Community Policing and Intelligence-Led Policing:
An Examination of Convergent or Discriminant Validity

Jeremy G. Carter
School of Public and Environmental Affairs
Indiana University – Purdue University Indianapolis
carterjg@iupui.edu

Bryanna Fox
Department of Criminology
University of South Florida
bhfox@usf.edu

Abstract

Purpose: Despite increased scholarly inquiry regarding intelligence-led policing and popularity among law enforcement agencies around the globe, ambiguity remains regarding the conceptual foundation and appropriate measurement of ILP. Although most scholars agree that ILP is indeed a unique policing philosophy, there is less consensus regarding the relationship between ILP and the ever-present model of community-oriented policing (COP). Consequently, there is a clear need to study the empirical distinctions and overlaps in these policing philosophies as implemented by U.S. law enforcement agencies.
Methods: Data were gleaned from the 2007 LEMAS and 2009 NIJ Intelligence surveys. A total of 227 unique police agencies in the United States are included. A series of bivariate, exploratory factor analyses, and structural models are used to determine discriminatory or convergent validity across COP and ILP constructs.
Findings: The goal was to answer the question: Are these two policing philosophies are being implemented as separate and distinct strategies? Results of our exploratory and structural models indicate that COP and ILP loaded on unique latent constructs. This affirms the results of the bivariate correlations, and indicates that COP and ILP have discriminant measurement validity. In other words, COP and ILP are conceptually distinct, even when implemented in police departments across the United States. Implications of these findings, and suggestions for future research are discussed.
Originality: This is the first study to empirically test the discriminant or convergent validity of COP and ILP.

Keywords: intelligence-led policing, community policing, law enforcement

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Introduction

Intelligence-led policing (ILP) is a relatively recent policing philosophy in the United States, having emerged in the wake of the terrorist attacks of September 11, 2001 (9/11). Though the roots of ILP are found in the United Kingdom, specifically from the National Intelligence Model, the U.S. experience with ILP is largely attributed to the failure of law enforcement agencies to share information leading up to the 9/11 attacks (9/11 Commission Report, 2004) and the demand for police to be more efficient with limited resources (Ratcliffe, 2016).

Despite many agencies self-reporting the adoption of ILP, and increased scholarly inquiry regarding the model, there remains substantive ambiguity surrounding the conceptual foundation and appropriate measurement of ILP. As will be discussed in the narrative to follow, most scholars agree that ILP is indeed a unique policing philosophy. However, there is less consensus regarding the relationship between ILP and the ever-present model of community-oriented policing (COP). In short, the literature articulates the relationship between COP and ILP along a continuum that ranges from closely related (Bullock, 2013; Carter & Carter, 2009; Clarke, 2006; McGarrell, Freilich & Chermak, 2007), sharing minimal similarity (Innes *et al*., 2009; Tilley, 2003), and distinctly different (Deukmedjian & de Lint, 2007; Ratcliffe, 2016). There has yet to be an empirical examination of how similar or unique these policing philosophies truly are, and is thus the aim of the present study. From an academic perspective, there is a demand for conceptual guidance to refine studies of ILP moving forward. This refined conceptual understanding will hopefully lend validity to future examinations of ILP that may translate into more impactful remedies for practice. With respect to practice, an improved understanding of the relationship

between ILP and COP will help agencies navigate the development and implementation processes associated with ILP. As many agencies currently engage in some level of COP, there may be an organizational tendency to leverage existing programs and practices to facilitate adoption of ILP. Whether this is an appropriate strategy from a conceptual perspective is unclear, and the contribution of this study will help to shed light on this issue.

The Concept of Intelligence-Led Policing

While ILP is rarely defined, specifically because it is meant to evolve with advances in contemporary policing, Carter and Carter (2009) conceptualize ILP as:

> The collection and analysis of information related to crime and conditions that contribute to crime, resulting in an actionable intelligence product intended to aid law enforcement in developing tactical responses to threats and/or strategic planning related to emerging or changing threats (p. 317).

Based upon these broader tenets of 1) intelligence collection, 2) analysis, and 3) implementation to develop strategic and tactical responses to crime threats, ILP demonstrates a high degree of implementation fidelity across agencies. ILP has achieved considerable success in recent years, and is credited as the impetus for creating regional fusion centers staffed by federal, state, and local law enforcement in order to share intelligence and data across agencies (Lewandowski, Carter & Campbell, 2018). In essence, the goal of ILP is to capitalize on raw information inputs through both quantitative and qualitative analyses to proactively monitor and prevent criminal activity, primarily by targeting habitual (i.e. prolific) offenders and would-be threats to a community. As noted in the Audit Commission of the United Kingdom's Home Office

(1993), ILP leverages intelligence gained through various sources, including surveillance, informants, and other agencies, to target habitual offenders and gain crime reduction efficiencies.

Contemporary definitions of ILP also reflect a broader operational emphasis and, for some scholars, the inclusion of key components from other policing philosophies. For instance, in the United Kingdom the adoption of the National Intelligence Model (NIM) brought about a shift in ILP that integrated a problem-solving approach (Hale *et al*., 2004; Oakensen *et al*., 2002) and extended the application of ILP beyond habitual offenders to a variety of issues to which the police are responsible (Barton & Evans, 1999). In this way, ILP can both align with other prominent conceptual policing philosophies, such as problem-oriented policing (POP) and COP, but also maintain unique principles which distinguish it as a unique policing model. The commonalities and distinctions between ILP and COP, a highly popular policing philosophy in the United States and abroad, will be discussed and evaluated throughout here.

Conceptual Commonalities

Unlike the traditional reactive "order maintenance" law enforcement perspective, COP is a policing philosophy which emphasizes community involvement in crime prevention efforts (Gill *et al.,* 2014). COP rose to prominence in the 1990's as a new method of fighting crime using the collaborative efforts of law enforcement and the communities that they serve (Gill *et al.,* 2014). The primary goal of COP is to reduce crime and disorder by proactively identifying and solving problems through the use of police-community partnerships and strong relationships with the community (Mastrofski, Worden, & Snipes, 1995). As local residents are the "primary source of information concerning neighborhood problems", COP aims to amplify the role of citizens and intelligence in preventing and solving crime (Rosenbaum & Lurigio, 1994, p. 300). Typically, COP is implemented through community policing units trained in community relations and rapport

building, use of foot or bicycle patrols rather than vehicle patrols, and/or the assignment of officers to specific geographic areas in order to encourage police to get to know the residents, build trust in the community, and serve as "co-producers" of public safety (Gill *et al*., 2014; Rosenbaum & Lurigio, 1994; Skogan, 1994; Weisburd & McElroy, 1988). COP's emphasis on rapport and relationship-building speaks to its reliance on legitimacy, trust, and the collection of intelligence to identify, prevent, and solve crimes (Trojanowicz *et al.,* 1998).

COP has achieved widespread endorsement in police agencies around the globe (Gill *et al.,* 2014), and in 1994, Congress established the Office of Community Oriented Policing Services (COPS) in U.S. Department of Justice, which has awarded over $14 billion in grants to help advance community policing implementation, evaluation, and training for law enforcement (COPS Office, 2018). While early evaluations of COP's effectiveness indicate modest reductions in fear of crime and crime rates (Rosenbaum & Lurigio, 1994), research more consistently finds that COP has other benefits, such as increases in citizen satisfaction and trust in the police (Sherman & Eck, 2002; Skogan & Frydl, 2004; Weisburd & Eck, 2004). A meta-analysis by Gill and colleagues (2014) analyzed 37 evaluative studies of COP, and found that there was no significant effect on general reduction of crime, feelings of safety, citizen perceptions of police fairness or community disorder, but there was a 10% reduction in violent crime and 37% improvement in citizen's satisfaction with police.

Like COP, ILP is a proactive policing philosophy intended to identify and prevent crime problems, ideally before they occur or become severe. However, both COP and ILP are just frameworks for implementing strategies, and not a strategy in itself (Gill *et al.,* 2014). In other words, neither COP or ILP are meant to be tactics that can be applied to solve a particular problem, then be abandoned once the goal is achieved (Trojanowicz *et al.,* 1998). (This is more common in

POP, and traditional reactive policing practice.) Furthermore, given that both COP and ILP are broader frameworks that can be implemented in multiple ways across different agencies and vary over time, determining a concrete definition and evaluation of ILP and COP is more challenging (Carter & Philips, 2015; Klockars, 1988; Mastrofski, 1988; Mastrofski *et al.,* 2007). Other major commonalities are COP and ILP's reliance upon community information to develop actionable intelligence on potential or current crime problems, the two-way flow of information between the police and public, and the use of data to inform evidence-based decision-making (Carter & Phillips, 2015; McGarrell *et al.,* 2007).

Conceptual Differences

There are several notable differences between ILP and COP. Primarily, COP's emphasis on community empowerment and building trust in police is not a central focus of ILP (Bullock, 2013). Instead, ILP is a philosophy where intelligence and data are used to objectively identify crime threats and effectively address them (Bullock, 2013). While more visible issues, such as youths loitering on a street corner, may draw attention of community members and become more of a focus in COP, ILP relies on intelligence and data to prioritize issues (which may be more latent), such as a human trafficking ring operating in the neighborhood that the community is generally unaware of. In other words, while information from the public is highly sought and valued in both COP and ILP, objective analysis used to determine the most substantial criminal threats is the top priority and mechanism used to proactively police under the ILP model.

ILP has also emphasized focusing on the more severe and prolific offenders, as research indicates that prioritizing these cases over others leads to more efficient and effective crime reduction efforts (Ratcliffe, 2016). Conversely, COP tends to focus on neighborhood-level issues, based upon input on community concerns (Ratcliffe, 2016). The ILP model encourages law

enforcement agencies to "work smarter, not harder" when addressing criminal threats in their community. Rather than waiting for small problems to become larger, or only addressing issues once the community voices a concern, ILP aims to utilize data to more effectively reduce, disrupt, and prevent crime (Ratcliffe, 2016). As Wood and Shearing (2007) stated, ILP "does not re-imagine the police role so much as it re-imagines how the police can be smarter in the application of their unique authority and capacities" (p. 55). In short, COP's primary goal is to increase public cooperation and perceptions of police legitimacy to help proactively address crime and disorder, while ILP aims to utilize data and intelligence from the community and other agencies to more efficiently, effectively, and proactively deploy police resources to address the most severe and prolific criminal threats (Bullock, 2013).

Current Study

Given the relatively broad definitions and implementation fidelity of both COP and ILP, numerous conceptual similarities between COP and ILP, and the fact that many law enforcement agencies are employing both COP and ILP concurrently, there is a clear need to study the empirical distinctions and overlaps in these policing philosophies as implemented by U.S. law enforcement agencies. To do this, a series of analyses are run to determine discriminatory or convergent validity across COP and ILP constructs as implemented by 227 police departments in the United States.

Methods

Data

The present study leveraged the merger of two national law enforcement surveys to test the convergent or discriminant validity of community and intelligence-led policing constructs; the *2007 Law Enforcement Management and Administrative Statistics* (LEMAS) survey and the *Understanding the Intelligence Practices of State, Local, and Tribal Law Enforcement Agencies*

survey sponsored by the National Institute of Justice. [1] LEMAS data contains relevant community policing indicators commonly used by previous policing scholars (MacDonald, 2002; Maguire, 1997; Morabito, 2010; Paoline, Myers, & Worden, 2000). The NIJ intelligence survey contains a number of law enforcement intelligence-specific metrics. Both surveys were self-report instruments completed by a member of the agency. In the case of the NIJ intelligence survey, an intelligence-specific key personnel completed the survey as this member was most likely to have intimate knowledge of intelligence-related practices within the agency (Carter *et al*., 2012).

The decision to utilize the 2007 wave of LEMAS data was an effort to best match the NIJ intelligence data that were collected in 2009. While not perfectly aligned in time, the merger of these two surveys from slightly different temporal periods is not likely to influence observed measurement outcomes. A means comparison test of COP metrics utilized in the present study from LEMAS survey waves 2007 and 2013 yielded no significant differences, thereby indicating limited variation of reported community policing activities in a given agency in 2007 and the likely level of community policing activities that would be present in the NIJ intelligence survey year of 2009. The 2007 LEMAS survey included 2,875 unique agencies. The NIJ intelligence survey included 272 unique agencies. Both surveys contain national representation from across the United States. Of the 272 agencies in the NIJ intelligence survey, 227 were also included in the 2007 LEMAS survey – thus representing the agencies utilized in the present study. Of the 227 agencies included in the study, the median agency size was 604 total personnel, 57% were local police agencies, followed by county sheriff (22%) and state police (21%). Most agencies in the dataset were from the midwest (27%) and southeast (24%), followed by west (19%), northeast (17%), and southwest (13%).

Community Policing Variables

Variables selected to capture community policing were derived from previous studies employing index measures of COP and ILP (Burruss & Giblin, 2014; Chappell & Gibson, 2009; Lee, 2010; Maguire, 1997; MacDonald, 2002; Morabito, 2008; 2010). Ten indicators gleaned from the 2007 LEMAS survey represent the scope of COP activities engaged in by each agency. These ten indicator variables included the following: train new recruits in community policing; train in-service officers in community policing; conduct community surveys; conduct a citizen police academy; patrol officers assigned to specific geographic units; have a formal community policing unit; have a community policing mission statement; have a written community policing plan; encourage officers to engage in scanning, analysis, responses, assessment (SARA) problem solving; and include problem solving in officer performance evaluations. Indicators of training (new recruits and in-service officers) were coded as follows: 3 = All, 2 = half or more, 1 = less than half, 0 = none. The remaining eight indicators were dichotomous and thus coded according to whether the agency responded in the affirmative (1) or not (0). The reliability coefficient (alpha) for these community policing variables was .723 (higher than the alpha coefficients reported in previous studies that ranged from .660-.706).

Intelligence-Led Policing Variables

Akin to COP, ILP is a complex construct best captured through a multi-item index. The present study identified variables from the NIJ intelligence survey that represent agency practices consistent with intelligence-led policing based on the limited ILP literature, operational components outlined in the National Criminal Intelligence Sharing Plan (Global Intelligence Working Group, 2003) – the leading professional resource published by the U.S. Department of Justice – as well as items adapted from similar measures used in studies of community policing.

Specifically, the study leverages Carter's (2016) operational index of ILP. These measures are also consistent with Ratcliffe's (2016, p. 80-84) 3-i conceptual model of ILP. Seven of the items included were dichotomous measures (1 = Yes or 0 = No). These dichotomous items are whether or not the agency has defined intelligence goals and objectives; has formal mechanisms to share information with the public; has a policy to specifically guide intelligence practices; has trained line officers; has trained community organizations; has trained citizens about ILP and sharing information; and has developed collection requirements for information sharing. The remaining four items were likert scales with values of 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. No neutral response was provided. Likert scale items used in the ILP index included the following statements: "Intelligence is formally integrated in the agency's decision making processes;" "The chief executive support intelligence-led policing;" "The agency provides actionable intelligence products to external agencies;" and "The agency receives actionable intelligence products from external agencies;" The reliability coefficient (alpha) for these indicators of ILP was .842 (consistent with Carter's (2016) alpha of .848). Descriptive statistics for COP and ILP indicators are provided in Table 1.

[**Table 1. Descriptive Statistics for COP and ILP Measurement Items** approximately here]

Analytic Strategy

To test whether or not COP and ILP demonstrate convergent or discriminant measurement validity, a three stage analytic process was employed. First, given this study is the first to test measurement between these two constructs, correlations were examined to determine if COP and ILP variables are related at the bivariate level. Second, exploratory factor analyses were utilized to explore

shared variance of COP and ILP variables. This analytic method leverages observed covariances of input data to identify latent factors in the absence of theory or empirical evidence. This approach is simply data-driven by input variables and relies upon reliability statistics that cannot determine dimensionality of latent constructs (Gau, 2010). Lastly, structural models were employed to conduct confirmatory factor analysis to specifically test whether or not COP and ILP indicators load on a single, or multiple, constructs. Prior to conducting analyses, data were examined for normality with two variables (train sworn officers and train citizens for intelligence) exhibiting skewness just above 1.0 and one variable (agency has intelligence policy) with kurtosis slightly less than -1.0. Though these values raise little concern, they are nonetheless accounted for through the use of robust maximum likelihood estimation (Gau, 2010). Bivariate and exploratory factor analyses were conducted using SPSS (v. 24) while SPSS-AMOS (v. 24) was used for structural confirmatory models.

Results

Bivariate (Pearson's) correlations are reported in Table 2. As illustrated in the table using light and dark shading, COP and ILP variables are largely correlated within each set of indicators and not across the two underlying constructs. These distinct intra-construct correlations provide initial evidence of discriminant validity and serve as the beginning phase of the subsequent exploratory and structural models (Muthen, 1983) to be presented. The most common inter-construct correlations were agencies that conduct a citizen police academy (COP item 4) was related to training citizens on ILP, sharing intelligence information with the public, and having a written intelligence policy. It may be that agencies who conduct a citizen police academy may perceive this program as a means through which citizens can be trained on ILP as well as a forum to share

information with the public – which is likely a central focus of an articulated intelligence policy. In total, only five variables were correlated across the two constructs and in each case, these correlation strengths were minimal.

[**Table 1. Table 2. Bivariate Correlations for COP and ILP Measures** approximately here]

The next phase of exploring COP and ILP measurement was exploratory factor analysis (EFA). Three exploratory factor analyses were conducted; 1) COP only variables, 2) ILP only variables, and 3) both COP and ILP variables. Results of these EFAs are reported in Table 3. Though debate exists regarding which rotation method is most appropriate for a given data set (Henson & Roberts, 2006), most scholars agree that an orthogonal rotation should be employed in instances where variables are correlated and oblique rotation when variables are not correlated (Schmitt, 2011). Given the aforementioned correlations reported in Table 2 demonstrated minimal corollary relationships between COP and ILP variables and rather robust correlations within both COP and ILP variables, the present study employed both orthogonal (varimax) and oblique (promax) rotations in the EFAs for purposes of robustness. Both rotation methods yielded identical results, suggesting the factors are truly uncorrelated (Costello & Osborne, 2005).

As reported in Table 3, the two factor loading demonstrates both COP and ILP loaded on unique latent constructs. With the exception of COP item 2 (train in-service personnel), all component loadings exceeded the .4 threshold given the study's sample size (Pearson & Mundform, 2010). These two factor loadings are provided as comparison for the one factor loading analysis wherein all of the COP and ILP indicators were included in a single PCA. Here, the factor loadings display unique latent constructs where component 1 and component 2 are substantively

different. In component 1, the largest COP loading is .267 while the ILP loadings are all above .532. Component 2 loadings are in contrast to component 1 and demonstrate further evidence of two distinct constructs. Thus, EFA results lend additional support beyond bivariate correlations that COP and ILP have discriminant measurement validity.

Lastly, two structural confirmatory factor analysis (CFA) models were employed to test whether COP and ILP variables load on a single, or multiple, construct. In the first CFA model, all COP and ILP variables were included and structured on a single construct. In the second CFA model, COP and ILP variables were included and structured on two separate constructs. Similar to the EFA process, CFA enables the identification of unique constructs through an examination of model fit and factor loadings. If, for example, both COP and ILP variables loaded on the single construct, this would be indicative of convergent validity wherein the two policing philosophies would share commonalities. Conversely, if the COP and ILP variables load distinctly different from one another on a single construct, this would demonstrate discriminant validity and thus a lack of shared variance between the two constructs.

Identification parameters of structural models were assessed prior to analyses. Model identification requires a structural model to be over-identified – meaning the number of distinct sample moments, or non-redundant elements, must exceed the number of distinct parameters to be estimated – in order to produce a meaningful solution. Non-identified models will execute in the program, but results are meaningless. Put simply, the number of distinct sample moments must exceed the degrees of freedom. The number of distinct sample moments is calculated as $p(p+1)/2$ where p = the number of observed variables (Rigdon, 1995). Given the 21 total variables included in the analyses, the number of distinct sample moments was 231 and exceed the number of distinct parameters to be estimated, and degrees of freedom, in both CFA models. Thus, the CFA models

were properly identified. Model fit was assessed using the four most common and perhaps agreed upon indicators; chi-square comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean squared residual (SRMR). Acceptable threshold values for these indices vary, though Hu and Bentler (1999) identified general rules of thumb for model fit that are largely cited in the literature. Values above .90 indicate good-fit for both the CFI and TLI. The RMSEA has a more variable acceptance with values of .06 or lower equating to close fit, .06 to .10 representing reasonable fit, and anything above .10 as poor fit. The SRMR value should be .06 or less. Each latent factor should load higher than .30 on the observed variables and also be statistically significant (Brown, 2015). Model fit indices are reported in Table 4. Both the single construct and two construct CFA models demonstrate good fit as each of the fit indices are well within desired thresholds. Standardized factor loadings, with the exception of COP item 2 (train in-service personnel), were all above the .30 when loading on the appropriate underlying construct. Lastly, though the chi-square statistic for each CFA model was significant, this measure is sensitive to sample size and likely does not undermine the conclusions drawn from the present study (Fan, Thompson & Wang, 1999; Gau, 2011).

Results of the structural CFA models, reported in Table 5, are consistent with those of the aforementioned EFA. The single structural model exhibits contrasting factor loadings on the lone construct. COP indicators loaded poorly, ranging from .006 to .151, while ILP indicators loaded moderately to strongly with estimates ranging from .407 to .761. These divergent loading patterns allude to two distinctly different constructs. Emergent from the single construct model are results of the second CFA wherein COP and ILP indicators were structured on two separate constructs. Again, results indicate that COP and ILP variables load on unique constructs. With the exception of COP item 2 (train in-service personnel, .236), all COP indicators loaded moderately to strongly

on construct one (.464 - .725) while all ILP indicators loaded moderately to strongly on construct two (.468 - .700). While marginally different, model fit indices (Table 4) suggest the two construct model is the more appropriate measurement model. Notably, the correlation between COP and ILP factors in the two construct model was only .059, thus indicating the two constructs lack convergent validity. In sum, results of the EFA and structural CFA models demonstrate discriminant validity between COP and ILP. These two policing philosophies, as measured in the present study, are in fact distinct concepts.

Discussion

As noted in prior research and by those familiar with the applied implementation of COP and ILP in police agencies, there exists a degree of conceptual confusion regarding the empirical distinctions between the COP and ILP frameworks (Bullock, 2013; Ratcliffe, 2016). This confusion stems from the fact that both COP and ILP appear to share many core elements, such as an emphasis on proactive versus reactive policing, and two-way sharing of information with the community. Additionally, both COP and ILP maintain a broad and flexible framework to allow these strategies to be utilized as long-term solutions and be customized to the individual needs and strengths of each agency. Moreover, the future trajectory of contemporary policing demands may also require a more tightly coupled relationship between COP and ILP. For example, the role of local law enforcement in assisting issues of counter-terrorism (McGarrell *et al.*, 2007), public health (Carter & Rip, 2013), social harm (Mohler *et al.*, 2018; Ratcliffe, 2015), border security and immigration (Lewandowski *et al.*, 2017), and mental health (White & Weisburd, 2017) are increasingly being recognized as local police responsibilities with a nexus in both COP and ILP.

Consequently, an analysis of the distinctiveness of these policing philosophies after implementation is needed.

To do this, we conducted a series of analyses to measure the discriminant validity across measures of COP and ILP as implemented in 227 law enforcement agencies in the United States. The goal was to answer the question: Are these two policing philosophies being implemented as separate and distinct strategies? Results of our exploratory and structural models indicate that, overall, the answer to this question is yes.

Inter-construct correlations show that across the more than 20 measurement items, one COP measure was weakly correlated with four ILP variables. This COP item, holding a citizen police academy, is now common across many American police agencies. Therefore, the weak correlations with ILP items is not surprising. Additional analyses suggested that the correlations are spurious and do not present a meaningful association between COP and ILP variables.

Results of the exploratory factor analyses show that COP and ILP loaded on unique latent constructs. This affirms the results of the bivariate correlations, and indicates that COP and ILP have discriminant measurement validity. In other words, these policing philosophies are being implemented as separate and distinct strategies. Confirmatory factor analyses provided further support for the distinction between COP and ILP as implemented in practice. The goodness-of-fit indices indicated that a two construct model best fit the data, and measures of COP and ILP load on unique constructs according to the appropriate policing philosophy. This finding supports prior research indicating COP and ILP are conceptually distinct, even when implemented in police departments across the United States (Ratcliffe, 2016; see however, Bullock, 2013).

While this study is the first to empirically assess the distinctiveness versus overlap in the ILP and COP policing philosophies, it is not without limitations. While the 227 agencies in this

study represent a sizable sample, it is still a relatively small portion of the total local, state, and federal agencies across the United States. Additionally, while the critical elements of ILP and COP are both accounted for using the LEMAS dataset, the quality of implementation of each element is not captured. For instance, COP item 2, training in service personnel on community policing, consistently loaded poorly across EFA and CFA analyses. This item also exhibited the lowest reliability (alpha) within the COP index. However, the inclusion of this item has substantive meaning and importance, as it is difficult to argue that police personnel should not receive COP training. The inclusion of this item in the index is also consistent with the aforementioned studies that employed an index measure of COP. Thus, without refined data that more accurately captures the quality of training (or training curriculum), it is not possible to empirically demonstrate why this item is not consistent with theorized practice. Lastly, these data do not allow for a more robust examination of the connectedness of COP and ILP variables. This is to say, COP and ILP variables are both reported from different data sources and do not capture the degree to which inter-play may exist between common indicators. For example, an agency that is highly engaged in COP may be using these mechanisms to facilitate information inputs into an ILP framework. Unfortunately, while these data are the best available to examine this measurement question, they are less than pristine.

Nonetheless, the COP and ILP variables performed largely as expected, and provide support that each philosophy is unique and implemented independently as recommend. Additionally, this study indicates for the first time that there is strong discriminant validity in the measures utilized to represent COP and ILP in the LEMAS dataset. This means that researchers can now track patterns of implementation of these policing philosophies across American law enforcement agencies over time, and correlate the use of COP and ILP with changes in crime rates,

arrest rates, use of force and violence against police officers, complaints, and more. Such analyses can help researchers evaluate the aggregate impact of COP and ILP, and compare the effectiveness of the philosophies on various outcomes of interest to the community, police, academics, and stakeholders.

Conclusions and Future Research

This study indicates that despite the points of similarity between COP and ILP, U.S. law enforcement agencies appear to be implementing each strategy as distinct, independent, and unique philosophies, rather than a blend of both frameworks. This finding is important, as it suggests that police departments, in general, are purposive in the selection of the philosophy to implement and do not succumb to selecting elements from multiple philosophies that can be drawn from a broader "toolbox" at will. Such an approach often serves to water down the effects of any single philosophy, and distract from a singular philosophical objective provided from adhering to a single distinct strategy. Findings also provide implementation guidance for agencies seeking to implement an ILP capacity, or refine an existing ILP approach. Results from the present study indicate an ILP capacity should have unique factors not related to COP. Thus as agencies seek to develop an effective ILP approach care should be given to differentiate programs and practices from those serving COP. For example, agencies should consider having intelligence and information sharing-specific communication channels with the public and private partners in their jurisdiction. Moreover, agencies should consider developing, or gaining access to, formal information sharing system and analytic products intended to serve an intelligence function. The reality may be that agencies "piggy back" ILP practices on top of existing COP practices given resources and time constraints, however this research suggest such practices should at a minimum be guided by ILP- or COP-specific purposes.

Importantly, this study also addresses the fundamental question raised in prior research on whether community and intelligence-led policing styles may be viewed as conceptually distinct. The answer, according to multiple discriminant analyses, indicates the answer is yes. Future research can examine the effects of various policing styles, particularly when implemented in part or in full. In other words, is there a benefit to adhering to only certain elements of COP and ILP, or do the benefits arise only when a specific combination of factors are implemented? This research will help demonstrate the most cost-effective manner of obtaining the most benefits for police agencies, particularly as budgets are notoriously low in relation to crime reduction demands. Moreover, scholars should seek to better understand the shared value of organizational practices that are likely to facilitate both COP and ILP. Indeed, several factors within both frameworks are complimentary to one another but if measured independently may not exhibit such efficiencies. Furthermore, the ability to evaluate the impacts of COP and ILP across a variety of outcome variables will be highly beneficial to illustrate which policing philosophy may be of greatest benefit to agencies facing specific issues in their community.

Notes:

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Table 1. Descriptive Statistics for COP and ILP Measurement Items (n=227)

Item	Mean	SD	Min	Max
Community Policing (α = .723)				
1. Train new recruits on community policing	1.86	1.41	0	3
2. Train in-service personnel on community policing	.87	1.01	0	3
3. Conduct a survey of citizen perceptions of crime, fear of crime, and satisfaction with police	.42	.50	0	1
4. Conduct a citizen police academy	.55	.50	0	1
5. Patrol officers assigned to specific geographic units	.56	.50	0	1
6. Have a formal community policing unit	.41	.49	0	1
7. Have a community policing mission statement	.67	.47	0	1
8. Have a written community policing plan	.30	.46	0	1
9. Encourage officers to engage in SARA problem-solving	.37	.49	0	1
10. Include problem-solving in officer evaluations	.29	.46	0	1
Intelligence-Led Policing (α = .842)				
11. Training sworn personnel on intelligence-led policing	.23	.42	0	1
12. Train community organizations on intelligence-led policing	.31	.46	0	1
13. Train citizen on intelligence-led policing	.23	.42	0	1
14. Have goals and objectives for intelligence	.45	.50	0	1
15. Share information with the public	.45	.50	0	1
16. Have formal information collection requirements	.34	.47	0	1
17. Have a written intelligence policy	.52	.50	0	1
18. Intelligence is integrated into decision making processes	1.65	.85	0	3
19. Chief supports intelligence-led policing	1.85	.92	0	3
20. Receive intelligence from outside agencies	1.51	1.14	0	3
21. Provide intelligence to outside agencies	1.62	.97	0	3

Table 2. Bivariate Correlations for COP and ILP Measures (n=227)

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	1																				
2	**.325**	1																			
3	.102	**.144**	1																		
4	**.290**	.105	**.451**	1																	
5	**.224**	.003	**.321**	**.259**	1																
6	**.183**	.044	**.385**	**.436**	**.397**	1															
7	**.413**	**.173**	**.348**	**.430**	**.507**	**.394**	1														
8	**.138**	**.216**	**.345**	**.274**	**.335**	**.299**	**.347**	1													
9	**.262**	**.161**	**.369**	**.205**	**.460**	**.237**	**.402**	**.417**	1												
10	**.296**	**.206**	**.394**	**.169**	**.367**	**.250**	**.300**	**.373**	**.587**	1											
11	.039	.002	.051	.004	.002	.041	.060	.106	**.169**	.032	1										
12	.038	.065	.019	.036	.038	.008	.038	.063	.106	.112	**.257**	1									
13	.112	.056	.000	**.134**	.014	.011	.023	.061	.120	.043	**.244**	**.672**	1								
14	.107	.104	.026	.076	.106	.006	.027	.047	.044	.021	**.334**	**.301**	**.240**	1							
15	**.132**	.019	.044	**.183**	.123	.042	.124	.008	.010	.021	**.334**	**.397**	**.430**	**.378**	1						
16	.076	.094	.048	.067	.083	.055	.077	.015	.035	.069	**.396**	**.319**	**.296**	**.431**	**.319**	1					
17	.033	.051	.119	**.221**	.105	.067	.015	.114	.044	.124	**.213**	**.319**	**.246**	**.514**	**.390**	**.254**	1				
18	.022	.130	.040	.001	.043	.043	.056	.050	.022	.049	**.303**	**.291**	**.238**	**.461**	**.420**	**.352**	**.352**	1			
19	.046	.087	.000	.060	.025	.003	.013	.087	.016	.017	**.338**	**.190**	**.190**	**.338**	**.357**	**.337**	**.186**	**.631**	1		
20	.096	.050	.024	.040	.020	.031	.056	.061	.028	.015	**.356**	**.356**	**.335**	**.313**	**.531**	**.405**	**.241**	**.486**	**.384**	1	
21	.065	.010	.035	.109	.010	.028	.055	.033	.024	.033	**.336**	**.325**	**.248**	**.333**	**.488**	**.369**	**.251**	**.456**	**.423**	**.468**	1

Bold = $p<.05$ (2-tailed)

Table 3. COP and ILP Exploratory Factor Analysis Loadings (n=227)

Item	Two Factor Loading		One Factor Loading	
	Factor 1	Factor 2	Factor 1	Factor 2
Community Policing (α = .723)				
1. Train new recruits on community policing	.493		.198	.452
2. Train in-service personnel on community policing	.290		.049	.312
3. Conduct a survey of citizen perceptions of crime, fear of crime, and satisfaction with police	.650		.156	.629
4. Conduct a citizen police academy	.595		.267	.547
5. Patrol officers assigned to specific geographic units	.672		.200	.640
6. Have a formal community policing unit	.601		.147	.577
7. Have a community policing mission statement	.728		.153	.707
8. Have a written community policing plan	.621		.089	.623
9. Encourage officers to engage in SARA problem-solving	.700		.155	.684
10. Include problem-solving in officer evaluations	.660		.172	.637
Intelligence-Led Policing (α = .842)				
11. Training sworn personnel on intelligence-led policing		.572	.532	.250
12. Train community organizations on intelligence-led policing		.617	.610	.079
13. Train citizen on intelligence-led policing		.574	.573	.058
14. Have goals and objectives for intelligence		.656	.647	.123
15. Share information with the public		.724	.727	.060
16. Have formal information collection requirements		.632	.597	.238
17. Have a written intelligence policy		.549	.567	.027
18. Intelligence is integrated into decision making processes		.720	.692	.200
19. Chief supports intelligence-led policing		.626	.599	.194
20. Receive intelligence from outside agencies		.704	.683	.162
21. Provide intelligence to outside agencies		.675	.663	.122

Table 4. CFA Model Fit Results for One- and Two-Construct Models (n=227)

Model	MLM x^2	df	Model Identification [a]	CFI	TLI	RMSEA	SRMR	Loading Range	Between-Factor Correlation
Single Construct	191.995*	125	231 (106)	.954	.922	.049	.037	.006 - .761	---
Two Construct	258.751*	175	231 (56)	.942	.930	.046	.026	.236 -. 725	.059

[a] Model identification = Number of distinct sample moments (Number of distinct parameters to be estimated)

*$p<.001$

Table 5. CFA Estimates for One- and Two-Construct Structural Models (n=227)

Item	Single Construct Model Estimates	Two Construct Model Estimates	
	Construct 1	Construct 1	Construct 2
Community Policing			
1. Train new recruits on community policing	.151	.464	
2. Train in-service personnel on community policing	.036	.236	
3. Conduct a survey of citizen perceptions of crime, fear of crime, and satisfaction with police	.017	.569	
4. Conduct a citizen police academy	.137	.549	
5. Patrol officers assigned to specific geographic units	.057	.623	
6. Have a formal community policing unit	.006	.527	
7. Have a community policing mission statement	.051	.725	
8. Have a written community policing plan	.073	.537	
9. Encourage officers to engage in SARA problem-solving	.039	.618	
10. Include problem-solving in officer evaluations	.034	.617	
Intelligence-Led Policing			
11. Training sworn personnel on intelligence-led policing	.611		.524
12. Train community organizations on intelligence-led policing	.430		.519
13. Train citizen on intelligence-led policing	.407		.468
14. Have goals and objectives for intelligence	.654		.571
15. Share information with the public	.761		.700
16. Have formal information collection requirements	.683		.579
17. Have a written intelligence policy	.356		.453
18. Intelligence is integrated into decision making processes	.473		.654
19. Chief supports intelligence-led policing	.497		.559
20. Receive intelligence from outside agencies	.758		.697
21. Provide intelligence to outside agencies	.611		.661