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Working Together as Regional Scientists: A Forward-Looking Retrospective*

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Abstract: Several past presidents of the Southern Regional Science Association (SRSA) have used the occasion of the presidential address to reflect on the past and contemplate the future of both the association and regional science more broadly. In this paper, I revisit a group of addresses focused on the relevance and broader impact of regional science, touching on how regional scientists came together, how they have remained together, and how they can continue to work together for collective success.

Keywords: Regional science, relevance, engagement, transdisciplinary, systems thinking

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1. INTRODUCTION

Having cut my regional science teeth at the 46th Annual Meeting of the Southern Regional Science Association (SRSA) in Charleston, South Carolina in 2007 and having long been interested in history of thought, I jumped at the chance to reflect on a past SRSA presidential address for the 50th Anniversary issue of *The Review of Regional Studies*. In the year that followed, I found myself reflecting on many of the past SRSA presidential addresses as opposed to one. From Miki (1972) right through Fannin (2020), the SRSA presidents were themselves often providing a forward-looking retrospective, reflecting on the state of regional science or the SRSA and identifying areas for improvement. Perhaps because “science-based solutions for your life,” the informal motto of the Florida Cooperative Extension system, is now a part of my daily vernacular, I was drawn to a group of addresses that explicitly focused on the relevance of regional science outside of academia (Miki, 1972; Miernyk, 1976; Isserman, 1993a; Smith, 2005; Partridge, 2006; Jackson, 2011; Deller, 2015).

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Henry Ford (or perhaps Edward Everett Hale)¹ once said, “*Coming together is the beginning. Keeping together is progress. Working together is success.*” Despite disputed origins, this popular quote succinctly describes the hard work inherent in successful relationships, be they amongst spouses, teammates, community members, or in this case, an interdisciplinary group of academics and practitioners who call themselves regional scientists. This article will very briefly overview the beginnings of the SRSA and progress made during its six decades of existence, and reflect on the collective advice of several past presidents of the SRSA regarding working together for success, using printed presidential addresses spanning the entire five decades of existence of *The Review of Regional Studies* (RRS).

2. COMING TOGETHER

Though many can colorfully regale listeners with stories of how regional science began with a traveling caravan of enthusiastic young scholars led by Walter Isard in the 1940s, it is often formally dated to 1954, when the Regional Science Association (now the Regional Science Association International [RSAI]) held its first standalone conference (Boyce, 2004). Although a majority of early participants at regional science meetings were economists, there were many other disciplines represented including but not limited to sociology, demography, city and regional planning, and geography. Several notable regional scientists have provided engaging and detailed missives and perspectives on the history of regional science for interested readers (Boyce et al., 1991; Isserman, 1993b; Isard, 2003; Florax and Plane, 2004; Mulligan, 2014; Anselin, 2020).

The SRSA, founded in 1962 as the Southeastern Section of the Regional Science Association, has hosted regular annual meetings since 1970, the same year that the RRS debuted. The SRSA meetings are known for their welcoming atmosphere, purposeful student engagement, and notable level of participation from practitioners outside of academia. In their piece on the history and characteristics of the SRSA and RRS, Durden and Knox (2000) suggest that members and attendees at the annual meetings are mostly from the Southeastern United States, from Texas to the Carolinas and from Florida to the District of Columbia. During the period analyzed, there was at least one person from every state, except Vermont, and attendees from several foreign countries. Additional historical context for both the SRSA and the RRS, including notable leaders, annual meeting attendance, membership, and authorship within RRS can be found in Durden and Knox (2000).

3. KEEPING TOGETHER

The SRSA is now one of forty-two RSAI-recognized sections that are organized in four super-regional organizations (European Regional Science Association, North American Regional Science Council, Pacific Regional Science Conference Organization, and Latin American Regional Science Association). For all intents and purposes, the popularity and relevance of

¹This popular motivational quote has been attributed to both Henry Ford [1863-1947], an American industrialist and founder of the Ford Motor Company, and Edward Everett Hale [1822-1909], an American author and poet.

both the RSAI and the SRSA remain strong. As with most professional organizations, the last 50 - 70 years haven't been without their ups and downs. The SRSA has occasionally struggled with issues related to university and faculty budgets, changes in member preferences and attitudes over time, cycles in membership numbers, etc. One recurring topic that has plagued regional scientists for decades and perhaps constrained the popularity and relevance of its professional organizations to a degree is the acceptance (or non-acceptance) of regional science as a scientific discipline.

Many prominent regional scientists, including several past presidents of the SRSA, have contributed to this debate, particularly in response to critiques found in articles such as Bailly and Coffey (1994), Polèse (1995), and Barnes (2003). In his presidential address to the SRSA in 1976, William Miernyk suggested that "regional science is firmly established as an independent discipline with a broad international base." (Miernyk, 1976, p. 1) Nearly two decades later, in his presidential address, Andy Isserman surmised that "regional science is an international, interdisciplinary community of scholars, not a science or a discipline." (Isserman, 1993b, p. 26) Maier et al. (2008) use citation based social network analysis to support the idea that regional science is a discipline in its own right, exhibiting cohesion among a core set of regional science journals that are distinct from other disciplines and their publication outlets. After an examination of the methodological and theoretical cores, the changing boundaries, and the values that guide policy recommendations within regional science, Schaeffer et al. (2011) refer to regional science as a "well established interdisciplinary field" (p. 171) and posit that "it is precisely the interdisciplinarity of regional science that distinguishes it from other social sciences, and ensures its continued relevance." (p. 161) Most recently, in his presentation for the NARSC 2020 Online Summer Speaker Series, Luc Anselin suggested that regional science is not a discipline but rather it is an interdisciplinary forum (Anselin, 2020).

Whether or not we can definitively call regional science a scientific discipline, there are individuals (including yours truly) that strongly identify as regional scientists, even if it is in the context of a dual identity as described in Miernyk (1976). Maier et al. (2008) aptly point out that Isserman's declaration that regional science was not a discipline "did not prevent him from further publishing in regional science journals and on regional science topics." (p. 1) This is actually true for each and every one of the authors noted above and I suspect they would use the term "regional scientist" (either alone or in conjunction with the title of their parent discipline) if you inquired about their expertise. So perhaps the more important question regarding "keeping together for progress" is: what is it about regional science that draws us together as regional scientists? Regional scientists are welcoming, engaged scholars conducting science-based, policy-relevant, geographically specific research to improve lives; our shared pursuit of research results that inform decision-making at the appropriate regional level (local, state, national, international) is what keeps us together.

As the SRSA annual meetings and the RRS celebrate a 50th anniversary, the allure and the relevance of the SRSA endure. In recent years, annual meeting attendance for the SRSA ranges from 175 – 220, the composition of which remains similar to that described in Durden and Knox (2000). SRSA still has a reputation for being particularly welcoming to students (graduate and undergraduate) and early career scholars. As a Ph.D. student in the Department of Economics and a graduate research assistant at the Regional Research

Institute at West Virginia University, my own dissertation committee included 3 past or soon to be SRSA presidents (Randy Jackson, Brian Cushing, and Peter Schaeffer) with another serving as an informal mentor for many years (Santiago Pinto). As a result, I have attended and presented at the SRSA meetings since my first year in graduate school and nowadays, the annual meetings always feel like an academic family reunion (a good one)! Similar to Anselin (2020), I have always viewed the SRSA as an interdisciplinary forum and agree with Schaeffer et al. (2011) that the inherent interdisciplinarity and the shared values are what keeps us together.

4. WORKING TOGETHER

Through the concerted and purposeful work of many, the SRSA came together and has remained together for more than six decades. Vicissitudes in visibility, attendance, and relevance suggest that there is work yet to be done as we strive for long-term success. The key missions of any professional organization should be educational and informational in nature, including publishing professional journals, developing professional excellence, and raising public awareness (Institute of Medicine, 2005). It is through these missions and actions that a professional organization can hope to affect change. If, as Henry Ford (or Edward Everett Hale) surmised, long-term success of the SRSA will result from working together, then we first need to identify the common goal – I submit that it is relevance.

Regional scientists have the ability to provide science-based, policy relevant, geographically specific information to decision-makers (Partridge, 2006; Lahr, 2009; Connaughton, 2010; Jackson et al., 2012; Woodward, 2012; White, 2012). In his presidential address to the SRSA in 2005, Mark Partridge asserts that regional scientists are drawn to regional science because our interests are inherently interdisciplinary, policy-relevant, and science-based – in other words, “[i]f it doesn’t affect people, regional scientists simply aren’t interested,” (Partridge, 2006, p. 2) Regional scientists have long pondered the relevance of their work to both policy and, more broadly, to society. Indeed, in their presidential addresses to the SRSA in the 1970s, both Robert Miki and William Miernyk focused on policy relevance, calling on the community of regional scientists to make policy relevance a priority, as it is crucial for maintaining public support (Miki, 1972; Miernyk, 1976).

Unfortunately, regional scientists, and academics more broadly, have often had only a meager role in the design and implementation of policy. In his presidential address to the SRSA in 1992, Andy Isserman noted that presidents of the now RSAI had also been calling for the association to be applied and problem-oriented since the 1970s, only to conclude that these calls “have been largely ignored for two decades” (Isserman, 1993a, p. 38). Just two years later, Andy would again lament the meager role that academics have played in the design and implementation of economic development policy in the United States (Isserman, 1993b). In his presidential address to the SRSA on the 50th anniversary of the association, Randy Jackson noted that, “[m]uch of what we discover in the field of regional science could and should, but somehow seldom does find immediate and important application.” (Jackson, 2011, p. 9) Indeed, our immediate past president, Matt Fannin was still encouraging the association to engage with audiences outside of the university by “continuing to make our scholarship practically relevant to non-academic constituents” (Fannin, 2020, p. 327).

Andy's now classic presidential address to the SRSA was a reflection on regional science intended to be reminiscent of the period of reflection that takes place during a "mid-life crisis." In the end, he calls on regional scientists to have the courage, persistence, and resolve to "initiate research into important, 'messy' problems." (Isserman, 1993a, p. 38) He reminded us that ability is one thing, but willingness and readiness to tackle the complex, dynamic problems that society faces is another.² Peter Schaeffer, in his presidential address to the SRSA in 2009, reminded us that imperfections, such as externalities, monopolistic competition, market failures, and inefficiencies, complicate models and analyses but also suggested that rising to the challenge of incorporating these complexities into our efforts is worth it in the context of policy relevance (Schaeffer, 2009). Again, long-term success of the association will require working together for change through individual and collective action.

In his presidential address to the SRSA in 2004, Stephen Smith set out to describe what is holding regional scientists back from being policy relevant and how to fix it. He articulated the difference between merely describing applied regional science work as policy relevant and it actually being policy relevant. Smith's broad use of the term policy to mean that which "tries to influence decisions, actions, or behavior" (Smith, 2005, p. 2) suggests that the same is likely true when you consider the relevance of regional science or our individual contributions to other academic disciplines, private industry, and society writ large. For better or worse, as regional scientists, we do not set policy and, unless we have children or other dependents, we are not often in the position of making decisions for others. However, we can and should be providing information and insights to aid others in these decision-making processes.

Smith (2005) reminds each of us that if we want to affect change as individuals (or on behalf of individual, collaborative research efforts), we must proactively assert to whom our results are of interest, for what can they be used, and how. In both the research design and results interpretation phases, consider whether it is individuals, business owners, federal agencies, local government representatives, rural development councils, etc. that can make use of your results and insights. Afterwards, consider what decision, action, or behavior can be influenced with this information and through which mechanisms or institutions will this influence occur (Smith, 2005). Finally, in the research dissemination phase, which should not end with a publication in an academic journal, communicate all of this clearly to the variety of audiences that represent interested or affected stakeholders.

These steps can help solidify the relevance of individual works of applied regional science research but we need to go further to ensure long-term public support and contribute to solutions for the world's wicked problems. In his presidential address to the SRSA, Bill Miernyk summarized Walter Isard's vision that the umbrella of regional science could encompass the study of social, economic, political, and behavioral phenomena that have a spatial dimension (Miernyk, 1976). This does not mean that each regional scientist must study everything³

²Miki (1972), Miernyk (1976), Isserman (1993a), and Deller (2015) also reflect a bit on how the incentive structures in place in academia can hinder a reorientation to problem-driven research and a more direct interface between research and policy.

³A strong sense of curiosity and yearning for our research to solve problems does lead to many of us to appear "a mile wide and an inch deep" (Deller, 2015, p. 7) but perhaps that's just the mark of a good regional scientist. Dr. E. Anthon Eff at Middle Tennessee State University convinced me to switch my

but it does imply that one function of regional science is to provide the interdisciplinary forum within which different perspectives on particular topics can be shared and collaborative teams can be formed to tackle problems that are more complex. Miki (1972) was quite forward looking in calling for regional scientists to “draw together the knowledge gained in order to provide a more cohesive and coherent background for public decision-makings” (p. 10), solidifying our collective relevance. In reflecting on the selected presidential addresses to the SRSA that span five decades, there are several recurrent calls that seem worth revisiting as they provide guidance for the SRSA and all regional scientists as we strive to remain relevant.

4.1. Be Diverse and Inclusive

From the very beginning Walter Isard stressed that disciplinary diversity would be a key component of the success of regional science (Isard, 1975). Regional science conferences continue to function as venues in which academics and practitioners from economics, geography, urban and regional planning, sociology, demography, engineering, etc. greet one another with smiles, handshakes, and curious, open minds.⁴ However, it is clear we can and should be doing more to broaden our perspectives on diversity and inclusion. While regional scientists remain diverse in terms of disciplinary background, we should strive for the same level of diversity along other measures such as career type and stage, gender, ethnicity, sexuality, and more (Holvino et al., 2004). Fannin (2020) points to two intentional efforts on the part of SRSA related to diversity that have contributed to its success: student participation and female representation.

Twenty-five years ago, Rogers and Weiler (1995) lamented the potential crisis of not having enough young scholars to carry on with regional science in the future, perhaps providing a wake-up call for the SRSA. Around the same time, the SRSA established the Barry M. Moriarty Graduate Paper Competition to encourage conference attendance and participation by graduate students. I still recall my first trip to the 46th Annual Meeting of the SRSA in 2007 as a first-year Ph.D. student. After completing what could only be considered a mediocre presentation at best that included notes pages visibly shaking in my hands, the session chair, Judy Stallmann, expressed interest in the work that I had presented and invited me for a post-conference walk around the streets of Charleston, SC. I still fondly remember that experience and for more than a decade, I have looked forward to seeing Judy’s smiling face at the SRSA meetings. Fannin (2020) correctly asserts that the SRSA has intentionally invested in student engagement (graduate and undergraduate) over the past 10-15 years, leading to annual conferences that now include a well-attended undergraduate poster session, organized by Heather Stephens, and several additional activities targeted towards graduate student engagement.

undergraduate major to economics (from biology) by describing economics as “a way of thinking that can be applied to any problem” and I am forever grateful that he set me on the path to being a regional scientist who is never bored.

⁴Barnes (2003) reminds us that while regional scientists are perhaps more welcoming at annual meetings than some other disciplines, we are still human and must continue to work against the sharing of disembodied knowledge and personal transgressions that are known to have occurred and are perhaps still occurring at these events.

Fannin (2020) also alludes to the increasing role that women are playing in SRSA attendance and leadership positions. Indeed, as I write, there are nine women and eight men on the Executive Council for the SRSA, including all three members of the RRS editorial team, which is in one-year transition period moving from one Editor-In-Chief to a team of two. In this same issue, Tessa Conroy and Amanda Ross, both current members of the SRSA Executive Council, reflect on the presidential address of Carol West, which drew comparisons between the quest for equality for female economists and the quest for relevance in regional science (West, 1996). While acknowledging progress, potential causes of female underrepresentation in regional science, and the difficulties inherent in determining what the “fair share” of representation might be, Waldorf (2009) and Regional Science Association International (2016) suggest there is more work to be done, especially with regard to gender composition of editorial boards and award/prize/recognition recipients. I do feel that SRSA has been “ahead of the game” in large part due to early female leaders such as Judy Stallman, Cynthia Rogers, Nancy White, and Carol West. I would even consider several of my own male mentors advocates for change in this area. The continued awareness and efforts of SRSA members of all genders will ensure long-term cultural change within the association as opposed to intentional or even unintentional short-term appeasements.

I contend that the SRSA has also been intentional about the diversity of our membership with respect to career type or affiliation. Unsurprisingly, academics with faculty appointments at public and private institutions comprise a large majority of the SRSA membership. Durden and Knox (2000) note that representatives of government agencies and private industry have also been active members of the SRSA through meeting attendance, association membership, and authorship in the RRS. There is evidence of a high level of engagement of these individuals that were or had been long-time government employees in the list of past presidents (Robert T. Miki, Alan R. Winger, Lowell D. Ashby, Richard J. Olsen, Hugh W. Knox, Joseph V. Cartwright, John R. Kort, Andy Bernat, Robert Gibbs, David McGranahan, Santiago Pinto, and Sarah Low). With policy relevance and the improvement of lives being key drivers of much of the research we pursue as regional scientists, we should continue to encourage the continued and perhaps increased involvement of these groups within the organization.

Conroy and Ross (2020) assert that diversity and inclusion are critical to the continued relevance of regional science as they affect “our ability to contribute comprehensive, holistic, and equitable insights on important questions” (p. 350). This could not be truer. As we strive for diversity in the areas mentioned and others, we should also be intentional about avoiding common pitfalls that could derail or slow progress towards diversity and inclusion (Holvino et al., 2004):

- Failing to relate diversity to the mission of the SRSA
- Waiting to collect data related to diversity or failing to recognize member perceptions as data
- Not acknowledging the difference between verbal support of diversity and inclusion and actions that increase diversity and inclusion or inaction that impedes progress

- Measuring success by the number or size of diversity activities as opposed to the change affected by these activities.

These pitfalls should make it clear that attaining and maintaining diversity⁵ will require working together. Like Smith's assertion that saying regional science is relevant is different than regional science being relevant, being a diverse community is different than being a diverse and inclusive community. Inclusion, the requirement that everyone's contributions and perspectives be valued, is the key to maintaining diversity. Through my involvement as a participant and an administrator with several regional science organizations, I have watched the composition of membership change over time, but hurdles remain for many whose age, race, ethnicity, gender, and/or sexual orientation might be underrepresented in regional science. These hurdles include implicit biases that might impact collaboration, manuscript reviews, grant proposal reviews, or access to informal mentoring channels. In response to civil unrest in 2020, many universities, government agencies, and private organizations have implemented training programs to improve awareness of and education on the concepts, the need for, and the purpose of diversity and inclusion. These short-term trainings will not be enough. Building on these resources, the SRSA must continue and perhaps formalize their continued commitment to diversity and inclusion to ensure a strong pipeline of diverse and active SRSA members for decades to come.

4.2. Be Engaged

Miernyk, citing the presidential addresses of Frank Knight and Wassily Leontief to the American Economic Association among others, levels a searing critique of the use of mathematics, statistics, and modeling as an ends to notoriety within the discipline of economics as opposed to a means for the analytical objectives related to improving the lot of humanity (Miernyk, 1976). He concludes by encouraging regional scientists not to follow the same path. Nearly 30 years later, Mark Partridge describes the current state of economics, geography, and regional science as, “[economics is] enamoured with mathematical technique rather than social or policy relevance. . . [geography] seemingly opposes rigor and analytics. . . and [regional science is] deriving models and conducting empirical studies that are not only practical, but firmly grounded in broader socioeconomic relevance.” (Partridge, 2006, p. 2) It seems that regional scientists did heed the advice of Miernyk but Smith (2005) and Partridge (2006) both suggest that we have not attained the full state of relevance that many believe is possible, but why not? As already noted, perhaps a lack of diversity of perspective has limited, though not precluded, relevance. Jackson (2011) suggests that “[t]here is a great well of untapped potential to transform regional science discovery into long-lasting knowledge that matters, but that potential is largely unrealized because we most often stop short of transferring our knowledge from our own research communities to its rightful spheres of influence.” (p. 9)⁶

⁵Note that attaining some level of diversity is not a fixed finish line that we cross and then sit down to rest. Perceptions related to both diversity and inclusion will likely change as society changes and we should be committed to recurring re-examination of our goals and progress towards these goals.

⁶I must note that as an advisee of Jackson, this suggestion reminds me of another “Jacksonism” that has stuck with me to this day, “research is not complete until it has been communicated widely”, meaning both

In his presidential address to the SRSA, Steve Deller focused on the necessity of engagement in attaining and maintaining relevance. Unfortunately, another commitment in Vienna, Austria, meant that I missed hearing Steve speak in Mobile, AL back in 2015. Not having read the written address until 2019, it took 3.5 years of “learning the ropes” of Cooperative Extension within an agricultural and applied economics department⁷ for me to realize what Steve could have imparted in less than an hour at an SRSA luncheon: public engagement is critical to relevance, be it personal or disciplinary. Modern, successful Cooperative Extension programs within the United States Land-Grant University system emphasize open lines of communication between academics, industry professionals, policy makers, and even the public. Not only does Cooperative Extension communicate information and insights from the university research enterprise to external audiences, but a truly engaged Cooperative Extension system also relays the problems and needs of these external communities back to the university in the hopes that the university research enterprise can identify solutions. Deller describes this as “the two-way nature of. . . engagement” (Deller, 2015, p. 7).

I completely agree with his assertions that regional scientists working from within academic institutions can be the embodiment of an engaged university (indeed, many of us represent what I like to call Cooperative Extension 2.0⁸) and that our core duty should be to “[help] communities make more informed decisions.” (p. 9)⁹ To do so successfully, Deller offers eight suggestions worth repeating in full here: “(1) know the audience; (2) develop credibility; (3) think long-term; (4) provide a continuous stream of policy work; (5) offer options and not ‘the answer;’ (6) build relationships and partnerships; (7) be sensitive to the timeliness of the research; and (8) use multiple methods of communication” (p. 10). Following this advice, successful “boots on the ground” engagement with stakeholders should provide a regional scientist with not only a better understanding of the communities and regional systems they study but also additional channels through which to disseminate information and insights.

Partridge (2006) had the additional suggestion of “extend[ing] an invitation to policy-makers, growth theorists, and media mavens to attend the . . . [SRSA] meetings,” further contending that “exposure to regional scientists would help them better understand actual trends rather than continuing to base their work on their personal hopes or beliefs.” (p. 13) This sentiment was echoed by Sarah Low in her presidential address to the SRSA several years later (Low, 2020). While the SRSA has a long history of regional scientists within government agencies regularly attending meetings, I am skeptical that listening to presentations of scholarly work within the setting of a traditional academic conference would be the best introduction to the discipline for elected officials, Congressional staff, or the media. Perhaps in addition to sessions geared towards local economies that have traditionally filled out the first afternoon of sessions at the SRSA meetings, we should consider sessions or events that are geared towards engagement with local policymakers and community members or at the

within and outside of academia.

⁷Food and Resource Economics Department within the Institute for Food and Agricultural Sciences at the University of Florida

⁸I often use the term Extension 2.0 to represent the notion of expanding the focus of Cooperative Extension beyond agriculture and rural communities, in alignment with a society that has changed since its inception.

⁹Deller (2015) uses this language to describe his own core duty as an Extension professional, but I interpret his call to action for regional scientists to suggest we should all take this on as our core duty.

very least, invite them to participate in our luncheons.

Ultimately, it is the consumers of regional science that will determine its relevance, ergo, regional scientists must be engaged with those that consume regional science education and research and be adaptable to their needs. So, go to local government meetings, reach out to individuals within state government agencies and industry associations if you have information or insights that might inform decision making, speak to your neighbors who are voting in local and federal elections, and above all listen and ask questions; ask how regional science can help and bring the questions back to the regional science community for investigation. As Deller suggests, findings from a diverse set of regional science perspectives are not going to provide “the answer” but can help stakeholders think more critically about the issues facing them and make more informed decisions about the best path forward (Deller, 2015). This type of concerted effort at the individual level is the only path towards the collective level of engagement necessary to be widely relevant.

4.3. Be Knowledge Creators

While calling for regional scientists to be problem-oriented and to have a sphere of influence that extends beyond academia, several have noted that these aspirations are impeded by or sometimes directly incompatible with the incentive structure of universities (Miki, 1972; Miernyk, 1976; Isserman, 1993a; Deller, 2015). In the quest for relevance among external audiences, regional scientists must not turn their backs on the pursuit of new knowledge and relevance among internal audiences (e.g. academic peers).

Bailly and Gibson (2017) suggest that regional science has grown and evolved by borrowing useful concepts and approaches from other disciplines and fields but I believe that we are disciplinarily opportunistic in a slightly different way. I believe we are a group of systems thinkers (some aware of it, some not) that work across our parent disciplines to make the concepts and approaches within these disciplines relevant. According to Cabrera and Cabrera (2015), who emphasize the *thinking* in systems thinking, there is a mismatch between the mental models we have developed about how the real world works and how the real world actually works. The same is true if we replace *mental model* with econometric model, spatial econometric model, input-output model, computable general equilibrium model, population dynamics model, etc. It is only through feedback from the real world and consequent adaptation that our mental models (or statistical models) will improve in their approximation of real world systems and behavior. Systems thinking, the very act of improving our mental models, “...offers a common language across methods, disciplines, and contexts, facilitating interdisciplinarity... and gives us hope that the collective efforts of many to understand their little part of the world can come together to better understand the world as a whole.” (Cabrera and Cabrera, 2015, p. 15) Walter Isard was clearly a systems thinker, regional science itself is both a product of systems thinking, and now, sixty years on, regional scientists have self-selected into a group of systems thinkers. To any regional scientist out there that didn’t already know about systems thinking, I encourage you to dig a bit deeper into this concept and to use these skills more purposefully now that you know what they are called.

While Luc Anselin is correct in his assertion that the nature of regional science as an in-

terdisciplinary forum provides fertile grounds for cross-fertilization of ideas (Anselin, 2020), knowledge creation, as opposed to new applications of current knowledge, is more likely to occur through transdisciplinary research efforts or convergence. The National Academies report titled *Convergence: Facilitating Transdisciplinary Integration of Life Sciences, Physical Sciences, Engineering and Beyond* defines convergence as, “the coming together of insights and approaches from originally distinct fields...[which] will make fundamental contributions in our drive to provide creative solutions to the most difficult problems facing us as a society.” (National Research Council, 2014, p. vii) Interdisciplinary implies the integration of methods or outputs of several disciplines, whereas transdisciplinary implies transcendence of disciplinary perspectives to form a new, holistic approach. To quote Aristotle, “the whole is greater than the sum of its parts”; in my mind, regional science is already well on its way to being greater than the sum of its parent disciplines, but transdisciplinary collaboration could be the key to complete fulfillment of Walter Isard’s grand vision for regional science.

In addition to proposing five axioms of regional science that are encompassed in the mantra, “space, as separation, leads to differentiation, then disequilibrium, which is resolved by spatial interaction” (Jackson, 2011, p. 7), Randy Jackson set forth several “known unknowns” in regional science as areas ripe for future research. His comprehensive list reminds us that our work is far from complete. In concert with the list of challenges for future research found in Schaeffer (2009), there are several career’s worth of research questions, few of which can be resolved by one regional scientist, one regional science method, or even one “parent discipline” within regional science. A transdisciplinary, systems thinking approach along with suggested areas for future research from past presidents and improved public engagement efforts should provide regional scientists with a problem-oriented research agenda, the results of which are fit for both academic journal articles and policy reports, for years to come.

5. CONCLUSION

In the 1950s, regional scientists first came together under the inspiring vision of Walter Isard, with the formation of the SRSA coming shortly after. A shared interest in conducting science-based, policy-relevant, geographically specific research to improve lives is what has kept us together. Now, we must continue to work together for long-term success of the interdisciplinary forum that is regional science. After reflecting on a selection of presidential addresses spanning nearly 50 years of the SRSA, it is clear that relevance, both external and internal, is the common goal. In addition, these reflections brought me to the realization that if relevance is the “what,” being diverse, inclusive, engaged, knowledge creators is the “how.”

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