobilization. The world's 190 million students may be enlisted to respond to such threats through action-research focused on building resiliency. Concepts such as social labs, institutional empathy, and scholarship help reframe the mandates of universities as they respond to climate change, making them platforms for developing leaders and changemakers who will increase the resilience of communities and ecosystems.

Keywords: social labs; resiliency; climate change; scholarship

INTRODUCTION

> Disaster preparedness is about people. It's about local government working with the local community and institutions to ensure that this is part of our culture and part of our everyday life …. It's about ensuring that people are prepared, not only with respect to skills but also with respect to a heart that allows them to go beyond themselves—to take care of others: before, during, and after a disaster.—Armin A. Luistro

I was teaching a graduate class that semester when Typhoon Haiyan struck the Philippines in 2013. Far from the hardest hit areas, we kept

track of the news reports of wind speeds reaching 280 kph, making it the most powerful storm in the world to make landfall in recorded history (Yamada & Galat, 2014). When the typhoon struck, newscasters showed howling winds shattering windows and seawater rushing into the city streets, up until the news feed blacked out as the rising waters damaged news transmission equipment. Electric power lines were downed, mobile communication from the affected areas went silent, and roads were blocked by fallen trees. Only when the connections were gradually restored did the terrible news of massive destruction begin to trickle in: stories of looting, homelessness, lack of water, electricity, and security slowly filled the news. Over several weeks, the government reported 16 million individuals affected, 1.1 million houses damaged (total damages amounted to 1.9 billion USD), and over 6,000 lives lost (NDRRMC, 2013).

As a teacher, I knew this period could provide a powerful learning experience for my students who were completing their coursework on development management. With massive loss of life and damage to property, Typhoon Haiyan surely pushed tens of thousands of vulnerable families further into poverty. Although we were in Manila, some 500 kilometers north of ground zero where Haiyan struck, we could not help but discuss the unfolding of an international humanitarian response over the weeks that followed: different countries pledging support and sending resources, United Nations agencies setting up coordination mechanisms, international humanitarian organization staff arriving by the hundreds. We were spared from the destruction, but instead of just watching passively, how could students learn from and become part of the solution to this massive climate change-induced problem?

LEADERSHIP FOR A CHANGING PLANET

"Anthropogenic climate change" is the term used to describe human-induced climate change that is affecting the planet (Rosenzweig et al., 2008). From supertyphoons like Haiyan to atypical snowstorms, droughts, and floods, the changing climate requires a planetary-scale response that is difficult to comprehend. Delina (2016) frames the leadership challenge provocatively, entitling his book "Strategies for Climate Mitigation: Wartime Mobilization as a Model for Action?". He presents wartime mobilization as a model to describe the global scale, urgency, and coordination required in the human response to match and deal with climate change. Just as humanity deployed massive resources and energies for World War II, he proposes that governments respond aggressively and quickly by activating similar capacities to reverse climate change, and rightly so—the costs of losing

this "war" against climate change are not just the direct loss of lives and damage to agriculture due to typhoons or floods, but also secondary effects such as water shortages, migration to cities, refugee crises, and political and armed conflicts as livelihoods become unviable. A Stanford University study estimated that unmitigated climate change could reduce global GDP by 23% by the year 2100 (Burke, Hsiang, & Miguel, 2015).

What kind of leadership, then, should humanity muster to adapt to climate change, or even better, reverse its harmful effects? How can leadership be developed and deployed at a scale and potency that is enough to significantly affect the resilience of seven billion people around the globe?

A MILLION TERM PAPERS BY TEN THOUSAND RESILIENCY LABS

What if universities enlisted students on a massive scale to work on climate change adaptation?

Our planet of seven billion had an estimated 190 million higher education students in 2016, a ratio of one higher education student for every 40 people (British Council, 2012). These 190 million students are in school to learn how to become creative and productive citizens in the future, reading books and writing papers on various subjects. What if each student was assigned to participate in a stream of action-research on local resiliency-related issues in their own towns or communities? Action-research projects would lead students to have local conversations with respondents from various sectors, from farmers to factory workers, parents, and community leaders.

Some leadership thinkers would consider such action-research conversations to be acts of leadership. For instance, Harvard University Professor Ron Heifetz describes adaptive leadership as "the practice of mobilizing people to tackle tough challenges and thrive …. New environments and new dreams demand new strategies and abilities, as well as the leadership to mobilize them" (Heifetz, Grashow, & Linsky, 2009). By this definition, students would already be deploying acts of leadership if their action-research projects stimulated stakeholders to work on the challenges of climate change that they faced locally.

An alternative label used for leadership is "changemaker." The term changemaker refers to individuals who do not necessarily have formal authority and yet demonstrate the following traits:

> (1) Believe in a responsibility to make positive changes in society. (2) Have the power and resources to make a difference (tangible and intangible). (3) Take initiative to bring about innovative change, local and systemic. (4) Work with others to maximize impact, working in groups and networks. (5) Know and live authentically according to one's values. (6) Practice empathy by engaging in another person's world without judgement. (Rivers, Nie, & Armellini, 2014)

By this definition, a student doing action-research on local resiliency issues would already be behaving as a changemaker.

Electrical engineering student Rikki Macolor of the University of Sto. Tomas in Manila is an example of such a changemaker. Weeks after Haiyan had knocked down electric power lines and left thousands of households without electricity, Macolor started working with a non-governmental organization (NGO) to help design a solar lantern. It was a simple US$15 device that combined a small solar panel, a rechargeable battery, a recycled plastic soda bottle, and some wires into a night lamp that could light up a small home for eight hours after exposure to four hours of sunlight. Shortly after, a government agency discovered Macolor's project and decided to mass produce his solar lantern to provide off-grid renewable light to thousands of Haiyan-affected homes (Santos, 2013).

In the class I taught that semester, entitled "Media, Power, and Community Development," we studied how technology and social media could be used to provide global platforms for change, similiar to how TEDx combined videos from hundreds of university talks into one powerful online channel. To link my students to the real-world drama of the Haiyan humanitarian response, I tweaked the curriculum and required my students to design and submit solutions for climate change adaptation via YouTube videos instead of taking a written final exam (their videos can be viewed at http://www.resiliency-lab.com/idea-generation).

As the world's third most disaster-prone country, the Philippines' 3.5 million college students in over 1,500 colleges and universities could provide a massive stream of resiliency-building projects, just as Macolor and my students did. Our initiatives back in 2013 are part of a small but growing number of social labs that bring the complexity of real-world problems into the classroom.

In his book *The Social Labs Revolution*, Hassan (2014) describes social labs as follows:

> [They are] platforms for addressing complex social challenges and have three core characteristics: (1)*They are social*. Social labs start by bringing together diverse participants to work in a team that acts collectively. They are ideally drawn from different sectors of society, such as government, civil society, and the business community. The participation of diverse stakeholders beyond consultation, as opposed to teams of experts or technocrats, represents the *social* nature of social labs; (2) *They are experimental*. Social labs are not one-off experiences. They're ongoing and sustained efforts. The team doing the work takes an iterative approach to the challenges it wants to address, prototyping interventions and managing a portfolio of promising solutions. This reflects the *experimental* nature of social labs, as opposed to the project-based nature of many social interventions; (3) *They are systemic*. The ideas and initiatives developing in social labs, released as prototypes, aspire to be *systemic* in nature. This means trying to come up with solutions that go beyond dealing with a part of the whole or symptoms and address the root cause of why things are not working in the first place.

A number of resiliency-oriented labs provide a picture of how these look like in the university setting. The University of Washington Resilience Lab (University of Washington Resilience Lab, 2017) works on stressors affecting the individual and "promotes resilience development while normalizing failure and acknowledging the wide range of hardships our community members have faced and continue to face." It has designed various learning experiences to increase student resilience in the face of failures. The Massachusetts Institute of Technology (MIT) Humanitarian Response Lab focuses on "improving the supply chain systems behind public services and private markets particularly in humanitarian settings." This lab's students and faculty have produced, among others, studies on the logistics of Personal Protective Equipment during the Ebola epidemic in Liberia (Chimnani, Goentzel, & Hasselberg, 2017) and developed models for scaling up post-harvest crop storage solutions to serve 16,000 farmers in Uganda. The University of Michigan runs a lab program called Beyond Carbon Neutral (Beyond Carbon Neutral, 2017) which works to cool down the planet by developing technologies that increase the rate at which carbon is removed from the planetary carbon cycle.

On the other side of the planet, the Resilient Africa Lab Network (RAN Lab) is a partnership of 18 African universities spread over 13 countries on the continent. In collaboration with George Washington University and Stanford University, the RAN Lab teams have produced solutions such as a low-cost solar-powered irrigation pump system for farmers in Uganda and an Android-based app to educate refugees on reproductive health and other common medical problems in Rwanda (Resilient Africa Network, 2017).

The Ashoka U Campus Network has a similar university-network strategy. Through a network of forty selected universities, Ashoka U cultivates a campus-wide culture of social innovation by promoting the vision that "Everyone is a Changemaker" (Ashoka U, 2017). Both RAN Lab and the Ashoka U Campus Network attempt to harness the collective brainpower of tens of thousands of students and faculty toward a coherent leadership and changemaking agenda.

TOWARD A SCHOLARSHIP OF RESILIENCY AND LEADERSHIP

Is it the role of universities to develop students into leaders? Would this not be a distraction from the traditional role of the university of preparing students to enter the workforce? In the face of climate change, can a good university refuse to equip its students with leadership skills to advance resilience in a warming planet? Three perspectives may support the adoption of these efforts in the definition of the university's identity and mandate.

Hambleton's discussion of Boyer's work *Scholarship Reconsidered* (1990) points out how the type of scholarship demonstrated in social labs is actually not new, but rather a deepening of existing forms of scholarship. Such resiliency-oriented action-research may reflect any one of four overlapping kinds of scholarship. First, the *scholarship of discovery* describes what is commonly known as research, where faculty and students apply their energies to interrogating the emerging realities of climate change, discovering patterns and models to better understand what is going on. Second, the *scholarship of application* focuses on the application of knowledge to create solutions to real-world problems. In this type of learning, knowledge is created in the design of solutions, like in the case of Macolor's solar powered lamp, and also as users adopt these solutions. New knowledge emerges from the act of applying knowledge. Third, the *scholarship of integration* interprets isolated facts and puts them in perspective. In climate change adaptation, students could be investigating the agronomy of droughts in relation to the sociology of farmer education, or the logistics of refugee camps in relation to the technology of health education via Android phones as RAN Lab did in Uganda. Finally, the *scholarship of teaching* passes on knowledge not just to students but to the broader publics. In the context of climate change adaptation, academe-community dialogues may effectively engage farmers and fisherfolks in learning conversations that help them adapt to climate change, while regular dialogues with the local mayor may help sensitize local municipal policies to community data emerging from students' action research findings (Hambleton, 2014).

Another way of framing a university's response to climate change is through the concept of "institutional empathy." Empathy reflects the extent to which students and universities embrace the issues of the climate's impact on others as their own. The concept of "institutional empathy" thus proposes that universities and other anchor institutions in cities strengthen the following attributes: civic vision, institutional body language, and community resonance (Jennings et al., 2016). This is important as universities stay in cities for decades or centuries and can thus provide memory and stability across many years of social and climate change.

To build up institutional empathy, university leaders must have *civic vision*, where the faculty imagine how the university, communities, and city can adapt to climate change. The university's civic vision is made clear not just through declarations in university mandates and documents, but also through a university's *institutional body language*, where a university conveys its values through its various academic programs, student interventions, extension programs, and community engagements. An empathetic university would use its voice as an analyst and as a representative of various constituents in advancing the public dialogues that influence the policies of the city. An empathetic university would thus demonstrate *community resonance*, where it can be deeply attuned to the values, tensions, and needs of the community it calls home just as an empathetic individual resonates with the thoughts and feelings of others (Jennings et al, 2016).

The aforementioned universities which have social labs may be thought of as having developed institutional empathy where they embraced resiliency and climate change-related problems as their own, and systematically responded to these from one semester to the next by deploying research and innovation capacities of students and faculty to answer the challenge of resiliency.

MOBILIZING CHANGEMAKERS FOR CHANGING OUR PLANET

Of the many university-based social labs, the University of Michigan's Beyond Carbon Neutral initiative may be the most ambitious, aiming to reverse global temperature rise by developing solutions to reabsorb carbon from the atmosphere. This goal is definitely audacious, but a similar collaborative effort in response to a planetary-scale environmental problem in the past is showing positive results. In the 1980s, a hole in the ozone layer caused by the introduction of new chemicals into the atmosphere grew to the size of India. Concerted efforts have since led

to the banning of these ozone-depleting substances, and now the ozone hole is healing and is expected to be fully closed by 2050.

Many of my students who submitted their ideas via YouTube felt uneasy at first. They were accustomed to having their academic work seen only by teachers, with feedback in the form of check marks and corrections in red ink and ending with the submission of grades. This time around, their work could now be seen by future employers and by others looking for solutions to resilience. I think that exercise changed some of my students' mindsets, even if their proposed designs were not adopted in any major way.

Leadership for resilience requires a shift in mindset from one of helplessness to one of optimism. Universities will have to enable millions of students to believe that anthropogenic climate change can also be positive change that we can study to solve the climate problems that we caused. But first, we have to create that shift in mental models, and we need to start doing that in each classroom to awake the changemaker in each student.

REFERENCES

Ashoka U. 2017. ***What we do.*** Available at http://ashokau.org/about/what-we-do/ (accessed May 15, 2017).

Beyond Carbon Neutral. 2017. ***Beyond Carbon Neutral.*** Available at http://beyondcarbonneutral.org/ (accessed May 16, 2017).

Boyer, E. L. 1990. ***Scholarship reconsidered: Priorities of the professoriate.*** Lawrenceville, NJ: Princeton University Press.

British Council. 2012. ***The shape of things to come: Higher education global trends and emerging opportunities to 2020.*** Available at https://www.britishcouncil.org/sites/default/files/the_shape_of_things_to_come_-_higher_education_global_trends_and_emerging_opportunities_to_2020.pdf (accessed May 15, 2017).

Burke, M., Hsiang, S., & Miguel, E. 2015. Global non-linear effect of temperature on economic production. ***Nature,*** 527(7577): 235–239. DOI: 10.1038/nature15725.

Chimnani, J., Goentzel, J., & Hasselberg, E. 2017. ***Outbreak and epidemic prevention in Liberia.*** Available at http://humanitarian.mit.edu/projects/outbreak-prevention (accessed May 16, 2017).

Delina, L. L. 2016. ***Strategies for rapid climate mitigation: Wartime mobilisation as a model for action?*** New York: Routledge.

Hambleton, R. 2014. ***From the smart city to the wise city: The role of universities in place-based leadership.*** Paper presented at Smart City: New Media, Social Participation and Urban Governance, June 5–7. Shanghai, China: Shanghai University.

Hassan, Z. 2014. ***The social labs revolution: A new approach to solving our most complex challenges***. San Francisco, CA: Berrett-Koehler Publishers.

Heifetz, R. A., Grashow, A., & Linsky, M. 2009. ***The practice of adaptive leadership: Tools and tactics for changing your organization and the world***. Boston, MA: Harvard Business Press.

Jennings, G., Mann, S., Bryant, F., Kirchman, M., Tisdale, R., Franlde, E., Cullen, J., Konigsberg, J., & Greenberg, A. 2016. ***The empathetic museum***. Available at http://empatheticmuseum.weebly.com/maturity-model.html (accessed May 16, 2017).

NDRRMC [National Disaster Risk Reduction and Management Council]. 2013. ***Final report re effects of Typhoon "Yolanda" (Haiyan).*** Available at http://ndrrmc.gov.ph/attachments/article/1329/FINAL_REPORT_re_Effects_of_Typhoon_YOLANDA_(HAIYAN)_06-09NOV2013.pdf (accessed May 15, 2017).

Resilient Africa Network. 2017. ***Ranlab.org.*** Available at http://www.ranlab.org/about-us/what-is-ran (accessed May 15, 2017).

Rivers, B. A., Nie, M., & Armellini, A. 2014. ***University teachers' conceptions of "changemaker": A starting point for embedding social innovation in learning and teaching.*** Paper presented at 6th International Social Innovation Research Conference, The University of Northampton, September 1–3. Available at http://nectar.northampton.ac.uk/6834/.

Rosenzweig, C., Karoly, D., Vicarelli, M. Neofotis, P., Wu, Q., Casassa, G., Menzel, A., Root, T. L., Estrella, N., Seguin, B., Tryjanowski, P., Liu, C., Rawlins, S., & Imeson, A. 2008. Attributing physical and biological impacts to anthropogenic climate change. ***Nature,*** 453(7193): 353–357. DOI: 10.1038/nature06937.

Santos, T. 2013. Thomasian helps light up Tacloban's dark nights. ***The Varsitarian.*** Available at http:// http://varsitarian.net/news/20131217/thomasian_helps_light_up_taclobans_dark_nights (accessed May 15, 2017).

University of Washington Resilience Lab. 2017. ***Webster.uaa.washington.edu.*** Available at http://webster.uaa.washington.edu/resilience/ (accessed May 16, 2017).

Yamada, S., & Galat, A. 2014. Typhoon Yolanda/Haiyan and climate justice. ***Disaster Medicine and Public Health Preparedness,*** 8(05): 432–435. DOI: 10.1017/dmp.2014.97.

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RESÚMENES

Laudato Si' y una espiritualidad de resiliencia

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Resumen. Este artículo examina *Laudato si'*, la encíclica del Papa Francisco, desde la perspectiva de una espiritualidad de presencia relacionada a la resiliencia, es decir, la capacidad de las organizaciones de responder a las crisis actuales y emergentes. Esta espiritualidad consiste en dos dimensiones: la profética y la contemplativa. El artículo explora las dos dimensiones y demuestra su uso en un contexto empresarial. Además, un aspecto importante de una espiritualidad de presencia es el día del Sabbat, que permite al individuo y a la organización a descansar y reenfocarse. Una vez terminada la actividad "frenética", tanto el líder como la organización pueden empezar el trabajo de anticipar, prepararse para las crisis y responder a las mismas. Este artículo, por tanto, se centra en la figura del líder de negocio y cómo podrá prepararse a ser resistente y guiar una organización durante una crisis. Se trata específicamente de la crisis del deterioro del medio ambiente tal como se menciona en la encíclica.

Palabras clave: *Laudato si'*; resiliencia; presencia; Sabbat; riesgo

Creando una resiliencia del agua urbana: Nuevas perspectivas para el programa de preparación para la sequía de Guadalajara

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Resumen. El cambio climático obliga a las ciudades a ser resilientes frente a una variedad de fenómenos meteorológicos. Empezando con propuestas para enfrentarse a huracanes o inundaciones, las estrategias de las ciudades resilientes tienen que considerar desafíos a largo plazo sobre un territorio más ámplio, como las sequías plurianuales y a nivel multiregional. Los urbanistas, gobiernos locales y regionales, y asesores políticos son por tanto motivados a considerar modelos más complejos para construir ciudades resilientes. Un ejemplo es el caso de Guadalajara en Jalisco, la segunda ciudad más grande de México, que se ha incluido últimamente en la Red de Cien Ciudades Resilientes. La ciudad obtuvo un programa de gestión de sequías del gobierno federal en 2015, pero los esfuerzos todavía no se corresponden con las políticas públicas actuales o el crecimiento rápido de la ciudad. Este artículo explora una propuesta más extensa de política pública para ocuparse del suministro de agua de una ciudad grande y su escasez inevitable. Se combinan elementos de la metodología de la *Resilience Alliance* y el programa de *Transition to Urban Water Services of Tomorrow (TRUST)* financiado por la Unión Europea.

Palabras clave: Guadalajara; suministro urbano de agua; resiliencia; gobierno

Los líderes como chamanes: Trabajando para curar un mundo aquejado[1]

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Resumen. En un mundo que necesita curación, los líderes de hoy que actúan como chamanes pueden traer la sabiduría milenaria del chamán al esfuerzo de crear un mundo más sostenible, justo y equitativo. Los líderes "chamánicos" del presente tienen los mismos papeles que los chamanes tradicionales: curar, conectar y dar sentido al servicio de un mundo mejor. Desde una perspectiva de liderazgo, el trabajo del chamán es curar el mundo que nos rodea y nuestra relación (humana) con ese mundo, lo que muchos líderes ya están intentando hacer. En este contexto, curar puede significar sanar nuestras relaciones, sistemas y organizaciones. De la misma manera, conectar significa trabajar a través de fronteras de diferentes tipos como relaciones, disciplinas, funciones, sectores e instituciones, entre otros para crear esfuerzos de colaboración o nuevas percepciones que puedan promover ideas e instituciones de una manera positiva. Por último, dar sentido es ayudar a los demás a entender e interpretar su mundo de un modo nuevo y constructivo. Eso significa crear una nueva visión del futuro a través de tareas como hacer nuevos memes o enmarcar historias o narrativas que ayuden a las personas a relacionarse con su trabajo o el mundo de otra manera. En el mundo aquejado de hoy donde las mitologías culturales, políticas y costumbres dominantes han desembocado en condiciones insostenibles y conflictividad, afirmo que más lideres tendrán que asumir estos roles chamánicos (y lo pueden hacer).

Palabras clave: Liderazgo; líderes chamánicos; sostenibilidad; memes

[1]Algunas ideas en este artículo vienen de *Intellectual shamans: Management academics making a difference* (Cambridge University Press, 2015) y de *The difference makers: How social and institutional entrepreneurs built the corporate responsibility movement* (Greenleaf, 2008).

La gestión educativa para un desarrollo sostenible: Integrando la ecología y los valores comunitarios en prácticas de impacto social

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Resumen. Este estudio explora un modelo de gestión educativa para integrar las ideas de desarrollo sostenible en programas universitarios. Este modelo pedagógico tiene un enfoque comunitario junto con otras metodologías probadas para las colaboraciones entre la universidad y la comunidad y un análisis del impacto social basado en el curso. La noción que tiene la encíclica *Laudato si'* de la ecología integral y la necesidad de crear programas académicos para el beneficio de la comunidad, inspiraron una colaboración entre el programa de Máster en Administración sin fines de lucro de la Universidad de San Francisco y la *Foundation for Sustainability Development.* Esta experiencia de colaboración se extendió a cursos de prácticas de desarrollo y se consolidó en estrategias para integrar la educación basada en la experiencia y el desarrollo organizacional a través de un análisis basado en la comunidad. Los modelos pedagógicos a nivel de posgrado estudiados aquí son relevantes para otras instituciones y programas académicos que quieren educar a los alumnos empleando un enfoque centrado en la comunidad.

Palabras clave: ecología integral; praxis; métodos; prácticas; educación para el desarrollo sostenible

Moderando el impacto del cambio climático a través de la universidad

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Resumen. Una respuesta suficiente a las amenazas del cambio climático presenta un desafío de liderazgo proporcional en escala a la urgencia y complejidad de movilización en tiempos de guerra. Será posible pedir a los 190 millones de estudiantes en el mundo que respondan a esas amenazas a través de la investigación-acción con un enfoque en crear resiliencia. Los conceptos como el laboratorio social, la empatía institucional y las becas ayudan a reformular los mandatos de las universidades mientras responden al cambio climático, convirtiéndolas en plataformas para formar líderes y creadores de cambio que aumentarán la resiliencia de comunidades y ecosistemas.

Palabras clave: laboratorios sociales, resiliencia, cambio climático, escolaridad

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