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THE TRANSLATIONAL CRIMINOLOGY RESEARCH FELLOWSHIP

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DRAFT Final Summary Overview

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ABSTRACT

Science can provide empirically-informed strategies and resources to inform and improve practice, though all too often communities operate independently from scientific scholarship. This science-practice gap exists in multiple domains; criminal justice is no exception. This presents a particular challenge for the National Institute of Justice (NIJ), as it is committed to “fostering science-based criminal justice practice” (National Institute of Justice, 2013). As part of NIJ’s ongoing initiatives to overcome the science-practice gap, NIJ sought and supported a Translational Criminology Research Fellow in FY14. The selected Fellow worked in residency at NIJ for one year, helping NIJ staff become more systematic and deliberate in its conceptualization of the science-practice gap; its development and implementation of activities intended to bridge the science-practice gap; and its operationalization and measurement of impact accordingly. Though the Translational Criminology Research Fellowship was primarily implemented to guide the work of NIJ, it also provided insight into ways that similar organizations might increase their effectiveness in bridging the science-practice gap. Specifically, it is recommended that such organizations attend to their own internal science-practice gaps, commit to interdisciplinarity, and institutionalize these processes.

THE TRANSLATIONAL CRIMINOLOGY RESEARCH FELLOWSHIP

Science can provide empirically-informed strategies and resources to inform and improve practice. However, communities all too often operate independently from scientific scholarship. The realm of criminal justice is no exception to this “science-practice gap” (Alpert & Lum, 2014; Greenwood, 2014; Kazdin, 2008; Makse & Volden, 2011; Miller & Shinn, 2005; Wandersman et al., 2008). In criminal justice, there exists a large body of research that articulates the underlying etiology of crime and identifies “what works” to reduce crime and increase justice (Alpert & Lum, 2014; Greenwood, 2014). However, the dissemination and utilization of this knowledge in practice lacks consistency and uniformity across time and context. Indeed, prior research has well-documented the differential uptake of science to guide practice in relation to juvenile justice, police pursuit, and criminal justice policy overall (see Alpert & Lum, 2014; Greenwood, 2014; Makse & Volden, 2011). As a result, efforts to prevent, reduce, and manage crime are impeded, as practice and policy operate beyond the reach of research.

This science-practice gap presents a key challenge for the National Institute of Justice (NIJ). NIJ is the research, development, and evaluation agency of the U.S. Department of Justice, and is committed to “fostering science-based criminal justice practice” (National Institute of Justice, 2013). NIJ recognizes that to achieve this aim, it must attend to and attempt to bridge the science-practice gap. To do this, NIJ supports rigorous scientific research that is reflective of real-world issues faced by criminal justice professionals (i.e., practice informs research); utilizes an array of vehicles to disseminate said research back to criminal justice professionals so that it may be used to inform policy and practice (i.e., research informs practice); and invests in varied initiatives that support regular information exchange between researchers and practitioners (e.g., researcher-practitioner partnerships and symposia). As a part of these efforts, NIJ sought and

ultimately supported a Translational Criminology Research Fellow in FY14 (National Institute of Justice, 2014). The Fellow was to help NIJ staff be more systematic and deliberate in its bridging efforts; specifically, to be more systematic and deliberate in its conceptualization of the science-practice gap; its development and implementation of activities intended to bridge the science-practice gap; and its operationalization and measurement of impact accordingly. Through these means, the Fellowship was intended to help propel NIJ forward in its bridging efforts to ensure NIJ-supported research has an impact on criminal justice policy and practice.

The Role of the Fellow

The Translational Criminology Research Fellow worked in residency at NIJ for one year. During this time, the Fellow engaged in a wide range of activities to document NIJ's current conceptualization of the science-practice gap, activities underway to target the gap, and corresponding operationalizations and measurements. Developing a comprehensive understanding of NIJ's current strategies was an essential first step as it would provide the foundation for organizing and systematizing future planning, management, and evaluation (see W.K. Kellogg Foundation, 2004). The timing of the Fellowship coincided with organizational change efforts across NIJ, initiated by new leadership in the Office of the Director. Therefore, it was necessary to rely on a wide range of data sources during this time of transition to capture varying perspectives on NIJ's role in bridging the science-practice gap. Accordingly, the Fellow assembled and met regularly with a working group, representative of NIJ staff, to provide insight into NIJ processes (see Knowlton & Phillips, 2012 for a discussion of small groups in logic model development); met regularly with social science analysts working on NIJ's Translational Criminology Research Portfolio (see National Institute of Justice, 2014) and with the Director of NIJ; attended NIJ office-specific staff meetings (e.g., office of communications), all-staff

meetings, and other NIJ events; conducted individual and group interviews with NIJ staff; and consulted archival records. These efforts culminated in a set of internal documents to be used by NIJ to plan for more systematic and deliberate bridging efforts in the future. This included a visualization of NIJ's conceptualization of the science-practice gap, a logic model linking NIJ's many bridging activities to their necessary resources and desired outcomes, and an evaluation plan for assessing impact.

The science-practice gap conceptual model, logic model, and evaluation plan were intended to help systematize NIJ's bridging activities moving forward. The Fellow also engaged with NIJ staff to inform their bridging activities in real time. In this regard, the Fellow could best be described as a consultant. The Fellow helped connect NIJ staff and contractors to empirical research, theory, and methods from a wide range of disciplines that they could draw upon to guide their bridging efforts. Though the Fellow provided recommendations based on existing literature, prior experience, and areas of expertise, all decision-making power and ownership of specific tasks and projects remained with NIJ staff. For example, the Fellow developed a visualization of a researcher-practitioner partnership (RPP) typology (adapted from Rojek, Smith, & Alpert, 2012) and designed an evaluation to examine the impact of a NIJ activity on RPPs; NIJ staff then implemented the evaluation. To support other evaluation efforts at NIJ, the Fellow provided a 'crash course' in efficiency analyses (see Rossi, Lipsey, & Freeman, 2003); NIJ staff then decided if an efficiency analysis was the best way to illustrate a specific activity's impact. To inform a budding research initiative, the Fellow identified key literature on organizational development, adult learning and training transfer, evaluation theory, communications theory, systems change, and team science (Austin, 2009; J. D. Ford, Ford, & D'Amelio, 2008; J. K. Ford & Foster-Fishman, 2012; Miller, 2010; National Research Council,

2015; Rogers, 2003; Taylor, Russ-Eft, & Chan, 2005); NIJ staff then decided which theories and strategies to use to guide implementation. Some of the Fellow’s interactions with NIJ staff were more formal and long-term as the Fellow served as a participating team member, whereas other interactions were more short-term and ad hoc. Regardless, these interactions gained their value in the Fellow’s ability to connect NIJ Staff to varied resources that could help inform their bridging work on the ground, leading to more systematic and deliberate processes.

Future Recommendations

The Translational Criminology Research Fellowship was primarily implemented to guide the work of NIJ. However, NIJ is one of many organizations that acts as a research intermediary or “broker”—connecting the worlds of research with those of policy and practice (see Burt, 2005 for a discussion of brokers in Social Network Theory). Therefore, this inaugural Fellowship provided insight into ways that research intermediaries, more broadly, might increase their effectiveness in bridging the science-practice gap. Specifically, it is recommended that in developing and implementing bridging activities, research intermediaries (1) attend to their own internal science-practice gaps, (2) commit to interdisciplinarity, and (3) institutionalize such processes. These recommendations are summarized in the table below.

| Recommendation | Details |
|--|--|
| Attend to internal science-practice gaps | <ul style="list-style-type: none"> • Develop logic model(s) and a theory of change for program/initiative activities. • Review and revise models regularly to ensure they accurately reflect program/initiative activities and incorporate ‘cutting edge’ research and theory. |
| Commit to interdisciplinarity | <ul style="list-style-type: none"> • Identify goals and objectives first. • Explore a wide range of disciplines for relevant theory, research, and methods to guide action, accordingly. |
| Institutionalize the process | <ul style="list-style-type: none"> • Determine how best to integrate an Interdisciplinary Executive Scientist (IES) into the research intermediary. • Create, fund, and fill a role for the IES. |

Attend to internal science-practice gaps. Research intermediaries are committed to supporting empirically-informed practice. For example, while NIJ strives to provide empirical evidence to inform the work of criminal justice professionals; the National Institutes of Health (NIH) “seek knowledge about...living systems...to enhance health, lengthen life, and reduce illness and disability” (National Institutes of Health, 2013); and the W. T Grant Foundation “invests in research with the potential to advance theory, policy, and practice related to children and youth” (W.T. Grant Foundation, n.d.). Although the specific topical areas vary across these organizations, their commitment to helping support science-based policy and practice is shared.

However, it cannot be assumed that because a research intermediary is committed to supporting science and its application to practice and policy ‘in the real world,’ that all of its *internal* activities and endeavors are guided by the most relevant and up-to-date research. NIJ’s focus on criminal justice necessarily means it is not focusing primarily on health disparities. Similarly, NIH is not considered the expert in criminal justice policy. Each research intermediary has elected to develop depth and expertise in a limited set of topical areas, necessarily at the expense of others. Therefore, it is possible and even expected that a new initiative or endeavor in any research intermediary is at risk for operating independently of the most relevant and up-to-date scientific scholarship; this may be because the new endeavor is informed best by a domain beyond the research intermediary’s current area of expertise. It is also possible that long-standing activities have continued to operate ‘as-is,’ in spite of more recent research suggesting there is a better way; this may be because resources have not been allocated to take stock and update organizational practices on a regular basis. So while research intermediaries have been focusing on supporting science-informed practices in particular arenas, they may have overlooked their own *internal* science-practice gaps. This is problematic because internal science-practice gaps

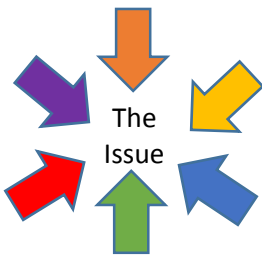
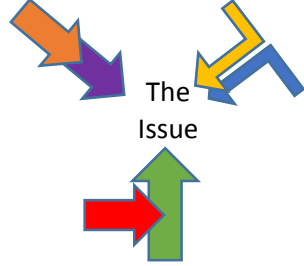

ultimately impact a research intermediary's ability to produce practice- and policy-relevant research and disseminate it effectively. For example, if the research intermediary is not well-versed in the most recent research on team science (e.g., see National Research Council, 2015), their ability to facilitate empirically-informed practice 'in the real world' via researcher-practitioner partnerships may be compromised.

Therefore, it is recommended that research intermediaries dedicate time and resources to developing a shared understanding of two key science-practice gaps: the science-practice gap 'in the real world' that is the primary focus of their organization (e.g., using science to inform criminal justice or policies affecting youth) and science-practice gaps that may exist *within* their organization. To do this, research intermediaries should consider developing logic models that delineate their many different activities conceptually linked to necessary resources and intended impacts alongside theories of change that identify the theories and empirical evidence drawn upon to support their work (see Knowlton & Phillips, 2012 for a discussion of logic models versus theories of change). These logic models and theories of change should be reviewed and revised on a regular basis to ensure they represent accurately the work of the research intermediary and incorporate 'cutting edge' research and theory.

Commit to Interdisciplinarity. To identify relevant research and theory that can guide new and ongoing activities within a research intermediary, it is necessary to know what research and theory is available. Though as previously discussed, there is often a tradeoff between depth and breadth; as individuals and organizations develop expertise in specific topics (i.e., depth), it is frequently at the expense of knowledge in an array of other areas (i.e., breadth). Therefore, research intermediaries must commit to interdisciplinarity to help ensure that while they continue to develop depth in a specific topical area (e.g., in disparities among youth), they also develop

breadth across a wide range of disciplines; this will enable research intermediaries to draw upon varied research and theoretical knowledge for new and ongoing activity development and implementation.

Increased interdisciplinarity is recommended here. However, the terms interdisciplinarity, multidisciplinary, and transdisciplinarity are frequently used interchangeably, without much consideration of the distinctions between these approaches (Alvargonzález, 2011). This may contribute to the misuse and overuse of these terms in contexts frequently void of any observable multi-, inter-, and transdisciplinary efforts. Yet, there are important differences between these approaches and the contexts in which they should be applied. Multidisciplinary and interdisciplinarity draw on different disciplines. However, the former maintains boundaries between the different fields and traditions, while the latter analyzes and synthesizes links between them to develop a coordinated understanding or whole (Choi & Pak, 2006). Transdisciplinarity moves a step further by completing transcending traditional boundaries of natural, social, and health sciences to produce a fully integrated humanities context (Choi & Pak, 2006), frequently organized around a social problem or area of concern. The table on the following page summarizes these distinctions, alongside figures that represent their key characteristics. The different colors in the figures represent different disciplines.

| Multidisciplinarity | Interdisciplinarity | Transdisciplinarity |
|--|--|--|
|  <p data-bbox="211 808 576 955">Boundaries between disciplines are strictly maintained in examining the issue</p> |  <p data-bbox="625 735 998 1018">Boundaries between disciplines are acknowledged and valued, but they are malleable; disciplines are analyzed and synthesized to build off of and inform one another for a coordinated understanding of the issue</p> |  <p data-bbox="1039 787 1404 966">Boundaries between multiple disciplines are transcended completely to create a fully integrated context organized around the issue.</p> |

Of these three approaches, interdisciplinarity might be the most useful for research intermediaries committed to bridging both internal and ‘real world’ science-practice gaps. In contrast to multidisciplinarity, this approach calls for drawing upon theory or research from one discipline and applying it to another to gain new insight, develop new models, or advance understanding. However, unlike transdisciplinarity, it embraces the importance of specialized training offered by only select traditions that might otherwise be lost if all disciplines were to be integrated fully. With this approach, users are free to explore and apply research, theory, and methods from multiple disciplines, while also considering the benefits and challenges inherent in each. This approach proved fruitful for the Translational Criminology Research Fellowship as the selected Fellow was a community psychologist with a background in systems change, organizational change and development, and evaluation. The Fellow’s multidisciplinary training

allowed for interdisciplinary application once in residency at NIJ: she was able to draw upon a wide array of traditions, theories, and methods to find the best fit to guide ongoing and future efforts.

To implement an effective interdisciplinary approach, it is recommended that research intermediaries focus on identifying goals and objectives first, and then explore a wide range of disciplines for relevant theory, research and methods to guide action. For example, if a research intermediary wants to ensure that their internal organizational change efforts sustain over time and do not compromise longstanding commitments to science-based practice, it would benefit from drawing upon the organizational development literature (e.g., see Austin, 2009; J. K. Ford & Foster-Fishman, 2012); if the research intermediary wants to ensure research is being disseminated in the most effective way to support its use, it would benefit from drawing upon the field of communications, and dissemination theories such as Diffusion of Innovations or Social Network Theory/Analysis (Borgatti, Mehra, Brass, & Labianca, 2009; Rogers, 2003); if a research intermediary is developing a training program for practitioners in order to support the implementation of new science-based strategies, it would benefit from the literature on training transfer and adult learning (e.g., see Keith & Frese, 2008; Taylor et al., 2005). Through committed interdisciplinarity, research intermediaries can be sure that they do not shy away from internal science-practice gaps, but instead bridge them with the same effort and commitment to empiricism as they exercise in attending to ‘real world’ science-practice gaps. And, as a result, produce increasingly relevant research that is disseminated in the most effective means possible to support implementation and utilization among practitioners and policymakers.

Institutionalize the process. Staff and leadership within research intermediaries likely espouse interdisciplinarity and science-based internal practices, in addition to their explicit

commitment to science-based policy and practice ‘in the real world.’ However, it may be difficult to identify precisely how these practices have been institutionalized. For example, how do staff members in a research intermediary know that they are drawing upon the most relevant disciplines and bodies of research when developing a new research portfolio or trajectory? How do research intermediaries ensure that their staff is updated on innovative research that might inform revisions to long-standing dissemination strategies? And, given the current workload and developed expertise of staff in research intermediaries, is it realistic to expect all staff to also become familiar enough with a wide range of disciplines to know what to apply and when?

Staff members in research intermediaries are dedicated to understanding the history, fundamentals, intricacies and nuances, and contemporary developments in their areas of expertise (i.e., depth). This means “their dance cards are simply too full to also orchestrate the information flows necessary for efficient and effective interdisciplinary research” that can attend to internal science-practice gaps (Hendren, 2014). Therefore, to institutionalize interdisciplinary, science-based internal practices, it is recommended that research intermediaries invest in “Interdisciplinary Executive Scientist(s)” (Hendren, 2014; National Research Council, 2015). Interdisciplinary Executive Scientists (IESs) provide the much-needed counterbalance of breadth for the already-developed depth among staff members in research intermediaries. IESs understand the interdisciplinary science approach and the importance of knowledge transfer between disciplines to respond to difficult challenges (Hendren, 2014). For research intermediaries, this might include the development and implementation of a new initiative, or persuading policymakers to use research evidence in their policy decisions. As a skilled communicator, the IES understands what information to share, how it can be applied, and when it will be useful.

If research intermediaries are committed to effective interdisciplinary science-based practices, they should make identified individual(s) responsible for it. That is, they should create an institutionalized position for the IES. This could be achieved via a series of visiting fellows, via paid staff position(s) within the research intermediary, or by establishing a center or office within the research intermediary. Regardless, the role of the IES would remain the same—to draw upon diverse viewpoints, traditions, theories, research, and methods to ensure interdisciplinary, science-based practice. Though the Translational Criminology Research Fellow was not explicitly identified as an IES, the Fellow served in this capacity to some extent, providing anecdotal evidence that the creation and institutionalization of such a position is worthwhile.

Conclusion

The National Institute of Justice has been engaged in efforts to bridge the science-practice gap in the field of criminal justice for some time. However, this was the first time NIJ funded a Translational Criminology Research Fellow, dedicated to helping NIJ staff become more systematic and deliberate in its bridging efforts, and developing insight to inform the broader conversation on the role of research intermediaries in bridging the science-practice gap. This inaugural Fellowship evidenced NIJ's sustained commitment to supporting practice- and policy-relevant research and research-informed practice and policy. Additionally, it modeled what can be gained from a willingness to try something new. An unwavering commitment to interdisciplinary internal and external bridging efforts, paired with a readiness for innovation may be the key for research intermediaries to ensure research has an impact.

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