UNDERSTANDING GANGS: DEVELOPING AN EPISTEMICALLY PLURALIST FRAMEWORK FOR GANG RESEARCH

BY

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Abstract

Gangs are associated with a range of social, criminal, and economic harms. Yet, after almost a century of dedicated research, the development of effective and ethical responses to such harms has proven difficult. Recent attempts to address this have seen the establishment of the Eurogang Program; an international group of gang researchers and practitioners coordinated around a consensus definition of gangs. Since its recent inception, the Eurogang Program has quickly become the dominant framework of research and practice. While much is being staked on the success of the Eurogang Program, the suitability of such a programme for progressing gang research is yet to be thoroughly examined.

In this thesis I therefore conduct a meta-theoretical examination of the state of gang research and particularly the Eurogang Program and its associated practices. By examining the frameworks underpinning gang research and drawing upon insights from the philosophy of science, I characterise the Eurogang approach as an attempt to coordinate gang research through means of unification (i.e., through the privileging of particular research perspectives and strategies to achieve coordination through consensus). I draw attention to some major limitations of these unificatory attempts and emphasise how the consensus Eurogang definition does not appropriately set up researchers to be able to develop the various kinds of conceptual and theoretical understandings of gangs required to improve gang policy and practice.

Instead, I make the case for a framework known as epistemic pluralism, in which researchers do not pursue consensus but rather cultivate multiple systems of knowing to serve a variety of different research purposes. After establishing the benefit of epistemic pluralism, I examine how such a framework may be applied to the gang field. This involves specific discussion of the various aims of gang researchers and the roles that conceptual strategies (i.e., definitional, classificatory, and explanatory approaches) play in providing the pragmatic

and epistemic (i.e., knowledge-related) insights required to meet them. These discussions offer a novel perspective on the roles of conceptual strategies in the process of knowledge production and justification.

Having established the general kinds of strategies required for different research purposes, I then consider some *specific* examples of conceptual strategies that are relevant to meeting the various needs of gang researchers. This takes the form of the *Conceptual Framework for Gang Research* (CFGR). This novel approach offers greater opportunities for more meaningful kinds of research coordination and maximises the likelihood of establishing the conceptual and theoretical understandings of gangs required to improve gang policy and practice. The value of this thesis as a case study for pursuing epistemic pluralism in the sciences is also discussed.

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Introduction

Over the better part of the last century, gangs have become a major focus for forensic and criminological researchers. The academic spotlight has become fixated on gangs due to what is often referred to as the "gang problem", i.e., the observed relationship between gangs (and gang membership) and a range of negative social, economic, and health related outcomes – such as crime, victimisation, homelessness, low educational and employment achievement, and mental health difficulties (Chu et al., 2012; Pyrooz, 2014; Pyrooz et al., 2016; Wood et al., 2017; Wu & Pyrooz, 2016). Despite the severity of harms constitutive of the gang problem, there is still much ground to be covered in the development of effective, reliable, ethical, and evidence-based responses (Bjerregaard, 2015; Boxer, 2019; Decker, 2016; Klein, 2001; Mallion & Wood, 2020b; McDaniel & Sayegh, 2020; Pyrooz & Decker, 2019; Roman, 2021; Thornberry et al., 2018).

The Eurogang Program is an international network of gang researchers and policy makers, coordinated around a consensus definition of gangs (i.e., the Eurogang definition) with the overarching aim of developing evidence-based understandings of gangs and effective responses to gang harms (Weerman et al., 2009). Since its inception, the Eurogang Program has become what is arguably the dominant programme of gang research, and the Eurogang definition is currently the most widely used definition of gangs by researchers and policy makers alike (Sanders, 2019).

With the high stakes placed upon the success of the Eurogang Program for progressing gang research, any potential concerns with the Program should be examined critically. In recent years, a number of critiques have been levelled at the Eurogang Program and its practices (e.g., the Eurogang definition, positivist/empiricist foundations, over-identification of gang members; Aldridge et al., 2012, 2013; Hagedorn, 2015; Hallsworth & Young, 2008; Medina et al., 2013; Rodríguez et al., 2017; Smithson et al., 2012; Van

Hellemont & Densley, 2021). Further, the Eurogang Program is an example of an attempt to coordinate researchers through means of *unification*, i.e., collaboration through the establishment of consensus concepts, definitions, methods, methodologies, and/or explanations (Friedman, 1974; Kitcher, 1981, 1989; Schurz, 1999; Schurz & Lambert, 1994). In the philosophy of science, unifying frameworks have received considerable critique with respect to their ability to facilitate scientific progress (Cartwright, 1983; Chang, 2012; Dupré, 1993; Giere, 2006; Kellert et al., 2006; Longino, 2013; Massimi & McCoy, 2020; Mitchell, 2003; Potochnik, 2017; Ruphy, 2016). For these reasons, I contend that there is clear value in examining the suitability of the Eurogang Program as an approach to organising gang research, as well as drawing upon the lessons learned in other domains that have faced similar difficulties.

Argument and Structure of this Thesis

The purpose of this thesis is to conduct a meta-theoretical examination of the state of gang research, with particular emphasis on determining the most appropriate scientific framework to guide research to inform effective and ethical responses to gang-related problems. My overarching argument is that the current trend towards unification, as exemplified by the Eurogang Program, is unlikely to be fruitful for developing the understandings of gang-related phenomena required to achieve such objectives. Instead, I make the case for an alternative approach to collaborative gang research based on *epistemic pluralism* (i.e., a meta-theoretical approach to cultivating a multiplicity of "systems of knowing", Chang, 2012) and examine the roles and relationships of *conceptual strategies* (i.e., definitional, classificatory, explanatory strategies) for developing understandings of phenomena under such a framework. This is followed by the development of the *Conceptual Framework for Gang Research* to provide a feasible alternative to pursuing collaborative gang research.

In the opening three chapters of this thesis, I establish why a meta-theoretical examination of gang research is warranted. The first chapter begins with a discussion of the "gang problems" which have attracted attention from researchers, policy makers, media, and the public alike. These discussions centre on crime, victimisation, and other largely negative health, social, and economic outcomes commonly associated with gangs and gang membership. I will highlight that attention has been turned to gangs due to the variety and severity of negative outcomes considered to be correlated with, compounded, and caused by gangs and gang membership.

The second chapter examines some of the major responses to these gang problems and discusses their effectiveness in addressing gang-related harms by drawing upon the findings of relevant meta-analyses and reviews. Discussions specifically focus on evaluations of gang legislation, policing practices, correctional practice, and youth prevention/intervention approaches. The take home message of this chapter is that despite the existence of a vast array of responses to gang harms, there is mixed evidence for their effectiveness, with a noticeable dearth of high-quality, evidence based, and ethical strategies for addressing gang-related harms.

Having outlined both the need to address gang-related harms and the mixed efficacy of contemporary responses to gang problems, the third chapter explores some of the general problems with gang research that may be affecting our ability to inform and develop effective and ethical responses. Issues pertaining to the definition and measurement of gangs/gang membership and the establishment of causal understandings of gang occurrences are considered in detail. I will discuss how such issues are likely to have affected research progress and why such issues require addressing.

In the fourth chapter I turn my attention to a contemporary development intended to facilitate a solution to the kinds of issues raised in the previous chapters. Namely, the

Eurogang Program of research. I discuss the intended purpose of the Eurogang Program including its major aims of facilitating comparative and collaborative empirical research into gang occurrences, and some of the advancements it has made in doing so. In discussing these aspects of the Eurogang approach, I describe how the Eurogang Program intends to progress gang research, i.e., with a set of consensus definitional and methodological strategies to establish an empirical research base. As part of this I introduce the Eurogang definition, and some of the research instruments intended to supplement it, as well as the Maxson-Klein Typology of Gangs (Klein & Maxson, 2006; Maxson & Klein, 1995).

Given the centrality of the Eurogang definition to the Eurogang Program's overall coordinating approach, in chapter five I draw upon my work in Wegerhoff et al. (2019) to conduct a conceptual examination of the Eurogang definition's suitability for progressing gang research. I build upon previous critiques of the Eurogang definition from within gang research and analyse the kind of definitional approach being undertaken based on insights drawn from developments in the philosophy of science. I examine some of the core conceptual assumptions underlying the production of the definition as well as discussing its construct validity and explanatory utility. I conclude that, in its current form, the Eurogang definition demonstrates poor construct validity and explanatory utility, due to the inclusion of normative criteria (e.g., criminality) and the form the definition itself takes (i.e., a necessary and sufficient conditions approach). I will emphasise how these properties render the definition unsuitable for theoretical purposes and as the basis for addressing the problems associated with gang research and practice.

I then propose a solution intended to better serve researchers in developing explanations of gang-related phenomena. Namely, I argue that – for theoretical purposes – it is necessary to consider *groups* (and *group phenomena*) as the target of explanation. I draw on the work of Thagard (2019a, 2019b) in the philosophy of science to propose a three-tiered

approach to conceptualising groups for the purpose of explanation. The three-tiered approach does not rely on drawing sharp definitional boundaries to depict an object of study, and thus better captures the nuance of a concept. I demonstrate what this approach may look like and then apply it to a specific gang exemplar to demonstrate its utility and divergence from current approaches.

Having proposed an alternative method of conceptualising gangs for explanatory purposes, in chapter six I consider what the development of this novel strategy means for gang research. Rather than simply arguing that my proposed conceptual approach should replace the Eurogang definition, I direct my attention more broadly to the overarching philosophical frameworks that guide scientific development, with specific emphasis on the implications that such frameworks have for accommodating novel advances. I argue that gang research is currently driven by an impetus towards *unification*. Under such a framework, the three-tiered approach and Eurogang approach would be in direct competition with each other, where one should be maintained, and the other discarded. The implications of this kind of competition are discussed with particular emphasis on how such ideals are likely to have contributed to a number of the difficulties affecting gang research.

Within philosophy of science, a comparatively novel approach known as *epistemic pluralism*, has received considerable endorsement as an alternative to unification. Epistemic pluralism is generally considered to be an approach to the structuring of scientific research that recognises the need to actively cultivate a plurality of "systems of knowing" to maximise the production of successful and useful knowledge (Chang, 2012). Unificationist frameworks of science promote a single "best" approach to investigating or understanding a target system (e.g., through preferred methodologies, consensus definitions and typologies, pursuit of unified theories). Conversely, epistemically pluralist positions maintain that any single approach to depicting, describing, classifying and/or explaining features of a phenomenon

will not be sufficient to meet all the possible epistemic (i.e., knowledge-related) and practical demands that researchers may have when investigating that phenomenon (Chang, 2012). I discuss how the differences between epistemically pluralist and unificatory positions influence scientific research and, in doing so, contend that an epistemically pluralist approach to coordinating gang research is likely to better serve the purposes of gang researchers than a unificatory approach.

In chapter seven I consider how such an epistemically pluralist approach might be pursued within gang research. Drawing particularly on my work in Wegerhoff et al. (2021), I present my own model of epistemic pluralism which emphasises the specific considerations that occur when determining and justifying the selection of conceptual strategies (i.e., definitions, classifications, explanations) for different purposes. I provide a detailed explication of how research tasks constrain conceptual strategies and how conceptual strategies work together to provide task-relevant insights.

These discussions begin with an examination of the purposes for which gang research is undertaken (i.e., *research tasks* in gang research). I endorse a teleological (i.e., goal-directed) framing of gang research tasks as doing so emphasises the unique practical and epistemic demands (i.e., unique *conceptual foci*) being pursued by researchers. In demonstrating how different conceptual strategies work together to capture the conceptual focus of a task, I explicitly discuss the interconnecting roles of *definitional*, *classificatory*, and *explanatory strategies*.

I then demonstrate how *definitional strategies* apply the abstract *conceptual focus* of a research task more concretely in relation to a target system (e.g., gangs) and I outline how definitional strategies direct research attention towards the aspects of a system that are most likely to be worth investigating for a specific purpose. Next, I explain how *classificatory strategies* are used to "zoom in" on the descriptive focus (captured at the definitional stage)

by identifying *classes with unique causal and/or compositional patterns*. I particularly focus on how classificatory strategies can be used to detect descriptive and explanatory patterns within a system that are of greatest relevance to drawing the insights required to achieve the practical and knowledge related aims of that task. Finally, I examine how *explanatory strategies* serve to account for the causal/compositional differences across the identified classes and ultimately provide the insights required to meet the needs of the research task.

In chapter eight I build upon the discussions of the previous chapter by considering the kinds of contemporary strategies in both gang research and the behavioural, psychological, and social sciences more generally that can serve the identified research tasks. The purpose of doing so is to present a practical example of what a pluralistic framework for gang research may look like. This takes the form of the *Conceptual Framework for Gang Research* (Wegerhoff et al., 2020). Promising definitional, classificatory, and explanatory strategies are put forward for the tasks of identification, prevention, risk-management and treatment/intervention. By clearly endorsing a pluralist approach to definition, classification, and explanation in gang research, and by providing a framework to coordinate these pluralistic efforts, it is expected that researchers will be able to better tailor their strategies to the needs of their investigations. Further, researchers can ascertain a better understanding of how the strategies used within one particular domain of research relate to those within other domains, and therefore what the extent of the applicability of their different research practices are. By highlighting the different roles of different strategies in gang research, it is anticipated that researchers can adopt a more meaningfully coordinated approach to research than that previously offered under the Eurogang's "one-size-fits-all" unified approach.

In chapter nine I discuss the overarching contributions of this thesis both to gang research and beyond. In doing so, I consider some avenues for future research that builds on the contributions of this thesis and draw some final conclusions.

Chapter One: The "Gang Problem"

In this chapter I begin with a discussion of some of the major reasons gangs have become a central focus of academic research as well as attracting considerable attention from policy makers, the justice system, media, and the public alike. Specifically, I focus on the "gang problem", which is framed in relation to the criminal, social, psychological, and economic correlates of gangs and gang membership. The purpose of discussing gang problems is to contextualise the practical importance of gang research and the developing of accurate conceptual and theoretical understandings of gangs.

It is important to note that much of the research on the gang problem (and thus the findings discussed in this chapter) has relied upon a variety of different gang definitions and definitional approaches (discussed further in chapter three). As such, while I have given a loose definition of the gang problem, I do not present a more specific definition of gangs themselves. It is my contention that doing so would risk giving the impression that the findings discussed here relate to one specific construct, rather than being representative of an overarching domain of research (potentially investigating a range of constructs). It has also been noted that the size of the gang problem changes depending on the kinds of definitions and methodologies used to measure it (Matsuda et al., 2012; Maxson & Klein, 1990, 1996), as such the below discussions should be taken as indicative, rather than precise.

This chapter begins with a brief discussion of the prevalence of gangs and gang member engagement in criminal and delinquent activity before discussing two specific kinds of criminal activity: violence and drug dealing/distribution. This is followed by consideration of some of the harms associated with gang membership including experiences of victimisation, mental health difficulties, and interruptions to important life-course transitions (e.g., educational and employment attainment). This is followed by a discussion of the estimated economic impact of gang activity.

1.1. Prevalence

Gang research began within the United States at the beginning of the 20th century and almost a century later gangs have been identified on every commonly populated continent in the world (Covey, 2010). Despite the widespread identification of gangs, ascertaining estimates of their prevalence has faced a number of challenges, largely stemming from the various definitions used across researchers and stakeholders (e.g., law enforcement, criminal justice agencies etc.) and across contexts (e.g., in different districts, states, countries, continents).

Within the United States, the most recent National Youth Gang Survey (NYGS: a representative survey of US law enforcement agencies about the gang activity in their areas) suggested the existence of approximately 30,700 gangs and 850,000 gang members throughout 3,100 jurisdictions with gang problems, as of 2012 (Egley et al., 2014). However, these estimates have been considered low by some. For example, Pyrooz and Sweeten (2015) utilised data from the National Longitudinal Survey of Youth 1997 (a representative survey of youth born between 1980-1984) and data from the 2010 US Census to present a national estimate of gang members. They estimated that approximately two percent of all youths between the ages of five and 17 years were gang affiliated, placing total estimates at about 1.06 million juvenile members (Pyrooz & Sweeten, 2015). This number is evidently much larger than the NYGS estimate whilst only attempting to count *juvenile* gang members (which only made up approximately 40% of the NYGS estimates). In order to update estimates of gang prevalence rates in the United States, Knox et al. (2019) extended the estimates made by Pyrooz and Sweeten according to historical year-to-year growth rates of gangs and the proportion of adult to juvenile gang members that had been observed across several different studies. Based on conservative adult to youth rations, the authors estimated the existence of approximately four million gang members in the US as of 2019.

A number of studies have also sought to estimate the prevalence of gangs outside of the United States. One of the largest of these was conducted by Gatti et al. (2011). Gatti and colleagues drew upon survey data collected from 40,678 7th-9th grade students in 62 cities in 30 different countries across Europe and Latin America (and two cities from the US). The findings of this study suggested that approximately 4.4% of these youths were gang members, with specific prevalence estimates ranging from less than 1% to just over 16% depending on the country.

In Aotearoa-New Zealand, the National Gang List – an intelligence database compiling patched and prospected gang members across police districts – has 8175 recorded gang members as of August 2021.[1] However, as stated by Aotearoa-New Zealand gang expert Jarrod Gilbert in an interview with Radio New Zealand (RNZ), it is difficult to get an accurate estimate based on such an account as these lists typically reflect police intelligence and are not an active count of gang members (RNZ, 2021). In fact, Gilbert suggests that the actual number of gang members may be closer to around half the number recorded on the National Gang List (RNZ, 2021). As of July 2014, the average age of the gang members included in this database was approximately 40 years old, indicating that it primarily focuses on *adult* gang members (Ministry of Social Development, 2016).

1.2. Crime and Delinquency

One of the major motivations for researching gangs has been to understand and address the relationship between gangs and crime. Gang members have been consistently identified as engaging in greater levels of offending and delinquency than non-gang members, including highly delinquent non-gang individuals (Battin et al., 1998; Chu et al., 2012; Craig et al., 2002; Curry et al., 2002; Decker et al., 2013; Krohn & Thornberry, 2008;

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[1] Simeon Brown to the Minister of Police Tables for Written Question 44841 (18 October 2021). https://www.parliament.nz/resource/en-NZ/WQ_44841_2021/bafa7d30002f7c7389bb91f40da759dbd5ff9b7a

Pyrooz et al., 2016; Spergel, 1990; Thornberry, 1998). It has also been demonstrated that rates of antisociality and offending fluctuate in accordance with gang membership status, i.e., increase with membership and decrease following gang-leaving (Augustyn & McGloin, 2021; Bjerk, 2009; Curry et al., 2014; Gatti et al., 2005; Gordon et al., 2004; Krohn & Thornberry, 2008; Melde & Esbensen, 2013; Peterson et al., 2004; Pyrooz et al., 2016; Sweeten et al., 2013; Thornberry et al., 1993; Thornberry et al., 2003). Accordingly, properties and processes specific to gang membership are characterised as being responsible for the elevated relationship between gangs and crime, positioning gangs as qualitatively distinct from other kinds of groups (Decker, 1996; Decker et al., 2008; Klein, 1995, 2006; Klein & Maxson, 2006; Melde & Esbensen, 2013). The purported criminogenic impact of gangs has also been documented to affect non-gang members, where association with gangs without membership has been linked with increases in antisocial and criminal outcomes (Curry et al., 2002; Pyrooz et al., 2013) and perpetration of social harm (Wood et al., 2020).

In addition to perpetrating disproportionate levels of crime, gang members have also been reported to engage in a wide variety of offending behaviours including violence, sexual offending, property crime, and substance distribution (Klein, 1971, 1995; Klein & Maxson, 2006; Pyrooz et al., 2016). Klein (1971, 1995) has termed this pattern of generalist antisociality as "cafeteria-style offending" where gang members do not typically specialise in terms of offence types (e.g., violent gangs, drug gangs), but rather engage in a variety of antisocial pursuits.

1.3. Violence

Violence is often considered to be one of the most prototypical characteristics of gangs and gang membership (Decker, 1996; Decker & Van Winkle, 1996; Felson, 2006; Klein et al., 2006; Melde & Esbensen, 2013; Van Hellemont & Densley, 2021). Violence is suggested to play a role in many aspects of gang life, and gangs themselves are commonly

considered to be one part of a wider culture of violence (Durán, 2013; Hagedorn, 1998; Lauger, 2012; Rios, 2011; Vigil, 2003). Firstly, violence has been implicated as a motivational factor where individuals fearing victimisation may join gangs for protection (Melde et al., 2012; Peterson et al., 2004; Pyrooz & Decker, 2011; Pyrooz et al., 2014). Some gangs have been found to engage in initiation and exit rituals where members are "beaten in/out" or encouraged to commit acts of violence to demonstrate their commitment and suitability for the group (Bolden, 2013; Decker & Van Winkle, 1996; Pyrooz & Decker, 2011; Vigil, 1996). Violence is also considered to be an important strategy for material and symbolic gain. For instance, as part of acquiring and defending gang turf (Sánchez-Jankowski, 1991), building reputation, status, and respect (Decker, 1996; Decker & Van Winkle, 1996; Melde et al., 2009; Wood, 2014), and in the commission of other offending, such as drug-dealing or robbery (Fagan, 1989; Klein et al., 2006). Where conflicts between gangs arise, violence – and particularly retaliatory violence – is considered to be a common occurrence, where transgressions (real or perceived) are responded to with exaggerated severity (Decker, 1996; Decker et al., 2013; Katz et al., 2011; McGloin & Collins, 2015). It is also apparent that media depictions of gangs tend to emphasise stories relating to violence (Esbensen & Tusinski, 2007; Thompson et al., 2000; Perrone & Chesney-Lind, 1997). Finally, victimisation and the effects of the violent gang lifestyle have been identified as commonly cited reasons for leaving gangs (Pyrooz & Decker, 2011).

It is therefore perhaps unsurprising that gang members are reported to engage in greater levels of violence than non-gang members who use violence (Barnes et al., 2010; Chu et al., 2012; Esbensen, Winfree et al., 2001; Gatti et al., 2005; Pyrooz et al., 2016; Wood et al., 2020) and neighbourhoods with higher gang presences typically experience greater rates of violence than those with fewer gangs (Huebner et al., 2016; Klein, 1995; Robinson et al., 2009). Further, gang violence is typically considered to be more serious than nongang

violence (Bjerregaard, 2010; Melde et al., 2009; Pyrooz et al., 2016), with gang members disproportionately involved in homicide statistics (Decker & Curry, 2002). In fact, even though decreasing homicide trends have been observed across several major US cities, gang-related homicides have often remained proportionally consistent (Egley et al., 2012; Valasik et al., 2017).

One of the major contributors to the severity/lethality of gang violence is the high rate of weapon ownership and usage among gang members (Chu et al., 2012; W. Miller, 1975). Gangs have been suggested to facilitate access to a range of weapons, including illegal firearms (Cook et al., 2007; Cook et al., 2014; Hureau & Braga, 2018; Roberto et al., 2018) and gang members are more likely to carry weapons than non-gang youth (Bjerregaard & Lizotte, 1995; Comer & Connolly, 2020). Historical increases in rates of gang offending within the US have also been attributed to changes in weapon usage and gangs' adoptions of firearms (Block & Block, 1993; Fagan & Wilkinson, 1998; Hutson et al., 1995).

Gang violence has serious impacts not only on those directly involved but also on those that live in the communities where gangs are based. Living in violent neighbourhoods and exposure to gang violence have both been found to contribute to increased levels of fear of victimisation and symptoms of poor mental health among young people (e.g., depression, anxiety, post-traumatic stress disorders, conduct disorders, Aneshensel & Sucoff, 1996; Dupéré et al., 2012; Kelly et al., 2012; Fowler et al., 2009). Further, while gang violence is often directed at other gang members, it is not *exclusively* so, and those in gang areas are at increased risk of being victimised by such violence whether intentional or otherwise (e.g., in drive-by shootings where innocent bystanders are often targeted or hurt/killed unintentionally, Hutson et al., 1996). As such, it has been reported that youths in gang areas often avoid certain locations for fear of being victimised or caught up in gang violence or being targeted by law enforcement who perceive them as gang members (Ralphs et al., 2009).

Another dimension of gang violence is engagement in sexual offending. The relationship between gangs and sexual violence is understudied and faces particular research difficulties due to the underreporting of both sexual violence and gang crime (Beckett et al., 2013; Berelowitz et al., 2013; Coy et al., 2013), potentially contributing to claims that the sexual exploitation of girls in gangs is overstated by researchers (e.g., Howell, 2007; J. W. Moore & Hagedorn, 2001). Despite these barriers, several studies that have investigated the relationship between gangs and sexual violence have identified patterns of sexual assault, exploitation, and coercion perpetrated by young male gang members against female gang-affiliates (Beckett et al., 2013; Berelowitz et al., 2013; Brookings, 2013; Coid et al., 2020; Coy et al., 2013; Dickson-Gomez et al., 2017; Wesche & Dickson-Gomez, 2019; Quinn et al., 2019).

1.4. Drug Dealing/Distribution

Like many of the relationships identified in this chapter, the relationship between gangs and drugs is a complex one. This is due not only to differences in conceptualisations and definitions of gangs across researchers, but also in terms of the different contexts in which such research has been undertaken and how the relationships between gangs and drug distribution may have changed over time. Two main perspectives on the gang-drug distribution relationship have been identified, the instrumental-rational perspective and the informal-diffuse perspective (Bjerregaard, 2010; Decker & Van Winkle, 1996; Decker et al., 2008; Hagedorn, 1994; Skolnick et al., 1990). The instrumentalist-rational view depicts gangs as highly organised criminal groups that make their money through the formalised distribution of illicit substances and whose profits are then reinvested into the group. The informal-diffuse perspective views gangs as far less organised and whose involvement in drug distribution is primarily reflective of the activity conducted by individuals rather than the gang as a whole.

US gang research around the 1980's and 1990's, particularly with respect to the emergence of the crack cocaine epidemic, highlighted a number of examples that supported the first perspective of organised gangs engaging in drug distribution (Padilla, 1992; Sánchez-Jankowski, 1991; Skolnick et al., 1990; C. S. Taylor, 1990). However, this is not to say *all* drug distribution was organised, less organised distribution was also observed (Decker & Van Winkle, 1996; Fagan, 1989; Hagedorn, 1998; see Decker, 2001a; Fleisher, 2015). Yet while specialised drug dealing gangs may exist, Klein (1995) contends that the number of US gangs that might be characterised as organised corporate drug-dealers is typically overstated by media and law enforcement. This view has been similarly echoed by researchers in other contexts (e.g., in Central and South American gang research; Rodgers & Baird, 2015).

Examining the longitudinal relationship between gang membership and drug distribution, Bjerregaard (2010) found that gang membership was only weakly associated with the distribution of illicit substances, suggesting that involvement in drug distribution was not determined by gang status. It was found, however, that the relationship between drug sales and violence was greater for nongang individuals than gang members, which was taken as support for the notion that gang membership may have indirect benefits on drug distribution (e.g., protection). These findings are largely corroborated in reviews of gang drug distribution literature, which suggest that the majority of higher quality research into the relationship between gang organisation and drug distribution appears to support the notion that gangs are disorganised and that drug dealing is not a result of gang membership (Decker & Pyrooz, 2013, 2015; Fleisher, 2015). While these findings are taken as indicative of the general gang landscape, it is largely accepted that gangs vary in their level of organisation and engagement in illegal activity (Klein & Maxson, 2006) and gangs are likely to appear on a continuum between the organised and disorganised perspectives (Decker & Pyrooz, 2015).

In the United Kingdom, one of the more recent iterations of the drug-gang relationship question relates to *county lines* activities, in which gangs are said to have matured into more profit driven organisations which have gang members travel to different counties to access untapped heroin and crack cocaine markets (see Coomber & Moyle 2018; McLean et al., 2020). Central to such a trend is the practice of *cuckooing*, whereby individuals involved in the distribution of illicit substances occupy a vulnerable individual's residence as a means of covertly engaging in criminal activity (Spicer et al., 2020). The current debate centres on the extent to which such practices are considered *gang* behaviour; where some have characterised gangs as responsible for this phenomenon, others have highlighted how this attribution represents a common trend within gang research and public commentary of scapegoating gangs for larger social problems (Hallsworth & Young, 2008; McLean et al., 2018; Spicer, 2021).

1.5. Individual/Life-Course Harms

In addition to being overrepresented in crime perpetration statistics, gang members are also more likely to be the victims of crime and violence than non-gang members (Barnes et al., 2012; Kubik et al., 2016; Peterson et al., 2004; T. Taylor et al., 2007; T. Taylor et al., 2008). Pyrooz et al. (2014) found support for the notion that gang membership itself uniquely contributes to the victim-perpetrator status of gang members, after controlling for a number of possible confounds (e.g., low self-control, adherence to street codes, routine activities). Involvement in delinquency and gang crime has also been indicated to mediate the relationship between gang membership and victimisation (Katz et al., 2011; Wu & Pyrooz, 2016). At the severe end of the victimisation spectrum, Pyrooz et al. (2020), while investigating the mortality rates of young black males aged 15-35 in St. Louis, found that gang members were at three times greater risk of mortality than non-gang members and most of these deaths were due to homicide or other injury. Beyond physical injury and

victimisation, gang membership may also have some unanticipated health risks. For instance, in Los Angeles it was observed that many gang members did not adhere to "shelter in place" orders intended to reduce the spread of COVID-19, placing them at risk of contracting and spreading the disease (see Brantingham et al., 2021).

The mental health outcomes of gang membership have been considerably less studied than the relationship between gangs and crime, with perhaps the exception of gang member substance use/abuse (e.g., Bjerregaard, 2010; Fleisher, 2015; Pyrooz et al., 2016; Sanders, 2021). It is expected however that exposure to crime and violence – as both perpetrators and victims – is likely contribute to a range of negative behavioural, social, and psychological outcomes (Beresford & Wood, 2016). Accordingly, a number of recent studies have sought to provide insight into the relationship between gangs and mental health outcomes. It is important to note that the specific foci of these studies have differed and some of the findings across these studies have been mixed. However, this is most likely due to differences in methodologies, samples, and the early stages of this kind of research (for a discussion see Frisby-Osman & Wood, 2020 and Osman & Wood, 2018). Generally, recent work has suggested that gang membership may be associated with numerous negative mental health outcomes including depression, anxiety, post-traumatic stress, perpetration trauma, hostility, paranoid ideation, psychosis, fear of victimisation, antisocial personality disorder, self-harm, suicide attempts and completions, pathological gambling, and substance dependence (Baćak et al., 2021; Coid et al., 2013; Connolly & Jackson, 2019; Frisby-Osman & Wood, 2020; Gaston et al., 2021; Kerig et al., 2016; Watkins & Melde 2016; Wood et al., 2017; Wood et al., 2020).

Many gang members join these groups at a very young age (often in early teens with age-graded prevalence estimates peaking at approximately 14 to 15 years old, Pyrooz, 2014; Pyrooz & Sweeten, 2015). A major concern, therefore, is the cumulative impact that gang

membership may have on future life outcomes and healthy life course transitions. It has been indicated that individuals with histories of gang membership are more likely to have worse short-term and long-term educational, employment, financial, relational, and parental outcomes than individuals who have never joined gangs, even after leaving their gang (Augustyn et al., 2014; Gilman et al., 2014; Krohn et al., 2011; Melde & Esbensen, 2011; Thornberry et al., 2003; Pyrooz, 2014). Concerningly, such outcomes have been observed even for those with comparatively brief periods of gang membership (i.e., six months or less), but are worse for those with longer periods of membership (Krohn et al., 2011).

1.6. Economic Cost

Alongside the humanitarian costs of gang crimes are the accompanying economic costs. It is difficult to ascertain an estimate of such costs particularly due to discrepancies in the reporting of gangs/gang crime (see Matsuda et al., 2012; Maxson & Klein, 1990, 1996). Further, many studies tend to focus on the cost of particular kinds of harm (e.g., gun violence, youth violence).

One report that looked specifically at gang violence was that conducted by The Vera Institute of Justice (2011). This report sought to approximate the annual criminal justice and medical costs of gang violence in Los Angeles. Gang-related violence was labelled as such by the responding governmental agencies (with the authors of the report noting that each agency defined gang-involvement differently). Criminal justice costs were estimated based on the costs of arresting and processing gang members through the justice system (e.g., costs to police, attorneys, courts, corrections, probation). Annual criminal justice costs to the city, county, and state were estimated to be USD$1.145 billion. Medical costs were calculated based on the costs incurred when treating *gunshot* injuries that were deemed to be gang perpetrated and were estimated to be USD$45.3 million per year.

Concerningly, such estimates are likely to only represent a fraction of the economic costs of gang activity. In England and Wales, a recent *Youth Violence Commission Report* sought to develop a thorough estimate of the economic and social costs of serious youth violence (Irwin-Rogers et al., 2020). Within this study serious youth violence was considered to be any offence committed by people aged 24 or under that involved the use of a knife or gun. Estimated costs were calculated for the following: *police* (e.g., investigating and dealing with youth violence), the *criminal justice system* (e.g., prosecution, courts, jury service, legal aid, probation, prison services, youth justice board), *health services* (e.g., ambulance, medical procedures, counselling), *physical and emotional harm* (e.g., reduction in quality of life, cost of physical and emotional injury), *victim services* (e.g., support for victim and victim's family and friends, opportunity costs for those volunteering to deliver victim services), and *lost economic output* (e.g., loss of productivity for victims, time spent off work). For the year 2018/19 alone, costs were calculated to total at least £700 million using officially reported statistics and around £1.3 billion when accounting for unrecorded youth violence (Irwin-Rogers et al., 2020).

Of the adjusted amounts, police costs accounted for approximately £84 million, criminal justice system costs for £181 million, health services for £67 million, victim services for £554,000, lost economic output for £177 million, and physical and emotional harm for £814 million. Together the police, criminal justice, and health service costs account for around £333 million of the £1.3billion total estimate. Even if the physical and emotional harm cost estimates totalling £814 million are removed from this consideration (as they are primarily intended to capture social costs rather than direct economic costs), police, criminal justice, and health costs still only account for 65% of the overall costs of serious youth violence. Based on such discussions it may therefore be contended that the kinds of estimates discussed in relation to gang-specific violence by the Vera Institute of Justice are on the

conservative side. Then again, given the high prevalence/labelling of gangs and gang homicides in Los Angeles compared to many other cities (Egley et al., 2012), Los Angeles may not be the most representative city. In any case, the current estimates of the economic costs of gang violence should be considered alarming.

1.7. Chapter Summary

It is apparent that gangs and gang membership are associated with a variety of negative outcomes. From overrepresentation in criminal and delinquent statistics, to experiencing disproportionate rates of victimisation and disruptions to important life-transitions. As such, it is of utmost importance that effective responses to gang problems are developed. Further, such approaches must recognise the victim-perpetrator overlap of gang involvement and be able to effectively address a range of difficulties associated with gangs and gang membership.

Chapter Two: Responses to Gang Problems

This chapter discusses the efficacy of the strategies that stakeholders currently utilise to address gang-related problems. The efficacy and ethical suitability of gang legislation, policing practices, correctional practice, and youth prevention/intervention approaches are all examined by drawing upon the findings of reviews and meta-analyses in these areas. In general, there appears to be a consistent pattern across each of these domains indicating that while some responses to gangs appear promising, the evidence is largely mixed. As such, reliable, ethical, and evidence-based responses to gang problems are yet to be established.

2.1. Laws/Legislation

Internationally, numerous legislative approaches have been introduced in an attempt to alleviate gang-related harms. The purpose of such responses has been to facilitate the suppression of gangs and gang activity as well as deter potential members from joining gangs and current members from offending (Bjerregaard, 2015). While these legislative responses take many forms, their aims are typically similar, serving to facilitate the justice system in prosecuting suspected gang members, increase legal penalties for participation in gang-related offences, introduce legal punishments for gang membership, or displays of gang membership, itself, and/or provide police with additional powers and resources in policing suspected gang members (Bjerregaard, 2015). Examples of such legislations are presented below.

Legislative approaches that facilitate the justice system in prosecuting suspected gang members include joint enterprise, common purpose, or shared responsibility doctrines wherein individuals who are considered to have assisted or encouraged an offence can be charged as primary perpetrators, regardless of their actual role in the offending, i.e., secondary liability (Crown Prosecution Service, 2018; McClenaghan et al., 2014). Policies which increase legal penalties for participation in gang-related offenses include gang

enhancement statutes such as the US Street Terrorism Enforcement and Prevention (STEP) Act, wherein individuals convicted of an offence can have the severity of their sentence escalated based on their gang membership status (Johnson et al., 1995; Yoshino, 2008). Similarly, the US STEP Act and other anti-gang statutes introduce legal punishments for gang membership, displays of gang membership, and participation in gang activities (e.g., recruiting individuals into gangs), and allow restrictions against behaviours such as the wearing of "gang apparel" or association with "known" gang members (see Youth Justice Coalition, 2012; Pitts, 2014). Civil Gang Injunctions (CGIs) are an example of a policy approach intended to provide police with additional resources and powers when policing suspected gang members (Caldwell, 2010; Hennigan & Sloane, 2013; see also Bjerregaard, 2015; and Wood et al., 2016). CGIs act as "restraining orders" against gangs or gang members and can be used to prevent particular gangs/gang members from frequenting specific locations or engaging in a range of legal (e.g., associating with other gang members, making particular hand gestures, riding bicycles, carrying pagers) and illegal (e.g., firearm possession, illegal substance possession) activities – with fines and other law enforcement options available for those who break the imposed restrictions.

While some researchers have indicated that current legislative approaches may be effective in reducing gang-related offending and victimisation, in general findings are mixed. For example, in relation to CGIs, Grogger (2002) found support for their effectiveness in reducing violent and property related crimes. Maxson et al. (2005) also indicated that such policies resulted in improvements in community reports of gang visibility, fear, and intimidation, but such improvements were not sustained in the long-term. Carr et al. (2017) examined a sample of 36 gang/organised criminal group members who received CGIs, comparing their offence counts, severity of offending, and levels of victimisation in the three years prior to receiving a CGI against the same outcomes in the three years post-CGI.

Reductions were found across all three outcomes. Similarly, Ridgeway et al. (2019) found that CGIs were estimated to result in 5% reductions in total crime in the short-term (i.e., 1.5 fewer crimes per quarter over a 20-quarter period) and 18% in the long-term (i.e., 13 fewer crimes per quarter over a 108-quarter period) – with considerable proportion of the effect being driven by a reduction in aggravated assaults.

Despite such findings, in conducting a broader review of the evidence for the effectiveness of legislative responses to gangs, Bjerregaard (2015) highlights that "very few evaluations have been conducted and there is no strong evidence of their effectiveness" (p. 364). This sentiment has been similarly echoed in a more recent review by Fraser et al. (2018) discussing gang policy in a comparative context across the UK and US. The authors highlight a trend in which punitive policy approaches developed in the US with little evidence base are being adopted in a UK setting (see also Klein, 2001). Not only do the authors highlight the lack of empirical support for such approaches, but they emphasise concerns that the kinds of policies being implemented (e.g., joint enterprise) are at considerable risk of disproportionately being targeted at minority groups, contributing to the over criminalisation and marginalisation of Black, Asian, and minority ethnic groups (see also P. Williams & Clarke, 2016).

Indicatively, in cities with some of the strongest implementation of anti-gang legislations (e.g., California and the STEP Act), gang membership and gang crime have continued to grow substantially, implying that such approaches have done little to effectively address the targeted problems (Van Hofwegen, 2009). There are also indications that legislative responses such as CGIs may in fact exacerbate the very problems they are intended to address (e.g., intergang violence, Bichler et al., 2019), while also impairing the prosocial opportunities of individuals that are targeted by such policies (e.g., employment, education, housing, prosocial associates, Swan & Bates, 2017) – opportunities which have

been identified as important factors in the desistance process (Sampson & Laub, 2003, 2005).

For instance, Bichler et al. (2019) note that intergang violence may be exacerbated by

policies such as CGIs as the CGI may serve to disrupt existing intergang hierarchies,

resulting in increased competition for control of the area (see also Valasik & Reid, 2021).

Similarly, policies which encourage the arrest of gang leaders may create power vacuums,

contributing to greater violence as others attempt to fill this vacuum (Vargas, 2014) or

suppression approaches might inadvertently result in increases of gang cohesiveness (Klein &

Maxson, 2006).

Problems with legislation are well noted in gang research and it has been suggested

that emphasising policy change may be one of the most effective approaches to improving

responses to gang-related problems (McDaniel & Sayegh, 2020). Subsequently, scholars have

emphasised the need to draw more heavily on gang research and theory (Bjerregaard, 2015;

Decker, 2016; Klein, 2001). One of the central issues raised with gang legislation is the lack

of a consensus legal definition of gangs (Barrows & Huff, 2009; Klein, 2009), as well as the

definitional vagueness regarding what a gang is, who is a gang member, and what kinds of

activities may be considered gang related (Bjerregaard, 2003). As Bjerregaard (2015)

summarises: "Many of the difficulties with these statutes are, at least in part, the result of the

difficulties in defining the problem" (p. 361). Legislative problems also permeate to other

domains, such as law enforcement.

2.2. Policing

The intended role of the police is to promote public safety and enforce the legal norms

of a society. A variety of law enforcement strategies have been utilised in response to

perceived gang problems, with particularly high-profile examples including suppression

tactics such as *street sweeps* (enforcing loitering laws to clear streets of suspected gang

members without need for evidence of other problematic behaviour), *hotspot policing*

(dedicating increased police presence to areas with higher crime rates or suspected gang presences), and enforcing *stop and search* policies (where officers may stop and search any individual they deem to be under "reasonable suspicion" of engaging in a criminal activity).

Despite their prevalent use, evidence supporting the efficacy of such policing practices has historically been limited (Braga & Weisburd, 2020; Klein, 1995; Maxson & Klein, 2006; Spergel, 1995). Some have also suggested that such practices may paradoxically promote the very outcomes being targeted (e.g., increasing gang violence, Hagedorn, 2015; Vargas, 2014; see also Novich, 2018). Recent meta-analyses and systematic reviews have however identified "small but noteworthy crime reductions" (Braga et al., 2014, p. 633) and "a small statistically significant mean effect size favouring the effects of hot spots policing in reducing crime outcomes at treatment places relative to control places" (Braga, Turchan et al., 2019, p. 289). It should be noted that these studies were not looking at hotspot policing of gang crime, but rather crime more generally.

Similarly, Braga, Weisburd, and Turchan (2018, 2019) conducted systematic review and meta-analytic investigations into the efficacy of problem-oriented policing practices such as focused-deterrence (also referred to as Group Violence Intervention; GVI). The intention of a focused-deterrence approach is to have police take a more integrated approach to addressing crime by including community and social involvement and presenting a targeted deterrent message to a specified audience (e.g., gang members in a given area), promising to severely punish the specific criminal behaviours of such individuals and groups while also emphasising non-criminal alternatives (e.g., employment training, substance dependence rehabilitation). The authors found an overall moderate positive effect size for the efficacy of focused-deterrence in addressing crime, with more rigorous research designs demonstrating smaller effects, and the greatest crime-reduction effects for practices targeted at serious

ongoing violence and conflicts among gangs and criminally active groups (Braga, Weisburd, & Turchan, 2018, 2019).

While the core aims of approaches such as focused-deterrence are to understand and address the causes, triggers, and facilitators of crime, evaluations of focused deterrence programmes have been labelled as "black box" evaluations with little to no examination of the specific programmatic elements thought to be responsible for changes in offence-related outcomes (Braga et al., 2018; Roman, 2021). In discussing focused deterrence approaches, Roman (2021) states:

> …across the roughly two dozen impact evaluations of GVI, no one has examined the likely cause and effect components of this multi-partner strategy in reducing violence. When a few studies did delve further than an examination of only aggregate, community-level outcomes, results mostly show null or negative findings. (p. 9)

Roman (2021) also highlights several critiques that have been raised regarding the implementation of such programmes. For instance, concerns about the integrity of how GVI approaches are applied in practice, citing examples of police continuing "practice as usual" rather than adhering to the protocol of GVI approaches; the excessive discretion that police have when implementing elements of such programmes; and the practical difficulties of coordinating community and police stakeholders who may be at conflict. Further, the negative costs of such programmes are seldom investigated, nor which specific individuals, groups, and/or communities bear the brunt of such costs (Barnett & Howard, 2018; McCord, 2003; Roman, 2021; Welsh & Rocque, 2014). Thus, while seemingly promising effect sizes may be identified by meta-analytic studies, such findings may be considered narrow in scope, given they only investigate one specific aspect of an already limited harm-reduction model.

Beyond concerns of efficacy, the major critiques against police practices relate to the harms they can cause and their disproportionate targeting of minority groups (Bowling & Phillips, 2007; Fagan et al., 2016; Stewart et al., 2017; P. Williams & Clarke, 2016). Notably, such disparities in the policing of different racial groups are not fully mediated by engagement in criminal behaviour (see Braga, Brunson, & Drakulich, 2019), and such practices have accordingly been argued to represent a form of legitimated oppression (Durán, 2009). With considerable legislative and institutional discretion regarding the identification of gangs and gang members, various subjective and biased criteria can influence who is labelled as, or suspected of being, a gang member (Bjerregaard, 2003, 2015). It has been documented that a number of individual level characteristics (e.g., ethnicity/race, tattoos, colours and style of clothing, age, gender) and neighbourhood-level (e.g., social/economic status, crime level, "known" gang presence) have been used by law enforcement to identify gang members, with particular patterns of labelling these characteristics or correlates of minority and/or socially/economically deprived groups as relevant to determining gang status (Bjerregaard, 2003; Caldwell, 2010; Durán, 2009; J. Miller, 1995).

Not only do such criteria contribute to the labelling of individuals as gang members, but entire communities and social problems may be designated and policed as "gang areas" or "gang problems" (Hallsworth & Young, 2008; Fraser & Atkinson, 2014; Novich, 2018; Ralphs et al., 2009; Smithson et al., 2012; Smithson & Ralphs, 2016). Especially worrying is the fact that individuals who are not gang members, but who are impacted by the over-policing of gangs, suffer twice over. First, from the negative effects of living in a gang affected neighbourhood (Ralphs et al., 2009), and second, from the negative impacts of being labelled and/or treated as a gang member (Bernburg & Krohn, 2003; Bernburg et al., 2006). For instance, Jackson et al. (2019) found that for typically prosocial (non-gang) youth, more frequent police stops were linked to the development of emotional distress and posttraumatic

stress symptoms, and experiences of stigma. Further, reviews by Stewart et al. (2017), Novich (2018), Rosenbaum (2019), and Braga, Brunson, and Drakulich (2019), among others, have charted the various physical (i.e., death, injury), mental health (i.e., distress, trauma, grief, depression), social (i.e., arrests, marginalisation), and relational harms (i.e., impairing policing legitimacy, distrust of police) associated with the kinds of policing practices described above.

2.3. Correctional Rehabilitation

In terms of programmes dedicated to the rehabilitation of gang members in a correctional setting, it is acknowledged that options are limited. Wood and Dennard (2017, p. 38) have highlighted that "Currently, no treatment programs specifically address gang membership" and Pyrooz and Decker (2019, p. 264) have further lamented that "when it comes to responding to gangs and gang members in prison, we have no reliable programs to offer".

Within a prison setting, the primary framework used for guiding resource allocation and treatment to individuals who have offended is the Risk-Need-Responsivity model (RNR; Andrews & Bonta, 2010; Bonta & Andrews, 2017). The three core principles of this model are: (1) the *risk* principle – that an individual's risk is measurable and correctional responses such as treatment dosage and resource allocation should be proportional to an individual's measured risk (i.e., high risk individuals should receive more intensive treatment, be housed more securely etc.); (2) the *need* principle – that treatment should target an individual's stable offence related needs, i.e., changeable factors that are statistically associated with, and thought to cause, offending; and (3) the *responsivity* principle – that treatment should (a) be designed and delivered in a way that evidence suggests is most likely to maximise engagement and rehabilitative success (i.e., the use of cognitive behavioural therapy), and (b) be tailored to the specific needs of the individual so that it is accessible and relevant (i.e.,

adjusting how a programme is administered in order to account for an individual's literacy skills, trauma history etc.). Gang membership is relevant to each of the risk, need, and responsivity principles.

Both risk and needs assessments and practices rely upon the identification and measurement of an individual's risk factors – including *static risk factors* (i.e., historical or unchangeable features of an individual or their environment associated with an increased risk of offending such as age or offence history) and *dynamic risk factors* (DRF; i.e., changeable features of an individual or their environment associated with an increased risk of offending such as having an antisocial personality, antisocial attitudes, or antisocial associates) (Andrews & Bonta, 2010; Bonta & Andrews, 2017). In regard to the *risk principle*, gang membership is relevant in terms of determining an individual's prison security and risk of reoffending classifications. The DRF of *antisocial associates* (which subsumes gang membership) is included in many of the risk measures which are utilised to determine the level of risk an individual poses, for instance the Violence Risk Scale instruments (Wong & Gordon, 1999–2003; Wong & Gordon, 2006) and the Level of Service Inventory instruments (Andrews & Bonta, 1995; Andrews et al., 2004). Having antisocial associates is considered one of the strongest predictors of reoffending (Bonta & Andrews, 2017), and gang members who are sent to prison typically have more serious and prolonged criminal careers than non-gang comparisons (Fleisher & Decker, 2001). Due to this predictive, and putatively causal relationship, the *need* principle considers gang membership/antisocial associates an important rehabilitative treatment target. As such, to reduce an individual's risk of reoffending, it follows that gang members should be encouraged to leave their gang, break contact with criminal peers, and (re)connect with prosocial individuals, such as non-criminal family or friends. Gang membership is thought to pose important *responsivity* considerations when conducting treatment due to issues regarding motivation and non-compliance (Di Placido et

al., 2006; Goldstein, 1993), and in studies with youth gang populations, gang membership has been indicated to reduce the efficacy of evidence-based interventions (Boxer et al., 2015).

While the results of meta-analytic studies investigating the efficacy of RNR-based approaches in reducing recidivism have varied, ranging from no effect of treatment to modest reductions, RNR-based approaches have typically been considered superior to non-RNR alternatives (Hanson et al., 2009; Lipsey & Cullen, 2007; Schmucker & Lösel, 2015). Despite the prevalence of RNR-based approaches to rehabilitation, and the considerable attention that has been paid to addressing the "gang problem", Mallion and Wood (2020a) note that only one study has explicitly investigated RNR-based approaches in relation to gang members. This study, conducted by Di Placido et al. (2006), examined the effectiveness of RNR-based high-intensity cognitive-behavioural rehabilitation programmes for reducing recidivism and institutional misconduct among gang members in correctional settings. Compared to a set of matched controls, gang members who *completed* treatment demonstrated significant reductions in both rates of violent recidivism (20% reduction) and non-violent recidivism (11% reduction) compared to those who did not complete at a 24-month follow up.[2] Of the treated gang members who *did* reoffend within the 24-month follow-up, offending was typically less serious compared to that of non-completing matched controls (measured by proxy through sentence length). Untreated gang members also demonstrated higher levels of serious institutional misconduct than treated gang members and untreated and treated matched controls. Due to retrospective study design and data limitations, the authors were unable to examine the effects of treatment on gang dissociation.

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[2] The authors note that comparing treatment completers with treatment non-completers may raise concerns regarding the similarity of matched controls. However, given matching on a range of historical and demographic characteristics the authors did not consider it to be a major threat to the validity of their findings. See also McMurran and Theodosi (2007) for greater discussion of the validity of comparing treatment completers and non-completers.

In considering the appropriateness of RNR-based programmes for gang members (beyond the single study conducted by Di Placido et al., 2006), Mallion and Wood (2020a) turn to the broader correctional rehabilitation literature and examine such discussions with respect to findings from gang research. While acknowledging the evidence for the modest efficacy of RNR-based approaches in general, the authors discuss several aspects of RNR-based programmes that may ultimately be limiting treatment outcomes for gang members (e.g., emphasis on avoidance goals contributing to demotivation, failure to acknowledge the function gang membership serves). Ultimately, it is argued that approaches grounded in the principles of strengths-based, holistic rehabilitation may be a more appropriate alternative. Mallion and Wood (2020a) specifically highlight a prison rehabilitation programme that has been running in English and Welsh prisons in recent years known as Identity Matters (IM).

Identity Matters (IM) is a structured and manualised desistance-oriented programme designed for individuals who have engaged in group/gang-related offending and focuses on the "push" and "pull" factors relevant to promoting gang disengagement and desistance from offending as well as the development of a personal (non-gang) identity (Randhawa-Horne et al., 2019). Only a small preliminary study of the IM programme's effectiveness has been conducted to date, however the results of this multi-method evaluation suggest that the programme was positively experienced by participants, facilitators, and stakeholders alike – with positive effects on treatment motivation and therapeutic/working alliance (Randhawa-Horne et al., 2019). While these preliminary results may suggest that strengths-based and desistance focused approaches are well suited to such groups, several limitations of the evaluation study – e.g., reliance upon a small sample size ($n = 20$), the use of pre- and post-measures that have not yet been validated with the target population, and the absence of a control condition – prevent such conclusions from being drawn. As such, more rigorous investigations are yet warranted. Of interest would be a direct comparison with current RNR-

based rehabilitation programmes with consideration of a range of recidivism and well-being outcomes.

Further supporting contentions that strengths-based rehabilitation approaches may be better suited for gang members, fundamental arguments have been made that the RNR approach to rehabilitation as a *practice framework* (i.e., as a bridging theory that guides correctional practice) makes a number of normative, etiological, and practice assumptions that privilege risk and harm reduction as primary objectives (Strauss-Hughes et al., 2021; Ward & Durrant, 2021). Importantly, such prioritisations have been identified as central barriers to both the effective and *ethical* delivery of treatment (Birgden, 2018). In relation to the rehabilitation of gang members, for instance, it may be argued that unless an individual has expressed a desire to leave their gang, the "encouraging" of individuals to break ties with fellow gang members could feasibly be construed as correctional coercion (see also Ward & Birgden, 2007). This is because leaving a gang cannot be considered an autonomous decision if failing to do so may have direct influence on correctional decision making (e.g., parole applications), or may be explicitly mandated as part of correctional procedure (e.g., disallowing individuals from contact with other gang members as part of release conditions).

Further, despite the relationship between gang membership and mental health difficulties, it has been indicated that little attention is paid to addressing such factors in correctional rehabilitation. For example, in their qualitative study of 17 gang members' experiences with re-entry post-prison, Gaston et al. (2021, p. 14) observed that gang members "were released from prison … without receiving treatment for their self-reported symptoms of trauma, mental health disorders, and maladaptive responses, such as anxiety, fear, hypervigilance, and drug use". While this sample is not large enough to draw generalisable conclusions, the findings do appear to reflect trends of undertreatment of mental health difficulties across prison populations generally (Beck & Maruschak, 2001; Brooker &

Gojkovic, 2009; Chari et al., 2016; Department of Corrections, 2016; Forrester et al., 2014; HM Inspectorate of Prisons, 2007; James & Glaze, 2006; Reingle Gonzalez & Connell, 2014). Much of this is likely attributable to pragmatic issues with current screening practices, funding, available resources/qualified staff, overburdened staff caseloads, low research priority, and the tendency to view prisoner health as separate from considerations of public health (see Brooker & Gojkovic, 2009; Fazel et al., 2016; Forrester et al., 2014; HM Inspectorate of Prisons, 2007; Reingle Gonzalez & Connell, 2014). However, it is also apparent that practice frameworks such as the RNR model primarily view mental health needs as responsivity factors (e.g., important in terms of how they influence an individual's ability to engage in risk-reduction treatment, Andrews & Bonta, 2010; Bonta & Andrews, 2017) rather than as a central component of ethical treatment itself.

In addition to rehabilitative difficulties, gangs also pose unique risk management challenges relating to serious misconduct and inter-group conflicts in correctional contexts (Decker, 2001b; Knox, 2000; Pyrooz et al., 2011; Pyrooz & Decker, 2019). Accordingly, it is not uncommon for certain jurisdictions to make custodial decisions based on an individual's perceived gang status. For instance, Pyrooz & Decker (2019) discuss how individuals identified as gang members are disproportionately and pre-emptively punished compared to other inmates in attempts to manage perceived risk. As such, they may be afforded fewer freedoms within a prison setting than individuals identified as non-gang members. Particularly serious examples of such practices include the housing of suspected gang members in solitary confinement as a means of mitigating their expected risk. The consequences of being identified as a gang member can therefore mean such individuals are denied basic privileges usually afforded in general population housing. For instance, individuals may lose access to personal visits, phone calls, and commissary, and be restricted

from certain treatment and vocational opportunities (Di Placido et al., 2006; Pyrooz &

Decker, 2019).

2.4. Youth Prevention/Interventions

Street gangs are often considered a youth phenomenon with membership rates

considered to peak around 14-15 years old (Pyrooz, 2014; Pyrooz & Sweeten, 2015). General

experimentation with norm-violation and antisocial behaviour is also considered common

among youth populations (Moffitt, 1993). Given the negative outcomes and potential

cumulative effects of gang joining and criminal behaviour, it is unsurprising that youth

populations are considered an ideal target for gang prevention/intervention efforts (see

Howell, 2010; Pyrooz & Sweeten, 2015). Historically, while a large number of youth

programmes have been administered to gang-involved youth, there has been very little

evaluation of the effectiveness of these programmes and many of the extant evaluations have

been of poorer quality (Klein & Maxson, 2006). To address this shortfall, evaluation of gang

programmes has received greater prioritisation in subsequent years. I discuss the findings of

several recent reviews and meta-analysis as well as some of the notable studies within them.

Huey et al. (2016) examined the effectiveness of 38 controlled evaluations of gang

intervention and treatment responses in North America using "vote counting" and meta-

analytic strategies.[3] The "vote counting" method (whereby the number of controlled gang

evaluations that reported significant positive effects were summed and compared against the

sum of those with non-significant effects, see Borenstein et al., 2009) revealed that 42% of

studies found positive effects on reducing antisocial outcomes, and 21% found positive

effects for reducing gang involvement. Of particular note was that despite being *gang*

prevention/interventions studies, 14 out of the 38 programmes did *not* include measures of

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[3] It should be noted that the evaluations included within Huey et al.'s (2016) analyses were not strictly focused on *youth* gangs, however many of the programmes examined are commonly utilised with youth populations. This is expanded upon further below.

gang-related outcomes. The authors' meta-analytic investigations drew on the effect sizes of 26 of the identified studies and identified a small significant effect for the intervention and treatment responses in reducing gang involvement ($d = 0.29$, $p = .03$), but no significant effect for antisocial outcomes ($p = .20$). The authors also noted that half of the evaluations included in their meta-analysis did not include measures of both antisocial and gang-related outcomes (i.e., included only gang outcomes or only antisocial outcomes).

While the studies included as part of Huey et al. (2016) were not exclusively restricted to youth programmes, the authors highlighted three programmes which stood out in terms of the strengths of their evaluations. Two of these programmes specifically focus on youth needs and the third takes a comprehensive approach to addressing gang violence. First, the *Gang Resistance Education Training* programme (GREAT) is a US based primary prevention programme delivered in schools by law enforcement officers aiming to "immunise" 11–13-year-olds against risk factors for gang involvement by teaching them a range of developmental and functional skills (Esbensen & Osgood, 1999; Esbensen, Osgood et al., 2001; Esbensen et al., 2012; Esbensen et al., 2013). Second, the adapted *Brief Strategic Family Therapy* programme (BSFT; Valdez et al., 2013) was a family-focused therapeutic programme for working with gang-affiliated youth that emphases familial functioning and addressing maladaptive interactional patterns to reduce the likelihood of a youth's risky or problematic behaviour, as well as some gang diversion elements. Third, *Spergel's Comprehensive Community-Wide Gang Program Model* is a US based programme that utilises law enforcement suppression strategies, social outreach from former gang members, social opportunity provision, community mobilisation, and organisational change/development to prevent gang violence (Spergel et al., 2003; Spergel et al., 2005a, 2005b, 2005c, 2005d, 2005e, 2006).

Despite acknowledging the strengths of these evaluations (i.e., as well-designed, appropriately evaluated studies), Huey et al. (2016) concluded that the evidence regarding the effectiveness of each programme was mixed. For instance, in commenting on the support for GREAT, one of the more widely endorsed gang prevention programmes, Huey et al. (2016) stated "Although significant intervention effects were found in each of the GREAT evaluations, effect sizes were consistently small in magnitude. Thus, the effectiveness of GREAT as a clinically meaningful approach to preventing gang involvement and antisocial behavior is debatable" (p. 228). Indicatively, this debate has continued since this meta-analytic study, where Elliott and Fagan (2017) and Howell (2018) have endorsed differing standards of what constitutes "evidence-based" and therefore drawn differing conclusions about GREAT's effectiveness. Howell (2018) has argued that GREAT should be considered an evidence-based gang prevention programme, while Elliott and Fagan (2017) have contended the opposite. Notably, neither Howell (2018) nor Elliott and Fagan (2017) discuss the findings of Huey et al. (2016).

Adapting intervention approaches that have demonstrated efficacy in preventing general antisociality has also been suggested as an option for responding to youth problems in the gang domain (Boxer, 2019; Gebo, 2016; McDaniel & Sayegh, 2020; Mallion & Wood, 2020a, 2020b; Roman et al., 2017; Simon et al., 2013). Two notable examples of approaches that have been suggested are *Functional Family Therapy* and *Multisystemic Therapy* (Boxer, 2019).

Functional Family Therapy (FFT) is a brief youth and family focused therapeutic intervention modality based on cognitive-behavioural and interactional systems principles, where antisocial behaviour and psychopathological difficulties are considered the result of a range of individual, familial, and intra-familial interactional characteristics (Alexander & Parsons, 1982; Alexander et al., 2013; Robbins et al., 2016; Sexton & Alexander, 2003). FFT

is typically directed at adolescents who have engaged in some antisocial behaviour and are considered at risk of engaging in further deviance and has demonstrated efficacy in addressing a range of adolescent externalising behaviours (e.g., aggression, conduct problems, delinquency, violence, substance use), and internalising difficulties (e.g., depression, anxiety), as well as a range of familial and interactional difficulties (e.g., maladaptive familial interactions, family conflict, parental distress) (Baldwin et al., 2012; Hartnett et al., 2017; Robbins et al., 2016; Sexton & Turner, 2010). Given the efficacy of FFT approaches, an adapted FFT for gang involved youth (FFT-G), has been developed which, in addition to regular FFT programming, aims to address risks factors relating to gang membership and provide education around the realities of gangs, gang life, and violence (Thornberry et al., 2018).

Thornberry et al. (2018) conducted a randomised controlled trial to evaluate the effectiveness of FFT-G for reducing recidivism with youth at risk of gang membership. The main findings were threefold. Firstly, youth at high risk for gang membership and their families engaged with and completed FFT-G at the same level as non-gang-involved youth. Secondly, FFT-G did not significantly reduce the likelihood of joining and re-joining a gang (however some practical difficulties were identified in measuring this). And thirdly, the treatment group displayed significantly lower rates of recidivism for general delinquency, violence, and substance use at 18-months follow-up compared to the treatment as usual control group. However, this third effect was only identified for those considered to be at *high* risk of becoming gang involved. Such findings are promising, particularly given the dearth of evidence-based approaches in this area. Yet, it is not readily apparent that FFT-G represents a *gang specific* approach given "the FFT-G program, as delivered, seemed primarily to reflect the basic FFT approach" (Thornberry et al., 2018, p. 963).

Multisystemic Therapy (MST) is an intensive home- and community-based intervention modality targeted at adolescents who have engaged in more serious or persistent patterns of antisocial behaviour (Henggeler et al., 1999; Henggeler & Shaeffer, 2016; Henggeler et al., 2009). MST is based on ecological systems principles (Bronfenbrenner, 1979), viewing antisocial behaviour and psychopathological difficulty as the product of a range of interacting personal, peer, familial, and neighbourhood/community causes (Henggeler et al., 1999; Henggeler & Shaeffer, 2016; Henggeler et al., 2009). Over the past few decades, MST has demonstrated efficacy in reducing a range of delinquent and mental health outcomes, including those relating to behavioural and conduct problems (e.g., aggression, conduct disorder, oppositional defiant disorder), recidivist antisocial behaviour (e.g., violent, property, sexual, general offending/recidivism), and substance abuse (Asscher et al., 2013; Henggeler, 2011; Henggeler & Shaeffer, 2016; Painter & Scannapieco, 2009; Tan & Fajardo, 2017; van der Stouwe et al., 2014; Vidal et al., 2017).

Boxer et al. (2017) conducted an intent-to-treat prospective study to evaluate the effectiveness of MST for reducing rearrest rates of gang involved youth with a follow up period of 12 months. In contrast with their previous findings, which indicated that gang affiliation was predictive of treatment incompletion (Boxer, 2011) and reduced the efficacy of MST approaches (Boxer et al, 2015), the authors found that MST was effective for reducing recidivism rates in gang members and was equally successful for both nongang and gang-involved youth in the long term. Perhaps worth noting is that due to the retrospective design of the study (and thus the *post hoc* determination of gang membership status), the MST approach did not specifically target or measure gang membership as a key outcome during the intervention, yet researchers still identified significant reductions in crime related outcomes, such as assault-related rearrests, for gang members (for discussion of the gang membership identification process used see Boxer et al., 2015). In fact, Boxer (2019)

suggests that *because* gang membership was not an explicit focus or referral criterion of the MST interventions they evaluated, youth are less likely to have felt singled out for their gang involvement. It is possible that without this explicit focus, gang membership was simply positioned as one of many considerations within the broader intervention process, allowing youth to engage more meaningfully without feeling that practitioners had a particular agenda regarding gang membership, as opposed to a specifically intended "gang intervention" which might convey a different message and promote resistance.

In discussing the efficacy of gang violence responses from a public health perspective, McDaniel and Sayegh (2020) and Mallion and Wood (2020b) review a large range of primary, secondary and tertiary gang intervention responses, including many of those which have been discussed above. Concluding their review, McDaniel and Sayegh (2020) state that "until more work is done evaluating gang-prevention programmes, we are left with few choices we can feel confident in for our gang-prevention efforts" (p. 273). This sentiment echoes remarks made by Thornberry et al. (2018) that "currently no known gang programs meet the rigorous standards of demonstrated effectiveness such as those promulgated by the Blueprints for Healthy Youth Development" (p. 954). In addition, to improve the mixed landscape of intervention responses, Mallion and Wood (2020b) directly emphasise the need for more methodologically sound evaluations of interventions, greater definitional consistency across researchers, and better causal understandings of gang occurrences. It has also been argued that more work needs to be done to understand and address the various mental health and psychological difficulties that gang involved youth experience, and particularly those that may motivate them to join gangs in the first place (Beresford & Wood, 2016; Frisby-Osman & Wood, 2020; Kelly et al., 2012; Mallion & Wood, 2020b; Raby & Jones, 2016; Wood, 2019).

2.5. Chapter Summary

Across reviews of legislative, policing, correctional, and youth prevention/intervention responses to gangs, conclusions regarding the efficacy of such approaches appear to be mixed. While a number of approaches across the domains are considered promising, there is still a dearth of high-quality evaluations demonstrating the efficacy of even the most established responses to gangs. The way in which responses are implemented and targeted, particularly regarding the disproportionate targeting of minority groups and the heavy harm-reduction focus, raises numerous ethical concerns regarding how such responses are implemented. Across each domain, considerable calls have been made not only for better and more consistent evaluation of responses to gang problems, but also greater clarity regarding what constitutes a gang (and consistency within and between researchers and stakeholders) and better causal understandings of gang-related phenomena. As such, in chapter three I discuss considerations relating to the identification of gangs and establishing causal understandings of gang-related phenomena in depth.

Chapter Three: Conceptual Difficulties with Researching Gangs

In this chapter I consider some of the key difficulties with researching gangs, particularly those that are likely to have contributed to the mixed efficacy and ethical suitability of responses to gang harms. I specifically consider issues relating to the identification of gangs and developing causal understandings of gang-related phenomena.[4] I also consider how such issues are likely to limit our ability to improve our responses to gangs in the long term.

3.1. Gang Identification

One of the leading difficulties within gang research has been the question of how to accurately identify gangs and gang members. Within the broader domains of gang research and practice, numerous methods have been used to measure and identify gangs/gang membership including *self-nomination* as a gang member, admission to *associating with gang members*, and designation as a gang member according to an established *gang definition* (i.e., gang instruments).

3.1.1. Self-Nomination

Self-nomination approaches involve asking individuals to self-report whether they belong to a gang or gang-like group with questions such as "are you in a gang?" and "have you ever been in a gang?" (Esbensen, Winfree et al., 2001; Thornberry et al., 2003). The reasoning behind this approach is that individuals themselves have the best understanding of whether or not they are an active gang member at a given point in time – which is particularly important given the transient nature of gang membership (Decker & Curry, 2000; Esbensen et al., 1993; Melde & Esbensen, 2011, 2013; Peterson et al., 2004; Pyrooz, 2014; Pyrooz et al.,

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[4] I refer to phenomena in the sense conceptualised by Bogen and Woodward (1988) and thus do not limit discussions to strictly observable effects.

2013; Thornberry et al., 2003), the nuances of which may not be picked up by identificatory methods applied by outside observers.

Concerns regarding the lack of objectivity involved with such methods have been raised, however. For instance, self-nomination approaches rely upon the individual's own conceptions of what a gang is (Tonks & Stephenson, 2018), which may differ from that of the researchers (e.g., derived from stereotypical depictions of gangs in the media) and other participants/responders (e.g., based on personal/experiential idiosyncrasies), thus calling into question whether researchers are in fact measuring what they intend to with this approach. Similarly, individuals pre-empting repercussions from admitting gang membership may choose not to disclose their gang status, while others may posture as gang members, presenting issues of transparency. Despite potential issues of subjectivity affecting the construct validity of self-nomination approaches, there are indications that these methods: align with other approaches to assessing gang membership (Decker et al., 2014), correlate with variables of theoretical relevance (Thornberry et al., 2003), and are considered to be a "a particularly robust measure of gang membership capable of distinguishing gang from nongang youth" (Esbensen, Winfree et al., 2001, p. 124) at the individual level.

3.1.2. Association Approaches

Association or "friends in gang" approaches to measuring gang membership involve asking individuals if they belong to a group of friends who may be considered gang members. For example, with questions such as "Do you consider your group of friends to be a gang?" (Melde et al., 2009; Melde & Esbensen, 2011). While largely similar to direct self-nomination approaches, a potential benefit for a "friends in gang" approach is that it provides an alternative means of identification that overcomes individual reluctances to disclose personal gang membership status (as may arise with self-nomination approaches), as it is anticipated that individuals will be more transparent when describing their friends' gang

statuses than their own. While this is possible, such approaches still suffer from issues relating to the subjectivity of individual gang conceptions, as well as introducing concerns regarding whether associating with gang members necessarily means they themselves belong to that group (Melde & Esbensen, 2011).

Perhaps the greatest utility of individual level identificatory approaches such as self-nomination and friend in gang approaches is that they provide a way of measuring gangs/gang membership without relying upon an explicit conceptualisation of gangs (i.e., an explicit group-level measure of what a gang is). This has been considered particularly valuable by researchers who have found issue with the use of gang definitions and sought to sidestep conceptual debates about the validity of gangs as a construct, particularly when their research interests do not explicitly require a group-level construct (e.g., counting the number of gang members or measuring qualities of an individual gang member, which arguably can be done without explication of gangs as groups) (Esbensen et al., 1993). Yet, while a group-level gang concept may not be necessary for all gang-related research interests, such a concept *is* necessary when attempting to develop theoretical understandings of group-level properties and processes, or when holding gangs as explananda (see chapter five for greater discussion of this point). Notably, the understanding of group processes in gangs has been consistently listed as an area of underdevelopment, and one that is deemed vital to effectively addressing a wide range of gang-related occurrences (including understanding gang joining, formation, persistence, desistance, and crime, to name a few) (Decker et al., 2013; Hennigan & Sloane, 2013; Hughes, 2013; Papachristos et al., 2013; Pyrooz et al., 2014; Short & Strodtbeck, 1965; Wood & Alleyne, 2010).

3.1.3. Definitional Approaches

Each of the identificatory approaches mentioned thus far have relied upon individual-level conceptions of gang members. To identify gangs at a group-level, definitional

approaches are used to discern gang from non-gang groups.[5] Considerable attempts have been made to define gangs over the years. Yet, despite these efforts, the major agreement within the gang field has been that there is a distinct *lack of agreement* regarding what constitutes a gang and how to define one. To highlight the longevity and extent of these discussions I list a number of the key contributors here: Ball and Curry (1995); Barrows and Huff (2009); Bjerregaard (2002); Brotherton (2008); Brotherton and Barrios (2004); Bursik and Grasmick (1993); Campbell and Muncer (1989); Cloward and Ohlin (1960); Covey et al. (1992); Curry (2015); Curry and Spergel (1988); Decker and Kempf-Leonard (1991); Esbensen, Winfree et al. (2001); Fagan (1989); Goldstein (1991); Hagedorn (1998); Horowitz (1990); Howell and Griffiths (2015); Katz and Jackson-Jacobs (2004); Klein (1971, 1995, 2009); Klein and Maxson (1989, 2006); Knox (2006); Matsuda et al. (2012); W. Miller (1975, 1980); Morash (1983); J. W. Moore (1990); Puffer (1912); Sánchez-Jankowski (1991, 2003); Sharp et al. (2006); Short (1990, 1996); Spergel (1984, 1995); Thrasher (1927); van Gemert (2012); Vigil (1983); Winfree et al. (1992); Weerman et al. (2009); Yablonsky (1959).

Due to this considerable disagreement, there have been a plethora of gang definitions utilised by gang researchers (as well as by other stakeholders interested in gangs). Two of the key questions which arise from having so many gang definitions in use are: *how, if at all, do these various definitions relate to one another?* and *which definition(s) have the best construct validity?* (i.e., bear the closest relationship to the concept of gangs as derived from theory). I now explore each of these questions in turn.

3.1.3.1. How do various definitions relate to one another?

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[5] This is not to say however that definitional approaches are only used to define the groups, however such definitions are usually directed at group-level constructs, i.e., gang motivation, gang crime (for relevant discussions see Curry, 2015; Decker & Kempf-Leonard, 1991; Maxson & Klein, 1990).

With so many definitions in use, researchers have sought to examine how these definitions relate to one another, and how differing definitions capture aspects of the "gang problem". Largely, the view is that the different definitions do not relate closely enough to one another to reliably pick out a consistent representation of gangs and gang members; a point that was particularly voiced by Klein (2005), who has extensively argued that collaborative and comparative gang research is not possible while such variation and discoordination exists. This is because there is a significant risk that different gang definitions capture different pictures of what gangs are, what they look like, and what they do (see also Ball & Curry, 1995; Decker & Kempf-Leonard, 1991; Klein, 2005; Matsuda et al., 2012; W. Miller, 1975, 1980; Needle & Stapleton, 1983). At face value this is particularly evident as the kinds of features emphasised by different definitional approaches vary tremendously (e.g., see Bjerregaard, 2002; Howell & Griffiths, 2015).

For instance, where some definitions include features such as criminality, others do not, clearly casting the conceptual net at different aspects of the general "gang concept". It has also been documented that the size of the gang problem changes depending on the definition used to document it (Matsuda et al., 2012; Maxson & Klein, 1990, 1996),[6] suggesting that different definitions may be based on different properties or characteristics of gangs. As such, while indicative of the general trends, it is evident that the findings discussed in the first two chapters are partially dependent on the nature of the gang and outcome definitions utilised. It has also been highlighted that different identification approaches (i.e., self-nomination, friend in gang, definition) capture groups with different characteristics (Esbensen, Winfree et al., 2001; Matsuda et al., 2012; Rodríguez et al., 2017; Winfree et al.,

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[6] A problem that is also observed for other measures which depend on the gang construct, i.e., for measures of gang-related activity such as the Los Angeles "gang member" vs Chicago "gang motivated" approaches to measuring gang-related violence (Maxson & Klein, 1990; Rosenfeld et al., 1999; see also Valasik & Reid, 2020, 2021).

1992), making inter-comparisons rather fraught for both empirical and theoretical research. It is necessary to note that not all gang researchers have agreed with this line of argument. Instead, some have argued that shared definitions are unnecessary for the study of gangs either due to the general conceptual similarities shared across definitions (Goldstein, 1991), or because they do not view conceptions of gangs as necessary for addressing the overarching problems such as youth violence, of which gangs are only a small part (M. L. Sullivan, 2005, 2006) (for a greater discussion see also Wood & Alleyne, 2010).

The problems relating to a lack of definitional consensus within academic gang research also flow through to responses to gangs in practice. For instance, in relation to gang legislation, Barrows and Huff (2009) conducted a review of the legislative gang definitions used across ten states in the United States. They found that while references to criminality and self-identification as gang members were common across definitions, there was generally considerable variance and only two states used the same definition. This definitional discrepancy and lack of clarity has been at least partially attributed as a cause of the legislative difficulties discussed in chapter two, such as those raised by Bjerregaard (2015): "Many of the difficulties with these statutes are, at least in part, the result of the difficulties in defining the problem" (p. 361).

While these effects were observed at the state-level and are, on their own, cause for concern, Klein (2009) identified even greater amplification of this variance when viewing such definitions at a local-level (i.e., between individual police jurisdictions) and more recent investigations of police methods of gang identification in the US have corroborated these findings (Scott, 2020). Such confusion not only results in potential limitations when using official sources of gang data for research purposes, but also results in the under- and over-identification of gang members (Barrows & Huff, 2009; Klein, 2009). The effects of this can lead to disproportionate responses to perceived gang problems at a broad scale, a failure to

address "real" gang problems, and increased negative outcomes for individuals identified as gang members using such approaches (e.g., criminal enhancements, treatment as a gang member from others, see Barrows & Huff 2009; Bernburg & Krohn, 2003; Bernburg et al., 2006; Durán, 2009; Johnson et al., 1995; Klein, 2009; Yoshino, 2008). Core aspects of effective gang research (e.g., evaluating the effectiveness of gang prevention/intervention programmes) depend on the ability to consistently and reliably identify gangs/gang members (i.e., inclusion criteria, outcome variables). An inability to guarantee accurate discernment of gangs/gang members therefore poses considerable concern for those pursuing effective and efficient responses to gang harms (Melde et al., 2016).

3.1.3.2. Which definition(s) have the best construct validity?

Considerable debate has occurred throughout gang research as to what kind of groups should be considered gangs. Definitional debates about gangs stem not only from differences regarding what features of a gang are worth focusing on for research purposes, but also differences about what a gang *actually is*. Unless otherwise specified, debates regarding the kinds of features that should be included in a gang definition allude to both epistemological (i.e., knowledge-related) and ontological (i.e., relating to the nature of being) positions about gangs as an object of research. For example, the argument that criminality should be included in a gang definition can reflect an epistemic justification that such an inclusion is most useful for inferring processes relevant to the practical requirement of addressing crime.[7] Similarly, it can reflect an ontological justification that gangs are, in essence, "by nature" criminal and thus should be defined as such. In both cases, discussions are raised regarding the construct validity of gang definitions.

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[7] This point is intended to be indicative of a general epistemic justification, not a depiction of an "accurate" or necessarily defensible position, I personally argue against this position later in chapters five and six.

While consensus is yet to be reached regarding the properties which determine a construct's validity (Eronen & Bringmann, 2021; Feest, 2020), for discussive purposes I employ the elaboration of construct validity defended by Borsboom and colleagues, which asserts that a measure can be considered to have good construct validity if it measures what it is intended to measure (Borsboom et al., 2004; Borsboom & Markus, 2013). For gang research, such a conceptualisation of construct validity holds that a gang measure (i.e., definition or other identificatory method) is valid if it correctly captures groups which are considered gangs (conceptually), without capturing those groups which are not considered to be gangs.

A key aspect of gang definitional debates is difference of opinion regarding the kinds of groups that should or should not be captured under such a label. Perhaps most fundamentally, differences in opinion reflect differences in how researchers view the labelling of gangs. For instance, while many have argued in favour of the labelling of gangs for research and policy reasons (examples of which have been described above) it has also been argued that gang definitions and the labelling of individuals as gang members reflect the prejudices of a system which inaccurately labels minority youth/adults or those resisting systematic marginality and oppression as dangerous criminals (Brotherton, 2008, 2018; Fraser, 2017; Hagedorn, 2008; Hallsworth & Young, 2008; Smithson & Ralphs, 2016).

Similarly, there has been considerable issue with the development of definitions that *only* capture "bona fide gangs" without capturing other kinds of groups that may be considered qualitatively different. For instance, college fraternities meet Klein's (1971) gang definition (see Bursik & Grasmick, 1993), and groups such as ravers, public drug takers (Aldridge et al., 2012; Medina et al., 2013), and alt-right/domestic extremist groups (Pyrooz et al., 2018; Reid & Valasik, 2018) meet the Eurogang definition criteria (as well as any other definition with similar necessary and sufficient conditions). It should be noted that while

much of the discussion thus far has excluded explicit mention of the now consensus Eurogang definition, this is because these sections are primarily focused on reviewing the problem space which resulted in the emergence of this definition. Given the considerable body of research that has emerged following the establishment of the Eurogang definition it is difficult to discuss these issues without also drawing reference to this definition. Here I use research based on the Eurogang definition to emphasise the kinds of critiques that can emerge in relation to gang definitions which include such features. For a greater discussion of the Eurogang definition see chapters four and five.

It has also been argued that certain groups which are often not considered to be gangs (in a theoretical or applied sense), *should* or *would be better understood* as such. For instance, Pyrooz and Densley (2018) argue for antifascist protest groups such as "Antifa" to be considered as street-gangs. Depending on who gets to decide what a gang is in the conceptual sense (and therefore what properties gang definitions should seek to capture),[8] there is indication that many members of the public view the police as a gang (see Armaline et al., 2014), and within a study conducted by Ralphs and Atkinson (2014) one sergeant remarked on how they "were the biggest gang in Glasgow" (p. 196).

Yet, such a position is unlikely to be supported by many gang scholars despite arguments that can be made about the properties of police groups, and the kinds of features that have historically been included in gang definitions. For instance, gang definitions have emphasised *physical properties* such as wearing shared colours, having a shared style of dress, and a group name; *structural features* such as having a formal/informal hierarchy; *group cultural features* such as machismo, solidarity, and secretiveness; *behavioural characteristics* such as engagement in violence, being street-oriented; and/or *social outcomes*

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[8] I briefly mention this point to emphasise some of the value-ladenness of category development. For greater discussion relevant to this point see chapter six.

such as causing harm or inciting fear in communities. All of these may be argued to apply as readily to the police as to the groups commonly considered gangs (including for definitions of gangs utilised by the police themselves, e.g., the US Federal gang definition, United States Department of Justice, 2021). Arguably, the distinction that separates police from meeting many of the extant gang definitions is the feature of "criminality" (and particularly, the criminality of the group, rather than individual members). Yet, such a distinction may be considered a technicality due to a state's self-sanctioning of behaviours that may otherwise be considered criminal (e.g., violence).

Others have argued for the distinction between different kinds of groups that may fall under a conceptual "gang" umbrella, with differences being drawn between groups such as street-gangs (Weerman et al., 2009), prison gangs (Pyrooz & Decker, 2019; Wood et al., 2014), organised crime groups (Alach, 2011; Decker & Pyrooz, 2013, 2015; Rodgers & Baird, 2015), and terrorist or extremist groups (Curry, 2011; Decker & Pyrooz, 2011, 2015). Evidently, there are numerous conceptions of what a gang is, and a similar abundance of definitions, with myriads of defining features attempting to capture the nature and nuance of such groups. Given this considerable diversity, discerning not only which concept of gangs is "the right one" and which definitional approach is "the best" at capturing that concept has proved troublesome, raising questions around the validity of gang constructs. Construct validity is essential to the accurate drawing of deductive inferences about the properties of category members (Cronbach & Meehl, 1955). Given the centrality of gang definitions in research (particularly positivist gang research, see Hagedorn, 2015), the ability to draw inferences about the nature of gangs and gang processes and to generalise these findings from one gang to another is considered of vital importance.

3.2. Causal Questions in Gang Research

Discussing the state of contemporary criminological and forensic research, J. A. Sullivan (2019) argues that one of the key barriers preventing the development of causal explanations of crime-related phenomena lies with the current conceptual approaches being utilised. Specifically, J. A. Sullivan argues that without first establishing what is referred to as *construct stability* (i.e., the consensus conceptualisation of key constructs defined in a valid and coherent manner within and across disciplines), we cannot assume that: (a) the constructs in question exist in the way we say they do; (b) our measurement approaches are accurately capturing details relating to the presumed concepts; or (c) the results from our research questions can be meaningfully compared, contrasted, or integrated to determine the causes of phenomena of interest. As discussed above, the gang field has experienced significant difficulty in developing precise and agreed upon definitions for concepts of investigation. It is perhaps no surprise then that, as I discuss below, the development of causal understandings of gang-related phenomena has proven elusive. Below I briefly discuss some of the progress that the gang field has made in answering "causal questions" about the relationship between gangs and outcomes of interest before discussing the pursuit of causal explanations in gang research in relation to the Bradford Hill (1965) criteria of causality.

3.2.1. Historical Progress Toward Understanding the Relationship Between Gangs and Crime

Perhaps the most fundamental causal question in gang research is that of the relationship between gangs and offending (Katz & Jackson-Jacobs, 2004). In reviewing the problem of determining causality in gang research, Ezell (2018) highlights two particular areas that gang research has struggled with, namely: (1) the establishment of causal ordering and (2) the ruling out of confounding explanations for relationships between gangs and antisociality.

Causal ordering relates to the idea that the cause should precede the effect. The emergence of gangs (at a group/social level/scale) or gang joining (at an individual level/scale) should theoretically precede changes in antisocial/criminal occurrences if gangs or gang membership are to be considered a cause of antisocial outcomes. Historically, a common reliance on cross-sectional data in gang research has made it difficult to determine the temporal ordering of the relationship between gang membership and crime (Bjerregaard, 2002; Katz & Jackson-Jacobs, 2004; Klein & Maxson, 2006; Krohn & Thornberry, 2008). Resultantly, such methods have restricted researchers' abilities to ascertain the nature of the relationship between variables of interest. For example, the possibility that crime causes gang membership, as victimisation may lead to gang joining/formation for protection or engaging in crime may bring a person into contact with gang members or increase the chances of recruitment.

The second concern relates to the notion that variables that are not related to gangs may better account for discrepancies in offending between gang and non-gang groups and that such confounding explanations must therefore be ruled out (Curry et al., 2014; Decker et al., 2013; Esbensen et al., 2010; Klein & Maxson, 2006). Difficulties employing randomised controlled trials (RCTs) in gang research (Decker et al., 2013), issues with data collection, and the unavailability of control conditions in research designs (Pyrooz et al., 2016) have all been suggested to limit progress in this area. For instance, while RCTs are often considered the gold-standard for research designs, they involve the random assignment of individuals to matched experimental and control conditions in attempts to isolate any causal effect of the experimental condition. Due to the ethical and practical difficulties of assigning individuals to join gangs – and therefore in establishing control conditions or random assignment – it is particularly difficult to determine whether "non-gang" variables are responsible for outcomes of interest such as criminality (Decker et al., 2013). In other words, it may be that differences

in the individuals who join gangs (e.g., impulsivity, antisocial attitudes) or the contexts in which gangs form (e.g., poverty, economic disparity) are responsible for, or better account for, the observed correlations between gangs/gang membership and antisocial outcomes.

The increase in longitudinal studies which utilise multiple measurement time points is considered to have provided some clarity on these issues. Curry (2015) and Pyrooz and Mitchell (2015) argue that insights derived from longitudinal studies have helped to provide clarity about causal relationships in gang research – particularly the multiple works of Thornberry and colleagues in which *selection*, *facilitation*, and *enhancement* models of the relationship between gangs and crime have been posed and tested (e.g., Thornberry, Krohn, Lizotte, & Chard-Wierschem, 1993; Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003).

The *selection* model posits that individual characteristics account for the delinquency associated with gangs rather than any group-level processes. For example, individuals who are already highly delinquent are those who join or are selected into gangs and continue with their delinquency. Thus, the number or severity of delinquent acts committed by the individuals who join gangs accounts for the disproportionate level of crime associated with such groups. The *facilitation* model articulates that "non-criminal individuals" join gangs and, while part of this social group, are subject to a range of norms, processes, and opportunities which promote antisocial learning and criminal behaviour. The *enhancement* model is a combination of the selection and facilitation models whereby already antisocial individuals are selected into gangs wherein their antisocial characteristics are exacerbated by the group context, resulting in greater antisociality.

Two reviews conducted by Krohn and Thornberry (2008) and Curry et al. (2014) and a recent meta-analysis by Pyrooz et al. (2016) examined the evidence for each of these models and found support for the enhancement model over the facilitation and selection models in explaining the relationship between gang membership and offending. For many,

the development of such evidence has been considered a suitable answer to the major causal question in gang research, as Pyrooz and Mitchell (2015) state: "Now that the sharp criticisms attacking the very basis for the study of gangs have been found to rest on a shaky empirical foundation, researchers are able to direct their energies to other hard problems" (p. 47). Of these hard problems, Pyrooz and Mitchell specifically point towards the need to understand the aspects of gangs which produce offending outcomes, in particular the role of *group processes*, an issue which they highlight has been raised by gang researchers for decades (Decker et al., 2013; Hennigan & Sloane, 2013; Hughes, 2013; Papachristos et al., 2013; Pyrooz et al., 2014; Short & Strodtbeck, 1965; Wood & Alleyne, 2010).

Yet despite this progress, findings from gang intervention approaches raise questions regarding the complicated relationship between criminal outcomes and gang membership. It is usually held that gang membership status (or level of gang embeddedness) should be targeted given the negative outcomes that correlate with higher levels of gang involvement (as discussed in chapter one). However, the extent to which gang status itself represents a meaningful treatment target is unclear. In a meta-analysis drawing on the effect sizes of 26 studies of intervention and treatment responses to gangs, Huey et al. (2016) identified a small significant effect in reducing gang involvement ($d = 0.29$, $p = .03$), but no significant effect on antisocial outcomes ($p = .20$). In explaining such findings, the authors note that half of the evaluations included in their meta-analysis did not include outcome measures of *both* gang membership and antisociality. They attribute this to causal assumptions regarding the relationship between gang membership and crime (i.e., the *facilitation* model, Thornberry et al., 2003), where it is presumed that targeting gang membership will, by proxy, target the processes underlying criminogenic outcomes.

Similarly, Boxer (2019) notes that even though some evaluations of Functional Family Therapy and Multisystemic Therapy approaches for gang involved youth have

demonstrated success in reducing antisocial outcomes, "there is no evidence from these studies whether and how any unique, gang-specific mediators or moderators of treatment were associated with benefits" (p. 9). Such examples have also been identified in other gang intervention settings. For instance, upon conducting an informal preliminary examination into the effectiveness of a prison-based gang renouncement programme (GRAD), Pyrooz and Decker (2019) observed that while the programme appeared to facilitate gang disengagement (i.e., reductions in gang membership/gang embeddedness), such changes did not equate to reductions in key outcomes such as prison misconduct or victimisation. These kinds of findings raise questions regarding the most appropriate targets of gang intervention approaches and the nature of the relationship between gangs and antisocial outcomes.

In summarising the state of gang homicide research, Sanchez et al. (2021) state that "despite almost a century of gang research, the cupboard of theoretical explanations of gang homicide is mostly bare" (p. 11). Such a conclusion is highly concerning – not only because of the serious impacts of violence and particularly homicide (see chapter one) – but because serious violence has been one of the major foci of gang research since gang research first emerged (e.g., Asbury, 1927; Thrasher, 1927; see Sanchez et al., 2021). The question therefore is how is this dearth of theoretical understanding being addressed?

3.2.2. Answering Causal Questions in Gang Research: The Criteria of Causality and How to Meet Them

"It is my contention that researchers are making progress in answering the so-called 'causal question' of deciphering the association between gangs and delinquency with better methods and data, rather than a definition of gang that will fit the philosophical needs of gang researchers." (Curry, 2015, p. 13)

Depending on how this particular sentiment is understood, it can be taken a number of ways: (1) as an argument for the value of empiricism over "philosophical timewasting" (i.e., a position which asserts that empirical research is the most fruitful way forward for gang researchers and that philosophical concerns distract from scientific progress);[9] (2) as a *conditional argument* for the value of empirical research over certain kinds of philosophical concerns (i.e., that the kinds of philosophical concerns raised by gang researchers regarding gang definitions have served to distract from scientific progress, but this is not to be said for all philosophical questions); or (3) as a *reflective statement* (i.e., observing that empirical research thus far has demonstrated greater utility for progressing our understandings of gangs than attempts to define them according to differential epistemic, moral, or pragmatic concerns).

If this statement were to be read as an absolute argument in favour of empirical development over philosophical development, modern critiques regarding theoretical developments in forensic and criminological sciences would disagree. Ward (2019) contends that contemporary preoccupation with empirical proficiencies (and particularly quantitative developments) have come at the cost of general theoretical and conceptual competencies (i.e., requirements central to the development of accurate scientific understandings). A failure to understand and meet these philosophical needs is argued to have contributed to a host of problems within forensic and criminological research, including: uncritical and dogmatic acceptance of existing theories, stipulative definitions of science as strictly empirical in nature, failure to clarify the meaning of key constructs, seeking for the "one true theory" and rejecting epistemic pluralism, embracing impoverished theories of method, and failure to

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[9] A position that would seem unlikely given the attention Curry himself has paid to conceptual issues with defining gangs (e.g., Ball & Curry, 1995; Curry, 2015), however is still a plausible interpretation in and of itself and facilitates useful discussion.

distinguish distinct epistemic tasks. All of these problems limit researchers' ability to develop causal understandings of the phenomena central to forensic and criminological practice.

As a conditional or reflective statement, it is difficult to explicitly agree or disagree with such a position given the multiple plausible interpretations of "philosophical needs", however, arguably both positions have their merit in some regard (depending on the cases employed to defend them). What is worth commenting on though is the view that empirical developments and philosophical needs are in some way separate and/or in competition with one another. While empirical progress has no doubt been of incredible value to advancing gang research, there is more to answering causal questions than can be done with empirical research alone. Bradford Hill (1965) offers nine guidelines for determining whether a relationship can defensibly be considered causal. The guidelines include:

(1) *Strength*: strong statistical associations are more likely to have causal components than weaker associations (however this does not mean weaker associations cannot also be causal ones)

(2) *Consistency*: relationships that are reproducible across place, circumstances, samples, time, and observers are more likely to be indicative of a causal effect

(3) *Specificity*: the more specific a putative cause is to an outcome of interest, the more likely it is to be causal. This may include an effect that can be accounted for by appeal to a single putative cause (i.e., one-to-one relationship), or a putative cause that is only associated with a given effect (i.e., a cause that is unique to a particular disease)

(4) *Temporality*: a putative cause must precede the outcome of interest

(5) *(Biological) gradient*: a decrease/increase in the cause should have a corresponding effect (i.e., decrease/increase) upon the outcome of interest (i.e., a dose-response curve)

(6) *Plausibility*: given the current body of knowledge, is there a conceptually plausible explanation for the relationship between a putative cause and the outcome of interest? (i.e., plausible causal etiological/mechanistic relationship)

(7) *Coherence*: does the proposed causal relationship cohere with other findings within the domain of research? (i.e., is it corroborated by findings from other studies or well-established laws or facts)

(8) *Experiment*: if a putative cause can be manipulated experimentally (or semi-experimentally) in a well-designed and unbiased study and produce an effect on an outcome of interest there is greater grounds to presume causality

(9) *Analogy*: does the presumed causal relationship bear similarity to other well-established causal relationships

Some of the above guidelines can be satisfied through empirical research, yet they cannot be fully met without explicit conceptual and theoretical analysis. Even the criterion of "statistical association", which centres upon identifying an empirical connection between two constructs, requires conceptual clarification; particularly in terms of the constituents of the constructs under investigation and the outcome of interest (and how to measure/depict them). In fact, recent theoretical scholarship in the field of psychology has emphasised the considerable coordinating role that philosophy of science must play in connecting mathematical structures and psychological concepts to empirical patterns (see Eronen & Romeijn, 2020).

The normative aspects of approaches to identifying or measuring gangs (e.g., subjective conceptions of gangs in self-nomination and "friend in gang" approaches; inclusion of social/legal criteria such as criminality in gang definitions) also make satisfying the criteria of specificity and coherence incredibly difficult. After all, how does one identify the coherent and specific psychological and social causes for a subjective and/or unstable target of explanation?[10] Or, how does one identify unique or specific gang mechanisms, functions, or processes which are not predefined by the construct of interest?

As alluded to in chapter two, empirical evaluations of the effectiveness of responses to gang harms are often conducted in a "black box" manner, where the putatively causal workings of the intervention approach are not examined with explicit measures (Braga et al., 2018; Gravel et al., 2013; Klein, 2011; Roman, 2021). As Gravel et al. (2013) state:

> Without linkage between a program's activities, its outputs and its outcomes, evaluators may be able to say whether a program was effective, but may not be able to establish causality, and, more importantly, are left to wonder why it was effective. Conversely, if a program is found ineffective, it is impossible to identify with certainty where the program has failed, whether there were unintended consequences of a program's activities or what can be done to improve the program. (p. 236)

Such advances therefore require not only greater evaluative methods, but also appropriate conceptual and theoretical development. While it is commonly acknowledged that a greater theoretical understanding of gang-related phenomena is required to inform responses to gang harms, it must be questioned whether current approaches are capable of facilitating such developments.

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[10] For greater discussion of this point see chapter *5.1.1. The Construct Validity of "Gangs"*.

Commonplace within gang research – and criminology more broadly – is the identification of *dynamic risk factors* (DRF: i.e., changeable factors which are predictive of an increased likelihood of a criminal outcome occurring) and *protective factors* (PF: i.e., changeable factors which are statistically associated with a decreased likelihood of a criminal outcome occurring). These predictors are incorporated into explanations of crime and targeted in treatment/intervention approaches (Andrews & Bonta, 2010; Bonta & Andrews, 2017; O'Brien et al., 2013; Howell et al., 2017; Howell & Egley, 2005; Thornberry et al., 2003).

However, concerns have been raised regarding the conceptualisation of predictive constructs as putative causes of criminal outcomes (Ward, 2016, 2019; Ward & Beech, 2015). Evaluating the causality of DRF using Bradford Hill's (1965) criteria, as described above, Ward (2016) argues that DRF fail to meet the criteria of specificity, plausibility, coherence, experimental evidence, and analogy. Specifically, Ward (2016) argues that the qualities which make DRF good predictive constructs (e.g., include multiple variables while avoiding multicollinearity) ultimately undermine their ability to satisfy important causal criteria (e.g., coherence, specificity). Similarly, Heffernan, Wegerhoff, and Ward (2019) reviewed the existing literature to examine the causal status of DRF according to a primarily *empirical* set of causal criteria.[11] Namely, the criteria presented by Kraemer et al. (1997): that a causal risk factor must (a) precede an outcome of interest and increase the likelihood of its occurrence, (b) be dynamic/changeable, and (c) be amenable to *intentional* change and such changes must alter the outcome of interest (i.e., otherwise there is little point targeting them with interventions strategies). It was demonstrated that while DRF did precede outcomes of interest (i.e., recidivism) and demonstrate some level of dynamicism/changeability, it was not

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[11] This is not to imply that empirical and theoretical standards are independent, but rather indicates a particular scope of emphasis.

evident that treatment mediated the relationship between an individual's DRF score change and changes in recidivist outcomes. As such, DRF were not considered to meet the minimal empirical standards to be deemed causal.

It should therefore be questioned whether risk and protective factors (at least in their current form) are likely to provide the causal understandings required to improve intervention strategies for gang-related problems (Fortune & Ward, 2017; Ward & Fortune, 2016a, 2016b). Notably, this issue has been attributed to the epistemic and methodological assumptions employed when identifying such factors and incorporating them into explanations of behaviour. For example, views of construct validity that privilege concurrent and predictive validity at the expense of identifying etiological and/or causal relationships between variables of theoretical relevance and a corresponding dependence on correlational methods and significance testing (Haig, 2012; Heffernan & Ward, 2017; Ward, 2016; Ward & Beech, 2004; see Cording et al., 2016 and Cording & Beggs Christofferson, 2017 for greater discussion).

Without proper theoretical and empirical evaluation, it is difficult to accept the putative causal role of constructs employed in explanations and targeted in interventions directed at gangs. If this is the case for the most studied relationships in gang research (i.e., between gangs and violence/crime), this should also present cause for concern for less considered yet highly important relationships in the field. For example, the relationship between gang membership and mental health outcomes (Baćak et al., 2021; Beresford & Wood, 2016; Osman & Wood, 2018), or between gang intervention programmes and possible adverse outcomes that extend beyond programme effectiveness (Barnett & Howard, 2018; McCord, 2003; Roman, 2021; Rubenson et al., 2020; Welsh & Rocque, 2014). As such, not only are theoretical understandings of gang-related phenomena left wanting, but it is unclear

that our current approaches to pursuing explanations of such phenomena are suitable to address this need.

3.3. Chapter Summary

In this chapter I have reviewed a number of difficulties associated with researching gangs, in particular those relating to the defining features of gangs and the development of causal understandings of gang-related phenomena. Given the prevalence and severity of gang related harms (as discussed in chapter one) and the limited efficacy of existing responses in addressing such harms (as discussed in chapter two), addressing these primary concerns within gang research is vital. Not only are such difficulties likely contributing to the mixed efficacy observed across interventions, but they also limit the ability for gang research to fix or improve upon existing shortcomings. There is a very real need for researchers to overcome these issues and develop better understandings of gangs to inform effective evidence-based responses to gang-related harms. In order to do so, it is evident that the field requires some form of framework to align researchers in a manner that can overcome the barriers to developing shared understandings of key phenomena.

Given the above discussions, it is my contention that answering causal questions in gang research *does* necessarily involve important conceptual and theoretical development; yet such developments are often considered secondary to empirical progress. As described in chapter two, a number of recommendations for improving responses to gang harms have suggested that there is a need to draw more heavily upon research and gang theories (Bjerregaard, 2015; Decker, 2016; Klein, 2001). Yet, given the limitations of our conceptual and theoretical understandings of gangs, questions may be raised regarding the suitability of current gang research to address these "real-world" problems. Indicatively, several of the problems identified in relation to responses to gang harms relate to issues with defining and identifying gangs with validity and reliability, and targeting the causes of gang-related

phenomena. Given the historical multiplicity of gang identification approaches and limited progress toward establishing comprehensive causal accounts of gang-related phenomena, it appears that gang research still has some way to go to appropriately meet such demands. Problems at a conceptual and/or theoretical level also manifest at an applied one, and failures to develop appropriate strategies result in failures to address real harms.

Chapter Four: The Eurogang Program

In this chapter I discuss some modern advancements in gang research that have been developed in attempt to overcome a number of the difficulties that have affected gang research thus far. Particular emphasis is placed on the Eurogang Program of gang research which has in recent years become cemented as the leading collaborative gang research programme in the world. Drawing primarily upon a number of key works which have directly discussed the genesis, mission statements, and progresses of the Eurogang Program (e.g., Esbensen & Maxson, 2012, 2016, 2018; Klein & Maxson, 2006; Weerman et al., 2009[12]), I briefly review the overarching purposes and advancements that the Eurogang Program has offered. In doing so, I describe the emergence of the Eurogang Program, the principles which guide it, and the research instruments integral to the programme.

4.1. A Collaborative Programme of Research

The Eurogang Program had its origins in a series of meetings and workgroups initially brought together by Malcolm Klein (Weerman et al., 2009). The overarching incentive for such a programme was to facilitate the investigations of gangs within a European context and establish a systematic, comparative (i.e., cross-group, cross-neighbourhood, cross-city, cross-nation), and collaborative (i.e., multidisciplinary, multimethod) research project which allowed for the empirical investigation of gangs. According to Weerman et al. (2009), the foremost of barriers to achieving such a goal was a foundational one; namely, a general reluctance to acknowledge the existence of gangs in a European context or to adopt the "gang" label for troublesome youth groups which may otherwise be considered as such. As described in the Eurogang Manual (Weerman et al., 2009), this reluctance was thought to be a result of the stereotypical and sensationalised media depictions of gangs in the United States

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[12] While many of these sources cover the same details in similar words, for consistency and succinctness I cite the Eurogang Manual (Weerman et al., 2009) when referring to the details discussed across these sources, unless otherwise warranted.

which many European researchers and stakeholders relied upon when considering the existence of gangs in their communities. As a result, many of them denied the existence of gangs in their communities.

Similarly, where comparable troublesome youth groups were to be found, there was a general reluctance to label them as gangs for fear that doing so would result in *moral panic* (i.e., an irrational and/or disproportionate social fear/hysteria in response to a sensationalised gang phenomenon thought to threaten the perceived safety and values of community members) and *disproportional suppression responses* (i.e., the punitive political, justice, and policing responses intended to "stomp out" the purported gang problem). Understandably, reluctance to acknowledge the existence of gangs within a European context made studying gangs in Europe a difficult task. One of the central aims of the Eurogang Program was thus to establish a set of research instruments intended to overcome such difficulties and facilitate empirical investigations of street gangs in a comparative and collaborative manner. The purpose of which was to establish a research programme and evidence base that can be used to inform effective programmatic and policy responses to gang problems.

4.2. The Eurogang Definition and Other Instruments

In order to facilitate multimethod, multi-contextual collaborative and comparative gang research, the Eurogang Program recognised the need to develop research instruments that could appropriately facilitate and coordinate the various kinds of investigations that gang researchers may undertake. Examples of the instruments that have been developed by the Eurogang Program include: the *Youth Survey* for the individual-level identification of gang members; the *City-Level Instrument* to understand city-level gang trends such as emergence and behaviour and the role of the context in such trends; the *Expert Survey* to gather detailed information from gang experts (e.g., police officers, personnel from social welfare agencies, school personnel, youth service providers, community advocates, and other residents) in a

given geographical location (i.e., neighbourhood, city, police district); the *Prevention and Intervention Inventory* to identify strategies and/or programmes may be effective to responding to gang problems in different contexts; and the *Ethnography Guidelines* to guide ethnographic data collection.[13]

As part of establishing the above instruments, and in order to overcome the historical barriers to engaging in coordinated and comparative gang research (particularly those related to the multiplicity of extant gang definitions) the Eurogang Program put together a working group of gang scholars to establish an agreed upon definition that could be used by all researchers operating as part of the programme (Weerman et al., 2009). The working group – led by Malcolm Klein and consisting of Finn Esbensen, Uberto Gatti, Inger-Lise Lien, Dana Peterson, Alexander Salagaev, David Shannon, Frank Weerman, Tom Winfree, and Monica Whitlock – made the decision to draw a clear distinction between the *descriptors* applied to specific gangs and the *defining* features of a gang (Weerman et al., 2009). *Descriptors* were considered to be the features which describe specific characteristics of a gang/group but are not central to that group being considered a gang (e.g., features such as symbols, appearances, level of organisation, group name, tattoos etc.). Gang *definers* on the other hand were considered to be the necessary and sufficient conditions (i.e., the essential characteristics) that must be present in order to consider a group a gang.

The resultant Eurogang definition states that "a street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity" (Weerman et al., 2009, p. 20). Below is a general description of the recommendations for how each criterion should be applied and the general justification of these decisions:

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[13] For a greater discussion of these instruments see the Eurogang Manual (Weerman et al., 2009), these tools are not discussed in depth here but are raised to highlight some of the core aspects of the Eurogang Program and the role that the Eurogang definition itself plays in this programme.

- *Group*: gangs are a kind of group, thus a necessary condition to be considered a gang is that something must first be considered a group, this criterion excludes phenomena relating to solely individual or dyadic behaviour,[14] thus a group is considered to be a collection of three or more individuals.

- *Group identity*: without a group identity, properties, processes, or behaviours cannot be attributed to the gang, thus preventing the study of a range of phenomena including gang membership or gang activity.

- *Illegal activity*: is considered to be delinquent or criminal activity (not just bothersome behaviour). Illegal activity is considered integral to the distinguishing of gangs from non-gang groups as Eurogang researchers aim to inform gang programmes and policy. It is stated that the policy interests which motivate gang research (and thus the existence of the Eurogang Program) are directed towards such groups due to their engagement in criminal activities.[15] This criterion is subsumed as part of the *group identity* criterion due to the fact that not all members of a gang necessarily engage in criminal activity, but that such a feature is nonetheless considered characteristic of a gang's identity or culture as reflected in group norms and expectations (i.e., criminality is a group-level property).

- *Street-oriented*: while many kinds of groups engage in criminal activity (e.g., middle-class and/or suburban youths) the inclusion of "street-orientedness" is considered to emphasise one of the characteristics of gangs that creates considerable fear and concern, i.e., their public presence and illegal activities. Street-orientedness is thus taken to imply that members spend the majority of their group time (yet not

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[14] As well as, arguably, the behaviour of largescale populations.
[15] A framing of gang policy that many critical and constructionist scholars are likely to dispute due to the kinds of biases and motivations that may direct political direction toward a focus on gangs (Brotherton, 2018; Fraser, 2017; Fraser et al., 2018; Hagedorn, 2015; Hallsworth & Young, 2008; Smithson & Ralphs, 2016).

necessarily all of their time) outside of school, work, and home in street locations or places such as malls, parks, cars while unsupervised by adults.

- *Durable*: transient groups which emerge and dissipate rapidly are considered qualitatively distinct from groups which emerge and persist (persistence/durability refers to group-level existence i.e., the group can continue to exist despite member turnover). Such a criterion helps to distinguish gangs from transient non-gang groups (e.g., mobs) which may emerge for short periods or for certain events (e.g., protestors, hooligans). There are a number of gang-like groups that can emerge and persist for short periods of time (e.g., over summer holidays), the inclusion of the durability criterion therefore establishes that groups which rapidly dissipate and/or are isolated to a limited temporal context are not considered gangs from a Eurogang perspective. A group is considered durable if it has existed for at least several months (operationalised as exactly three months or more in the Eurogang Youth Survey).

- *Youth*: the interest of the Eurogang programme is in youth gangs, as such older groups are excluded from the Eurogang definition. It is recognised that the groups which the working group consider to be street-gangs are primarily made up of members in their adolescence rather than adulthood. However, this does not exclude groups with adult members, for instance gangs may have members in their twenties or older so long as the majority of the group's members are adolescents or in their early twenties. This is applied in the Eurogang Youth Survey as requiring the majority of members to be between twelve and twenty-five years old.

This consensus Eurogang definition is considered to be the basic unifying instrument which underlies all other instruments promoted by the Eurogang programme (Weerman et al., 2009), and since its development has become the most commonly used definition by academics and policy makers concerned with gangs (Sanders, 2019). Alongside this

definition, the programme also endorses the Maxson-Klein typology for classifying different kinds of gangs (Klein & Maxson, 2006; Maxson & Klein, 1995). This typology presents five distinct gang types, each of which vary according to the dimensions of: group size/number of members, the duration of the group's existence, the territoriality of the group or where they spend their time, the age composition of the group, and the kinds of activities that the gang engages in. The five kinds of gangs included in this typology are: 1) classical/traditional gangs; 2) neo-classical/neo-traditional gangs; 3) compressed gangs; 4) collective gangs; and 5) specialty gangs. The types presented by Maxson and Klein (1995) as summarised in the Eurogang Manual (Weerman et al., 2009, p. 21-22) are presented below:

- *The Classical (or Traditional) gang* is a large, enduring, territorial group with a wide age range and several subgroups based on age or area. Classical gangs often exist for twenty years or more, with members as young as ten years old and as old as thirty or more. Classical gangs with subgroups often have a hundred or more members, and they claim and defend their territories.

- *The Neo-Classical gang* is a newer territorial group with subgroups, generally with a history of ten years or less and fewer members than the Classical gang. Neo-Classical gangs may be medium-sized, including fifty or more members. They usually have subgroups based on age. They have a narrower age range than Classical gangs, and they claim and defend their territories.

- *The Compressed gang* has a relatively short history and usually is comprised of adolescent youth from about age twelve to twenty. Typically, Compressed gangs have fewer than fifty members and do not form subgroups. They have existed less than ten years and often only a few years. They may or may not claim and defend territories.

- *The Collective gang* resembles a disorganised mass of adolescent and young adult members without the clear characteristics of the other four gangs. Collective groups

are bigger than the Compressed gangs and with a wider age range between younger and older members. They might have as many as a hundred members, but without clear sub-groups despite being in existence for ten to fifteen years. They may or may not claim and defend territories.

- *The Specialty gang* is focused on a narrow crime pattern and exists more for criminal than social reasons. Its smaller size and area of operation serve its criminal purposes. Typical examples are drug sales groups and skinhead groups. The other four types of gangs commit a wide variety of crimes, but Specialty gangs are more organised around their narrow criminal purpose.

Through the development of these definitional and classificatory instruments (as well as the related research instruments built around these core approaches), the Eurogang Program was able to present a largely consensus approach to both defining gangs and identifying different kinds of gangs – a feat previously unachieved in gang research. These achievements have been considered the best current response to the historical difficulties affecting gang research and the Eurogang Program lays claim to a host of developments built on these foundations, including a considerable volume of published research works (Esbensen & Maxson, 2018) including five edited Eurogang volumes (in order of publication: Klein et al., 2001; Decker & Weerman, 2005; van Gemert et al., 2008; Esbensen & Maxson, 2012; Esbensen & Maxson, 2016). The Eurogang Program has thus been considered to be a major step forward in the progression of gang research, purportedly allowing for the investigation of a range of gang-related phenomena in a systematic, collaborative, and comparative manner with the overarching goal of informing effective programme and policy initiatives.

4.3. Chapter Summary

Historically gang research has been characterised by discoordination, disagreement, and definitional debate. In response, researchers have attempted to overcome such difficulties through the establishment of the Eurogang Program of research. At its core, the Eurogang Program aims to coordinate researchers in a manner that facilitates systematic, comparative, and collaborative research into gangs and gang occurrences. Central to the pursuit of this overarching objective has been the development of the Eurogang definition of gangs which has since reached near consensus status in the gang field. Notably, despite its relatively recent inception, the Eurogang approach has been viewed by many as the solution to the kinds of discoordination that have historically plagued the field and has quickly become established as the dominant approach to gang research. Such accomplishments have therefore been considered by many to be a successful first towards developing effective policy and practice responses to gang harms.

Chapter Five: A Critique of the Eurogang Approach

Having established a near-consensus definition of gangs, the aim of the Eurogang researchers has been to develop a comprehensive understanding of gangs that can be used to inform programmatic and public policy responses to gang problems (Esbensen & Maxson, 2012, 2016, 2018; Klein & Maxson, 2006; Weerman et al., 2009). However, despite these developments, some critiques have been raised against the Eurogang definition and a number of historical critiques (such as those discussed in chapter three) arguably also apply. Notably, critiques concerning debates around what constitutes a gang and how to avoid the tautology of including crime within a gang definition.

For a number of gang researchers, such questions do not appear to present cause for concern. For instance, issues relating to the tautology of including criminality within a gang definition have been dismissed by the justification that crime is not the only outcome that gang researchers seek to investigate, and that when researchers do investigate crime this is usually done so in a more specific manner (e.g., violence, drug offending, see Klein & Maxson, 2006). Similarly, problems with gangs *as a group-level construct* are avoided by focusing on individual gang members (e.g., Esbensen, Winfree et al., 2001; Decker et al., 2014) or gang behaviours (e.g., McLean et al., 2020; Van Hellemont & Densley, 2021) as the units of analysis. Additionally, problems with the term "gang" are averted through the substitution of alternative terms (e.g., "troublesome youth groups", see Weerman et al., 2009).

I argue that while such approaches may resolve these concerns in a manner that is suitable for *empirical* tasks (e.g., identifying gang members, measuring gang outcomes), they are not a complete solution and fail to address these concerns for *conceptual* and/or *theoretical* tasks (e.g., developing multilevel explanations for gang-related phenomena). For instance, critiques of the validity of (group-level) gang definitions are deflected by many

empirical researchers who identify gang members using *individual-level* identificatory

approaches (e.g., self-nomination as a gang member; see Bjerregaard, 2002; Decker et al.,

2014, see also chapter three), which allow researchers to index putative gang members and

investigate variables such as "gang embeddedness" without reliance upon a group-level

construct. However, it has also been acknowledged by gang researchers (e.g., Pyrooz et al.,

2016; Short, 1985) and philosophers of science and scientific method alike (e.g., Hochstein,

2016b; Thagard, 2019a) that explaining social phenomena such as interpersonal behaviour or

crime requires group/social levels or scales of explanation (in addition to individual

level/scale accounts). Failure to incorporate such levels results in impoverished explanations

due to the neglect of important group/social level mechanisms or processes). Thus, I argue in

this chapter that – for theoretical purposes – issues relating to the quality of group-level

constructs remain, and critiques relating to the gang construct, gang definitions, and tautology

have yet to be completely addressed.

     In order to make this argument I conduct a *conceptual critique* of the now-dominant

Eurogang approach.[16] In doing so, I focus my attention on the keystone of the Eurogang

Program; the Eurogang definition. Drawing upon the work conducted in Wegerhoff et al.,

(2019), I examine some of the core conceptual assumptions of the Eurogang approach,

including the suitability of "gangs" (and thus "gang-related phenomena") as a target of

explanation and the appropriateness of the Eurogang definitional approach for guiding gang

research. This critique begins with an examination of the validity and utility of the gang

construct as informed by Haig's (2014) criteria of scientific explanation. It is concluded that

the gang label has poor construct validity and limited explanatory utility, thereby making it

unsuitable for theoretical purposes (and thus for developing the required understandings of

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[16] Simply, I am interested in matters pertaining to theory construction and scientific explanation,
rather than problems of an explicitly empirical nature.

gangs to inform effective responses to gang problems). I suggest that for conceptual/theoretical purposes, researchers need to instead focus on what gangs are at a foundational level, namely *groups*, and that the group (and group phenomena) should be the target of explanation.

Following this I consider the limitations of the Eurogang definition for theory construction by examining the kind of *definitional approach* it represents (i.e., a necessary and sufficient condition/operational approach). In sum, I discuss how the Eurogang approach restricts researchers' abilities to (a) accurately represent gangs and (b) avoid tautologies. I argue that definitions that rely on necessary and sufficient conditions are the root of the problem. As a point of comparison, I turn to methods utilised in other sciences to propose a possible alternative solution. Namely, I draw upon the work of Thagard (2019a, 2019b) to offer a method known as three-analysis which facilitates the systematic and comprehensive conceptualisation of a concept without reliance upon necessary and sufficient conditions.

Finally, I provide an exemplar framework based on these developments to demonstrate not only the gaps missed by the Eurogang definition, but also how alternative approaches may better facilitate the understanding of a specific groups. This is then applied to a specific gang exemplar from the Aotearoa-New Zealand context, the Mongrel Mob. In doing so, I demonstrate how a three-analysis approach bypasses several of the theoretical roadblocks that obstruct gang research under the prevailing Eurogang approach and advance a way to explain the group and (by extension) gangs. I demonstrate how this alternative approach to conceptualising groups and gangs can have utility for ultimately informing effective and ethical practice and policy initiatives.

5.1. Examining the Construct Validity and Explanatory Utility of "Gangs"

In science, we develop theories to better understand a specific "thing" – for gang researchers this means constructing theories of gangs and gang behaviours. However, before

explaining gangs or gang-related phenomena, by developing theories of gangs or gang occurrences, it is necessary to determine *what* it is we are actually trying to explain, and whether this construct is suitable for explanatory purposes. Specifically, a term referring to a phenomenon is suitable for the purposes of scientific explanation when it demonstrates: (a) good construct validity, and (b) offers explanatory utility by allowing meaningful inferences to be drawn about the construct in question (Haig, 2014). To examine gangs as a theoretical construct, it is therefore necessary to review its suitability as a target of explanation with specific reference to construct validity and explanatory utility – both are investigated below.

5.1.1. The Construct Validity of "Gangs"

To investigate the validity of "gangs" as a construct, it is first necessary to look at what *kind* of thing gangs are. It is important to establish whether gangs are (a) something "real" and concrete (e.g., weather patterns, the atomic element gold) – allowing for the identification of robust explanatory targets (e.g., why is it raining now? Why is gold malleable?); or (b) a social construct depending on social judgments (e.g., education) – which produce more abstract and less stable explanatory targets (e.g., why is university education considered "higher" than vocational training?). Real and concrete entities facilitate the asking of specific questions with specific answers (e.g., "why is gold malleable?" – gold is malleable due to specific physical properties such as its atomic structure and the sharing of metallic bonds, which allow atoms to slide over each other and be manipulated). Alternatively, socially bound constructs encourage more general and value-based questions, resulting in correspondingly general and value-laden answers. From both a theoretical and practical perspective, it is much easier to work with real and concrete entities, as the conclusions that can be drawn about these constructs are more robust (Haig, 2014; Magnus, 2012).

While gangs are often treated as if they are real and concrete entities, from a theoretical perspective this status is less certain. Specifically, *gang* is a label applied to a

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group by society based on normative and legal judgements. This is an issue because, as these judgements change, people's interpretation of what a gang is also changes. For example, one of the most common criterions within gang definitions is the feature of *criminality* (e.g., Esbensen & Weerman, 2005; W. Miller, 1980; Sharp et al., 2006; for a summary see Wood & Alleyne, 2010). This is problematic as the law and what constitutes a crime are both socially determined legal judgements (Ward & Heffernan, 2017), meaning that as judgements change, the construct of *gangs* changes as well (as the very definition of a gang hangs on it being criminal). What was a gang one day can transform into a different kind of group the next; thus, it is impossible to develop an accurate understanding of *gangs* or *gang occurrences* if the goal posts can be shifted so easily.

This confusion explains why researchers have historically had such trouble defining and explaining gangs and their behaviours, as these kinds of socially defined labels are too unstable to facilitate explanatory strategies such as inductive inference (Magnus, 2012). Gangs are what can be referred to as a *non-primary* or *secondary kind*, because being labelled a gang is a property of a *group* that is judged to be criminal (Baker, 2015). Because of their instability and dependence on social judgements, non-primary kinds are unsuitable as targets of explanation (Baker, 2015; Haig, 2014). Simply, it is proposed that theories should not be developed to explain non-primary kinds such as gangs (or occurrences that necessarily depend upon the existence of such kinds, e.g., gang violence, gang formation). Instead, theories need to focus on the *primary kind* – i.e., the *thing being labelled* – as these are valid constructs which do *not* depend on social judgements (Baker, 2015; Haig, 2014).[17] The

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[17] Some argue that psychological standards for determining construct validity impose excessive burdens on demonstrating the validity of a construct, particularly when applied to constructs outside of psychology, even going so far as to say that "psychologists studying constructs that are not psychological should leave their methodological baggage at the door" (Cappelli, 2012, p. 151). The problem with this position is it begs the question: how does one determine what should or should not be considered a psychological construct? If a gang construct does not have to meet the criteria for construct validity often employed by psychologists, then how do we look at such groups in a manner

primary kind in this instance is social *groups* – because at the foundational level, gangs are arguably just social groups that are unwanted by mainstream society. Thus, theories or explanations attempting to understand *gangs* need to instead be directed at understanding *groups* and *group-related occurrences*.

Turning now to specific discussion of the Eurogang definition, it is also necessary to discuss some of the limitations of the validity of the Eurogang definition in practice. Notably, researchers who prescribe to the Eurogang Program (and thus to the use of the Eurogang definition) often make conceptual assumptions beyond the Eurogang definition about the kinds of groups that they are interested in. For instance, the Eurogang definition highlights illegal activity as a central component of a gang's identity (Weerman et al., 2009). It has been demonstrated, however, that such a definition picks up a wide range of groups including those not typically treated by researchers as street gangs, e.g., ravers, public drug takers (Aldridge et al., 2012; Medina et al., 2013), and alt-right/domestic extremist groups (Pyrooz et al., 2018; Reid & Valasik, 2018). Accordingly, while such groups and their members may meet Eurogang definitional criteria,[18] they are not typically considered gangs and are seldom the focus of gang study (Klein, 2014). Instead, researchers tend to concentrate on groups that they consider more prototypically gang-like (e.g., groups which engage in higher levels of violence; as violence is considered prototypical of gangs, Decker, 1996; Decker & Van Winkle, 1996; Felson, 2006; Melde & Esbensen, 2013; Van Hellemont & Densley, 2021). If such groups are being conceptually distinguished from street gangs, despite meeting the same definition, it is evident that researchers are in practice employing alternative gang concepts to

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that facilitates the elucidation of intrapersonal and/or interpersonal processes of psychological relevance? Due to such requirements, I argue it is necessary to consider construct validity in this stricter sense.

[18] And, as Reid and Valasik (2018) note: such groups may even *self-identify* as gangs or gang members (e.g., some alt-right groups: Simi et al., 2008; Wooden & Blazak, 2001), which is typically considered sufficient for a group/individual to be included in a gang study (Esbensen et al., 2012).

make such distinctions and that they are not relying conceptually on the Eurogang definition to carve out groups of interest.

Additional examples of a reliance upon alternate gang concepts can be found in contemporary research on the rehabilitation of gang members, such as Mallion and Wood's (2020a) evaluations of the applicability of the Good Lives Model (Ward, 2002; Ward & Maruna, 2007) rehabilitation framework for street gang members. As part of these evaluations, Mallion and Wood highlight the need to focus on an individual's internal/external capacities and motivations as treatment targets, rather than solely upon empirically derived risk factors. The Eurogang definition is employed at the beginning of the review (as part of the conventions of operating under the Eurogang Program) yet it is clear that the authors employ a different perspective of what a gang member is, as these assumptions lead to their specific treatment recommendations. The researchers hold the *agentic human actor* as the core concept of analysis, not an antisocial Eurogang member.[19]

I would also add that even those conducting primarily empirical research as part of the Eurogang Program have demonstrated that they utilise differential approaches to identifying gangs and their members. For instance, despite it being documented that Eurogang, self-nomination, and association approaches to identifying gang members tend to distinguish

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[19] Two points in regards to this: (1) their analysis emphasises the individual rather than the group level, the same argument applied at a group level would hold *groups as agentic actors* as the unit of analysis; (2) I anticipate that some might disagree with the fact that considering an individual to be a member of an antisocially defined group also renders consideration of that individual as antisocial (as it is possible to belong to a group that engages in crime without being criminal yourself, i.e., these properties can be thought to exist at different "levels"; a factor considered within the Eurogang Manual itself, Weerman et al., 2009). However, I would respond that the lack of explicit conceptualisation of a Eurogang member as an *individual* (i.e., definitional criteria are only applied to capture membership to a gang as a group) places a direct dependence on the group-level definitional framing, as gang members are considered to be individuals who belong to a group that meets the criteria to be considered a gang. While there is a consensus definition of *gangs as groups*, definitional approaches do not provide an explicit framing of *individual gang members* (Curry et al., 2014, see also Bolden, 2012), meaning work at this "level" leaves researchers dependent on group-level constructs, their own implicit or explicit conceptualisations of what it means to be an individual gang member, or the conceptions of individuals who label themselves or others as gang members (Curry et al., 2014; Esbensen, Winfree et al., 2001).

largely non-convergent samples of individuals (Matsuda et al., 2012), it has been commented that some Eurogang researchers continue to utilise these methods of gang identification instead of the Eurogang approach (Dyberg-Tengroth, 2019). It is plausible that such a trend is primarily attributable to the pragmatic requirements of surveying gang members as opposed to the conceptual origins of the approach (a justification which nevertheless presents issues of conceptual validity). Regardless, it is evident researchers have deemed that alternative identificatory approaches have clear utility for their research demands, suggesting particular advantages over the Eurogang definition.

5.1.2. Explanatory Utility of the Gang Construct

As has been stated above, a central aim of gang research is to develop an understanding of gangs and gang occurrences that can inform practice and promote public safety by reducing the harm and victimisation that results from crime. In other words, we are interested in gangs because we are interested in reducing crime and the harms that come along with this. Thus, for the gang label to be useful, it is necessary for it to provide researchers with insight into the causes of crime and other negative outcomes, offering opportunities for prevention, intervention, and management. This interest in crime is largely responsible for why researchers have argued for the inclusion of *criminality* in many gang definitions (e.g., in the *Eurogang* street-gang definition; Esbensen & Weerman, 2005; Weerman et al., 2009; see Wood & Alleyne, 2010).

Unfortunately, the inclusion of *criminality* into gang definitions causes significant theoretical problems as explanations of crime then become tautological (Ball & Curry, 1995; Bursik & Grasmick, 1993; Curry, 2015; Short, 1990, 1996; see also Klein, 1995). In brief, researchers and practitioners are primarily interested in gangs because they are concerned with explaining and stopping crime. Yet *criminality* is a prerequisite for something to be considered a gang in the first place. This means that attempts to generate theories of gangs (as

they are currently defined in the literature), will not be useful for understanding crime as the resulting theories amount to *criminal groups* cause *crime*, offering little value to practice. While it might be suggested that policy be targeted at shutting down or banning these groups, such a suggestion is not only ethically problematic (see Hallsworth & Young, 2008; Irwin-Rogers & Pinkney, 2017; P. Williams & Clarke, 2016) but it is also practically unhelpful as crime is already illegal and making it "double illegal" is unlikely to change anything.

Despite arguments that including criminality within gang definitions presents issues of tautology, it appears that those operating under the Eurogang Program (or any research project with gang definitions which centre on criminality) disagree. Klein and Maxson (2006) directly reject the concerns surrounding problems of tautology that are said to arise when including criminality in a gang definition. Their rationale consists of two key assertions:

> First, because gangs vary so widely in their criminal orientations and involvement, these can be studied without circularity; i.e., one can readily predict to levels, types, and circumstances of criminal involvement. Second, crime is not the only aspect we study and predict. The dependent variables of gang research often include cohesiveness, leadership, organisational sophistication, size, gender, ethnic variations, community embeddedness, and so on. Including criminal involvement or orientation in the definition facilitates rather than hinders such research. (p. 8)

Regarding the first point, it is possible to agree that such assertions defend the strictly *empirical* study of gangs from critiques of tautology (e.g., for measurement tasks or statistical tasks such as prediction). It is argued that because criminality refers to the antisocial identity of *all gangs*, and because individual gangs can vary considerably from one another in terms of how their antisociality is manifest, it is possible to study and predict the delinquent

activities of singular groups with little correlational overlap between definitional and outcome criteria. Similarly, the criminality of a gang at a given time point does not predetermine engagement in criminality at another timepoint, the consideration of a group's criminality at one timepoint may therefore be considered valuable for predicting future behaviours. Likewise, because the criterion of criminality refers to the general group identity and not any single activity or outcome, it is arguable that a specific criminal outcome of interest (e.g., drug offending) will not be so closely related to all other general delinquent tendencies/identity properties of the group so as to render the inclusion of such traits tautological. The risk of statistically accounting for an outcome based on the weight of a singular predictive construct may therefore be considered low. Including the criterion of criminality in a gang definition for empirical purposes (e.g., identification, measurement, prediction) may therefore be considered justified.

However, it is necessary to emphasise that the above justifications are primarily made in relation to *predictive-* or *measurement-*based research with minimal epistemic demands (i.e., low knowledge production demands). For instance, questions of measurement may be answered by appeal to *descriptive properties* (i.e., how many of *x* possess the properties of *a*, *b*, and *c*?). Similarly, predictive questions can be answered by appeal to relations pertaining to *likelihood* (i.e., temporal and correlative properties). In both instances, the inclusion of criminality within a gang definition does not interfere with the answering of the question. Alternatively, for more complex *theoretical* or *explanatory* tasks involving gangs, such as the discovery and elucidation of the etiological or causal processes/mechanisms driving criminal outcomes, the kinds of properties, processes, or mechanisms that can be appealed to are considerably limited by the predefining of the explanatory domain to one of criminality (and the multifactorial nature of what "criminality" refers to). In other words, the predefining of gangs as criminal groups similarly predefines the kinds of explanatory accounts that are, or

can be, given for criminal outcomes. For instance, "criminal groups cause crime *because of their criminal components and processes*" (i.e., due to criminal members, antisocial modelling, social learning of criminal behaviour, cognitive distortions, moral disengagement, antisocial group norms etc). That is, the argument is circular.

An alternative explanation may better result from considering the general trajectories that different groups can take, whether antisocial or prosocial, and considering the properties, processes, and mechanisms responsible for such trajectories without explicit focus on antisocial outcomes. In examining trajectories, it also makes greater sense to hold groups as the conceptual focus as – from a theoretical perspective – the construct of groups facilitates better investigation into "pre-gang" and "post-gang" groups as well as "near-gang" and "non-gang" groups, giving a more comprehensive emphasis on *group phenomena* and the processes underlying group trajectories and transformations.[20]

In relation to the second point of Klein and Maxson's rebuttal – that crime is not the only aspect of gangs that researchers seek to study and predict – it should be noted that while this is arguably true, criminality is still the *central focus* of much of gang research (hence the persistent arguments for the inclusion of criminality within gang definitions, see Esbensen & Weerman, 2005; W. Miller, 1980; Sharp et al., 2006; Weerman et al., 2009; Wood & Alleyne, 2010). Where criminality is not the primary emphasis, it is typically held secondary.

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[20] From the standpoint of a theorist, it is very difficult to construct an explanation for the emergence of gangs and the possible trajectories that gangs can take (including becoming non-criminal groups) if part of this change involves a move away from criminality (as this group now ceases to be a gang). If the group is the core concept of analysis, the construct of "group" does not change whether that group engages in particular kinds of behaviour or not, making it more stable and of greater suitability for considering the processes underlying different trajectories and transformations. This argument is the same as that made in correctional psychology against the holding of "offenders" as the core construct of analysis and instead for "individual agents" or "persons". Not only does this approach have the pragmatic and ethical benefit of helping to destigmatise professional practice by reducing the effects of labelling (Willis, 2018), but it also offers greater explanatory value by broadening the scope of consideration to look beyond offence-related characteristics and consider a broad range of behaviours, motivations, changes in identity, life roles, personal trajectories, and transformations (Ward, 2002, 2016; Ward & Maruna, 2007). It is this kind of scope that offers greater opportunity to facilitate important outcomes such as desistance.

For instance, Klein and Maxson (2006) list features such as cohesiveness, leadership, organisational sophistication, size, gender, ethnic variation, community embeddedness which are deemed important to consider *due to* a desire to understand the relationship between such features and criminality, not separately from it. Undoubtedly, for identifying the different kinds of gangs that exist, or which gangs/gang members engage in different levels or kinds of behaviours, the inclusion of criminality poses little immediate epistemic threat on its own (as its inclusion is justified by the need to count and identify gangs or gang threats). When seeking to *explain* gang occurrences however (e.g., gang formation, gang cohesion), the outcomes of interest are predefined *in direct relation to criminality* (i.e., criminal group formation, criminal group cohesion), and when subsequent investigations seek to draw links between these occurrences and criminality, the critique of tautology is once again presented (i.e., for identifying the causal relationship between criminal group cohesion and crime). Hence, due to their predefining as such, these foci of gang study are *not* separate from criminality.

The emphasis on *gang-specific* or *criminal* occurrences also valences the kinds of explanations that can be developed and the kinds of mechanisms or processes that can be appealed to. Appealing to general processes or mechanisms which result in general behavioural outcomes is likely to offer greater utility than seeking *gang-specific* processes or mechanisms, drawing into question the specific gang emphasis (rather than an emphasis on group phenomena). To overcome the tautology affecting current explanations for gang occurrences, an approach that does not explain *crime* by reference to *criminal groups* (or criminal correlates) needs to be developed. Instead, such accounts should look at the various processes responsible for producing a range of outcomes within a group. By explicitly removing the *criminal* label from the gang for explanatory purposes, and instead working with the *group*, researchers can begin to better disentangle features of interest. Holding

groups and *group phenomena* as targets of explanation instead of gangs or gang-related phenomena, will allow for insight into the varying trajectories, motivations, and behaviours that groups such as gangs can display that extend beyond *criminality*. For instance, trajectories such as group-level transformations into other kinds of groups (e.g., community/friendship groups), or non-criminal motivations for engaging in prosocial activities.

Furthermore, although researchers are typically interested in understanding gangs to figure out how to reduce crime, an accurate understanding of the groups we commonly refer to as gangs should not focus solely on antisociality as this is only part of the picture. This may be recognised to a certain degree within gang research, demonstrable through examples such as the consideration of the various reasons that gangs form (i.e., need to belong, sense of identity, for perceived protection; Klein & Maxson, 2006); the acknowledgement that most of the time gang members are not offending (Campbell, 1984; Decker & Van Winkle 1996; Fleisher 1998; Klein, 1971, 1995); and some of the non-criminal correlates of gang membership (e.g., mental health outcomes, Beresford & Wood, 2016; educational outcomes, Pyrooz, 2014).[21] Yet, the explananda of prevailing gang theories are seldom such outcomes, let alone *prosocial* or *positive* outcomes. Taking a "big picture" view of these groups will not only provide a better understanding of the motivations, functions, and behaviours of these groups and their members in terms of criminality, but also in terms of the prosocial aspects of the gang – the very thing criminal justice prevention efforts want to encourage. Thus, from a theoretical perspective it is imperative that we move beyond a construct that labels gangs as perpetually criminal and instead adopt the richer concept of *groups*.

5.1.3. Summary of Analysis

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[21] It should be noted that these outcomes are still considered to be particularly negative in terms of valence.

In summary, because the gang construct (a) demonstrates a lack of construct validity due to its status as a *non-primary kind* that depends on social judgements, and (b) adds little value to causal understandings of crime, I argue that gangs and gang-related occurrences should *not* be the emphasis of scientific explanations. Instead, I contend that it is necessary to move beyond the gang label and focus explanatory efforts on the more robust *primary kind* of *groups*. By shifting the focus of explanation from *gangs* to *groups*, researchers can expand the current view of gangs beyond just being a perpetually criminal group.[22] Ultimately, this will help to account for the fact that gangs engage in a variety of behaviours and some may evolve into prosocial entities, while others may not, allowing researchers to determine the causal mechanisms resulting in these distinct behaviours and trajectories.

5.2. Beyond Gangs: How to Conceptualise a Group?

I have argued that to progress the theoretical domain of gang research, it is necessary to direct explanation at what *gangs* actually are at the foundational level – *groups*. To achieve this, a working conceptualisation of *groups* is required. In many sciences, and particularly the behavioural sciences, the logical step here would be to decide upon or construct a definition of groups. However, lengthy and time-consuming debates are likely to follow, particularly considering that debates over definitions are evident in many research areas, for example: desistance (see Rocque, 2017); terrorism (see Martini & Njoku, 2017); stalking (see Petherick, 2017); and of course, gang research (see Curry, 2015; Decker et al., 2013; Wood & Alleyne, 2010), to name a few. Such debates can hinder constructive and efficient progress.

The primary reason definitions are so frequently debated is that they typically require the identification of necessary and sufficient conditions (e.g., three or more members,

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[22] While some gang researchers may recognise that gangs are not in practice "perpetually criminal" (i.e., these researchers hold personal assumptions about what gangs are and how they exist), this is not reflected in the core definitional emphasis of gangs. Currently, if a group is not criminal it cannot be considered a gang. If a gang ceases to be criminal, it is no longer a gang. Gangs, by very definition, are *perpetually criminal*, as they cannot *be* otherwise.

criminal, durable). As Thagard (2019b) describes, this works well where necessary and sufficient conditions are readily identifiable (e.g., in mathematics). In the social and natural world however, occurrences are far too varied, complex, and dynamic to be understood in such terms, resulting in the development of overly inclusive or exclusive definitions. For instance, members of a family may share a number of overlapping facial similarities (e.g., nose, eyes, head-shape, hair colour, etc.) without each member of that category (family) possessing all of these features. Thus, *family resemblance* cannot be captured with a strict definition, as not every member possesses the same features (Wittgenstein, 1953/1958). Hence, Thagard argues that researchers working in most scientific fields should move past attempts to develop definitions by identifying necessary and sufficient conditions and instead utilise a more suitable approach to creating a comprehensive conceptualisation of a construct, which he calls *three-analysis*.

5.2.1. Escaping the Constraints of a Definition: Three-Analysis

Traditional definitions developed using necessary and sufficient conditions are useful for operationalising a construct in order to complete empirical tasks such as measuring prevalence rates of gangs or comparing members of different categories. A three-analysis uses three *tiers* or *phases* of analysis to systematically produce a conceptualisation of a construct in an accurate and comprehensive manner that also sets the foundation for coherent theory generation (i.e., explanation). The *first tier* requires the identification of exemplars of the concept to be understood. The *second tier* involves the identification of the typical features of these exemplars. Finally, the *third tier* focuses on explanation; "what does the concept explain?" and "what is it explained by?" To give an example of how this may look when applied to a concept in the forensic setting, a very brief and non-exhaustive three-analysis is presented on the notion of *crime*.

(1) *Exemplars*: Sexual assault; kidnapping; destruction of property; treason; possession of a controlled substance; trafficking; speeding; not dressing modestly; loitering; shoplifting; conspiracy; recognising holidays not directly related to God; attempted murder, public displays of affection; indecent exposure; fraud; blackmail; obstruction of justice; public intoxication; neglect.

(2) *Typical features*: intentions, actions, or omissions transgressing legal boundaries; can cause or risk causing direct or indirect harm to another person or institution.

(3) *Explain*: when/how/why a person is considered to have violated the rights of others and how to respond to this transgression.

Explained by: social and normative judgements, laws, evidence of what is best for society, biological/evolutionary needs (e.g., cohesion, human need for safety).

This three-analysis approach is useful in overcoming the problem of deciding where to draw a concept's definitional boundaries for explanation. It also helps to overcome one of the major problems of using definitions in the behavioural sciences, that they are "overburdened as the carriers of knowledge" (Haig, 2012, p. 60). Definitions are often presumed to be purely descriptive, yet it is evident that many include theoretical and explanatory assumptions (e.g., including criminality in the *Eurogang* definition) and thus blurring the lines between description and explanation. This causes problems in identifying causal mechanisms, since the described concept does not necessarily exist in the assumed way. Three-analysis overcomes this problem by systematically separating the description and explanation phases by first identifying exemplars to act as reference points for outlining typical features, and then holding these typical features as explanatory targets (which theories can be produced to explain). Because three-analysis disentangles surface descriptions from causal properties, this approach also ensures that any causal mechanisms identified are robust

and relevant to the concept being explained, as explanation is targeted directly at explaining the emergence of typical features (valid explanatory targets), rather than broadly trying to explain a concept itself such as "gangs", "social change", or "crime".

5.2.2. Summary of Analysis

Current definitional approaches used in gang research requiring the identification of necessary and sufficient conditions fail to accurately capture a concept in a manner that is useful for scientific explanation. To overcome these problems, three-analysis is proposed as a suitable alternative due to its ability to richly capture complex concepts utilising three key phases. The first two phases involve the systematic description of the concept in question, while the third phase is concerned with explanation. Importantly, these phases allow descriptive properties to be disentangled from causal properties, thus identifying robust typical features, which can be understood through reference to relevant explanatory theories. By allowing researchers to highlight valid targets of explanation (typical features) and presenting a framework to draw upon, and integrate, a broad range of explanatory theories, three-analysis is able to overcome the limitations of traditional definitional approaches, which are more suited to empirical tasks, whilst offering superior explanatory utility. Thus, a three-analysis of *groups* is recommended to overcome the theoretical inertia caused by an overdependence on gang definitions.

5.3. Applying Three-Analysis to Groups

A comprehensive three-analysis of groups requires a thorough description of what a group is – and thus at the foundational level what a gang is. The description phase (*tier one* and *tier two*) requires the identification of exemplars and typical features, which is then followed by an in-depth explanation of the processes which produce these typical features (*tier three*). The current focus of this section is on the descriptive phases of the three-analysis (identifying exemplars and typical features) whilst demonstrating how general domains of

explanation may be explored further and integrated in future research to explain the emergence of typical features.

The following is a preliminary attempt to overcome the current conceptual, validity, and definitional issues plaguing gang research. Conducting this analysis should prompt a shift in approach within gang research by presenting a clear conceptual picture of what groups are by including key exemplars; disentangling descriptive and explanatory features of groups; and identifying explanations for both prosocial and antisocial group features.

5.3.1. Tier One: Exemplars of Groups

Because our overall interest is in "groups which can sometimes engage in normatively problematic behaviours", the exemplars selected reflect this whilst still keeping a broad enough scope so that a range of typical features can be identified. These include:

a) "Gangs": e.g., Mongrel Mob, Black Power (Gilbert, 2013), Mara Salvatrucha (MS-13; Wolf, 2012), the Crips and Bloods (Covey, 2015)

b) Youth groups: e.g., YMCA and Boy Scouts (Macleod, 1983)

c) Church/religious groups: e.g., Christian groups: Catholic, Baptist, Methodist church groups (Finke & Stark, 2005)

d) Cults/new religious movements: e.g., Scientology, Heaven's Gate (Zeller, 2014)

e) Fraternities and sororities: e.g., "Greek" houses in United States universities (Boeringer, 1999; Torbenson & Parks, 2009)

f) Hip-Hop groups/collectives: e.g., Wu-Tang Clan (Elliott & Hess, 2007), Odd Future Wolf Gang Kill Them All (Carter & Welsh, 2018)

g) Military and police units: e.g., US military groups (Laurence & Matthews, 2012), US Police Departments (Shane et al., 2017)

h) Sports teams: e.g., the All Blacks (Grainger, 2008), Barcelona, Real Madrid (Lowe, 2014)

i) Rotary clubs: e.g., clubs/groups within the Pacific Islands and Aotearoa-New Zealand (Rotary International, 1999)

j) Political parties: e.g., US Republican and Democratic Party (Noel, 2016)

k) Families: e.g., the reader's family, the author's family.

5.3.2. Tier Two: The Typical Features of Groups

To capture the "family resemblance" of groups, it is important to identify general features applying to most (but not necessarily all) of the exemplar category members. Usefully, a number of researchers have paid considerable attention to debating and investigating what the necessary and sufficient features of groups are, and these have been summarised in Forsyth's (2018) recent review of group dynamics. This review contains a discussion of group definitions and was utilised in conjunction with the above exemplars and broader literature to identify the typical features of groups. The following is a list of typical group features:

- two or more individuals (Turner, 1982): There has been considerable debate about whether groups can consist of as little as two people, or if these dyads should not be included under the "group umbrella" due to the different kinds of processes that occur in a group of three people versus in a dyad (Moreland, 2010; K. D. Williams, 2010). This is also the reason many gang definitions have opted for a minimum of three members (Esbensen & Weerman, 2005). However, the purpose of this three-analysis is not to identify necessary or sufficient features, instead it aims to capture a broad list of features which will ultimately be unpacked and investigated providing deeper

understanding into interpersonal relations within particular contexts. As such, a lower threshold of two or more individuals has been adopted.

- members think of themselves as a group, have a sense of inclusiveness, and communicate in person and/or technologically (Frey & Konieczka, 2010).

- members interact with the shared understanding that they are a group and behave in a manner showing commitment to the group (Kerr & Tindale, 2014).

- members engage in relational/socioemotional interactions (Bales, 2001); and hold a shared set of norms, values, beliefs, and/or regulations which guide members' behaviour (Sherif & Sherif, 1956).

- group and group members are dynamic in nature (i.e., group may change in size, complexity, function, individual's beliefs may change, etc.).

- members influence each other with their actions/interactions (Shaw, 1981).

- members are interdependent; sharing goals and common interests (Gould, 2004; Lewin, 1948), and may work together to achieve these goals (Keyton, 2002), however groups and their members may also possess goals without taking action towards achieving them, or engage in actions that are counterproductive to goal achievement.

- while belonging to the group, individual members are likely to belong to other groups and hold other interests (Forsyth, 2018).

- group may contain smaller subgroups (e.g., main gang label contains gang chapters);

- group exists within a wider social context and may be a subset of a larger organisation/group (e.g., fraternity within a university).

- durability (members can come and go but group continues).

- use of symbolism to demonstrate group identity/membership.

- group may control a particular territory/facility/enterprise, and individuals may spend considerable time with other group members (Forsyth, 2009, 2018).

- members may have different roles and hold different statuses within the group, e.g., leader (Hackman & Katz, 2010; Sherif & Sherif, 1956).

- individual members are linked to the group as a whole as well as other individual members (Bosse & Coughlan, 2016); however, members may not be directly linked to all group members, instead being connected indirectly (Dunbar, 2008).

- group members tend to share psychological qualities and categorical and demographic characteristics (Lazarsfeld & Merton, 1954).

- the group is a unified whole with a group identity and members have feelings of being "in the group" even when not physically together (see Forsyth, 2018).

5.3.3. Tier Three: Explaining Groups

Explaining the typical features of groups will provide a more complete understanding of the causal processes that lead a group to be the way that it is. Such an understanding can therefore offer insight into a wide range of individual and group related phenomena, e.g., gang violence. Importantly, because groups are social entities which exist within a sociocultural context (Forsyth, 2018), explanations of groups should consider not only individual level/scale explanations, but also social/group, individual, and sociocultural levels/scales of explanation (Thagard, 2019a, 2019b), and take a developmental approach to acknowledge their dynamism, evolution over time, and differing trajectories. To identify explanations for the above typical features, the current study has drawn upon Forsyth's (2018) review. For heuristic reasons, the broad range of dynamics discussed by Forsyth have been refined to reflect six overarching types of group process. These are: a) formation and early development processes; b) evolution and extinction processes; c) influence processes; d) performance processes; e) conflict processes; and f) contextual processes. Each process can be unpacked through reference to relevant literature to identify various explanations, thus allowing the above typical features to be understood in a dynamic and comprehensive

manner, relating to each group process. These phases are briefly described and examples of relevant theories are given below:

a) *Formation and early development processes*: focus on explaining how and why groups form and might relate to ideas such as: theories of group cohesion (Dion, 2000); entitativity (Campbell, 1958); self-categorisation theory (Turner et al., 1987); humans' need to belong (Baumeister & Leary, 1995); social identity theory (Tajfel & Turner, 1979); and the practical benefits of belonging to a group, e.g., protection, combining resources, social support etc. (Sterelny, 2012).

b) *Evolution and extinction processes*: while these may largely be similar to formative processes, evolution and extinction processes relate to a change in the value of belonging to a particular group resulting in either: a shift in the groups purpose, member turnover, or change in embeddedness of group members. This may occur through factors such as shifts in reward contingencies for group membership, and/or the availability of compelling alternatives (Forsyth, 2009).

c) *Influence processes*: are the processes by which members of a group influence each other as well as the wider group, and how the group influences the cognitions and behaviours of individual members. Relevant factors may include theories relating to: group structure (Benne & Sheats, 1948); conformity (Asch, 1951), obedience to authority (Milgram, 1963), deindividuation (Diener, 1980).

d) *Performance processes*: are the processes that influence how a group functions or performs together. Theories of factors relevant to group performance may include theories of social facilitation (Triplett, 1898); decision-making (Forsyth, 2018); social loafing (K. D. Williams et al., 1981); evaluation apprehension theory (Cottrell, 1972).

e) *Conflict processes*: can be at the intra- or inter- group level and relate to how conflict arises within and between groups, how it is dealt with, and the subsequent effects of

such conflict. Relevant theories may include those relating to: cooperation and competition (Deutsch, 2006); reciprocity (Falk & Fischbacher, 2006); conflict resolution (Deutsch et al., 2011); and social identity (Tajfel & Turner, 1979).

f) *Context processes* include environmental, social, and political circumstances that may influence groups. Relevant theories relate to how contextual factors influence behaviour, such as: a) situational context – e.g., physical spaces/constraints such as local architecture/city design (Perkins et al., 1993), and the available resources, and interactional and behavioural opportunities provided by the physical context (Sterelny, 2012); b) situational influences – e.g., contextually derived power or authority (Zimbardo, 2007); c) sociocultural context – e.g., cultural norms, values, and regulations affecting what kinds of behaviours groups of people engage in (Yuki & Brewer, 2014) and whether these behaviours are considered to be acceptable, morally wrong, or criminal by society (Tadros, 2016).

5.4. Using the Three-Analysis Group Framework to Understand a Specific "Gang"

I propose that the technique of three-analysis offers a systematic way to unpack the notion of *groups*, which can be facilitated by comprehensive reference to relevant literature and research. In doing so, this approach provides a thorough conceptualisation of what a group is. The typical features and explanatory processes identified above are some of the key factors that need to be considered when formulating, understanding, and addressing specific exemplars of groups such as gangs. Referencing this *group* framework when considering specific kinds of groups will help to avoid the "tunnel vision" and preoccupation on unitary features – such as with *criminality* in the study of gangs. This will allow for a more specific understanding of how particular groups function and how specific characteristics and behaviours can emerge in particular contexts. To demonstrate how this group framework may

be utilised to better capture specific groups, below is an example of how it may apply to an exemplar – Aotearoa-New Zealand's Mongrel Mob.

5.4.1. The Current Perspective: Viewing the Mongrel Mob as a Gang

To briefly introduce this exemplar, the Mongrel Mob is considered to be one of Aotearoa-New Zealand's most notorious "gangs" (Gilbert, 2013). In terms of definitions, the Mongrel Mob has been referred to as a "street-gang" (Gilbert, 2013), however it is typically defined as an "ethnic gang" (Winter, 2018), or one of the many variations on this theme, e.g., an "ethnic supergang" (Meek, 1992), "traditional ethnic gang" (Alach, 2011), etc. The definitions/categories of "street gang" and "ethnic gang" tell us very little about what the Mongrel Mob actually is except for the fact that the group and its members are "street-oriented" and/or "ethnic",[23] and "criminal" – offering little explanatory insight as well as providing highly problematic labels. A number of stakeholders have particular interest in the Mongrel Mob due to their relationship with crime. For instance, Police, Justice, Corrections, politicians, and researchers who may be interested in the overrepresentation of Mongrel Mob members in Aotearoa-New Zealand prisons (Baird, 2018). The following is a demonstration of how drawing upon the group three-analysis framework can help to develop a coherent and more holistic understanding of the Mongrel Mob that extends beyond criminal and ethnic assumptions.

5.4.2. The Mongrel Mob as a Group: Mapping Typical Features

Drawing upon the typical features of *groups* it is possible to identify how these may manifest in relation to a specific exemplar – i.e., the typical features of the Mongrel Mob. Examples of such typical features may include:

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[23] A particularly problematic inference, which further perpetuates colonial perspectives of indigenous groups and, through its emphasis, makes the bizarre assumption that only individuals from minority groups have "ethnicities".

a) *Two or more members*: As of March 2018, estimated to have more than 1100 members in Aotearoa-New Zealand prisons alone (Baird, 2018).

b) *Group changes in size and complexity over time*: began as a smaller loose-knit unit of youths, presently it is better established, better organised, and much larger (Gilbert, 2013).

c) *Group members tend to share psychological qualities and categorical and demographic characteristics*: initially consisted largely of Pākehā (New Zealand European) members from Wellington and the Hawkes Bay, however evolved to include a significant number of Māori members; shared rebellious nature; lower levels of formal education compared to general public, etc. (Gilbert, 2013).

d) *Controls a particular territory/facility/enterprise, and individuals spend considerable time with other group members*: Mongrel Mob chapters are known to have "headquarters", clubhouses, and/or gang houses around Aotearoa-New Zealand, which vary in complexity and size. This is where members: congregate, socialise, hold meetings, spend time, etc.

e) *Use of symbolism*: The Mongrel Mob use symbols and practices to signify group identity/membership (e.g., bulldog emblem, gang colours, tattoos, gang patches, leather clothing, swastika, Seig Heil salute, and guttural bark).

f) *Shared set of norms, values, beliefs, and regulations that guide members' behaviour*: The Mongrel Mob holds a shared set of values including notions of brotherhood, loyalty, and rebellion that contribute to the formation of "laws" such as *Mongrelism. Mongrelism* is a law or guiding principle that embodies the rejection and subversion of mainstream social norms and expectations, manifesting as antisocial behaviours such as violence in particular contexts (Gilbert, 2013).

g) *Mongrel Mob members are linked to the group as a whole as well as other individual members*: demonstrated through group identity features such as individual use of the group's symbols as well as individual friendships and associations within the group.

5.4.3. The Mongrel Mob: Explaining Typical Features

Having identified the above typical features, it is possible to draw on the different domains of explanatory processes identified during the group three-analysis to highlight ways in which we might explain the emergence of these typical features. Specifically, this means drawing upon theories relating to the processes of *formation, evolution and extinction, influence, performance, conflict*, and *context* to demonstrate how these typical features have come to be. Below is a brief demonstration of how different explanatory theories may be brought together in order to explain the emergence of the above typical features of the Mongrel Mob:

Explanations for "two or more members" – Theories of contextual opportunity and social cohesion can be utilised to explain how individuals occupying similar geographic areas and social niches are likely to have encountered each other and formed initial friendship bonds. Theories of human needs (i.e., need to belong) and interpersonal attraction may help to explain why these individuals were attracted to each other as friends (e.g., shared historical experiences, attitudes, hobbies, etc.). Similarly, theories of entitativity, group cohesion, and group persistence might explain how as friendships formed and individuals began to spend more time with each other the group came to be seen more readily as a cohesive unit – by both group members and outsiders.

Explanations for "members linked to the group as a whole as well as other individual members" – Due to the group members' shared similarities and experiences, they are also likely to have had similar needs, goals, and aspirations in life; further facilitating the

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formation of intergroup bonds. Theories of group identity formation, self-categorisation, and social identity can be utilised to explain how the characteristics of the group's members (e.g., rebellious, young, creative, free, etc.) as well as stereotypes about the kinds of people they are, are likely to have contributed to how the group was/is viewed by in-group and out-group members. These theories along with theories relating to group-level attraction can also be drawn upon to explicate how the formation of a group identity is likely to have resulted in members feeling connected not only to the other members within the group, but also to the group itself. Positively, strong embeddedness within the group and viewing oneself primarily as part of the group – driven by processes such as deindividuation, depersonalisation, self-categorisation, etc. – may help individuals to cope with negative experiences (e.g., "He said he could fit in and get lost within that group. 'All my problems, all my hate, all my anxieties…these were all locked away and safe'.", Andrae et al., 2017, p. 130).

Explanations for "members are similar demographically, psychologically, etc." – In the Mongrel Mob's early days – due to the geographical context and the demographics of the areas in which this group existed – it was primarily young Pākehā individuals who joined the group – due to having shared needs met by group membership (e.g., the need to belong). The "rebellious" nature of these individuals likely meant that other options for fulfilling their needs such as joining more mainstream groups were perhaps seen as being less viable or desirable by both themselves and members of mainstream society.

Theories relating to specific contextual, political, and cultural influences such as the "urban drift" of Māori can then be utilised to explain how the demographic makeup of the regions in which the early Mongrel Mob was operating came to change as well as how media spread the word of the Mongrel Mob beyond Wellington and the Hawkes Bay. These theories would also demonstrate how joining the Mongrel Mob might have been a particularly valuable option for many Māori. For instance, as a means of coping with the severe negative

impacts that resulted from rapid mass urbanisation (e.g., social and cultural dislocation) as well a range of traumatic historical experiences such as the systematic abuse and victimisation many Māori experienced in boys' residences and other continued effects of colonisation (Gilbert, 2013; Winter, 2018).

Explanations for "members have shared values, norms, etc." – Theories such as those relating to the development of group norms, social identity theory, social categorisation theory, groupthink, conformity, obedience to authority, and context, can be utilised to explain how shared experiences and conflict with mainstream society are likely to have shaped the group's overall values. Factors such as colonisation, marginalisation, neglect, and systemic abuse are likely to have affected many if not most of the Māori members of the group (Gilbert, 2013). As such, it is highly likely that shared attitudes encouraging the unity and protection of group members as well as those opposing mainstream society were held and made more salient within the group – with certain aspects being more readily apparent to outsiders (e.g., anti-society attitudes).

Additionally, anti-authoritarian attitudes/values may have been strengthened as a result of intergroup conflict (i.e., with police, etc.) and the effects of such conflict being felt by the group as a whole – due to strong associations with group identity. This shift likely explains the adoption of *Mongrelism*; a law that embodies the rejection and subversion of mainstream social norms, manifesting as antisocial behaviours such as violence in particular contexts (Gilbert, 2013). However, antisocial attitudes are not the only kinds of values to be formed within the group, for instance, high-ranking Mongrel Mob members holding anti-methamphetamine attitudes have directly banned the drug from many of the group's chapters and tried to engage in removing methamphetamine from local communities (New Zealand Drug Foundation, 2016). Subsequently, as a result of group processes (e.g., obedience to

authority and conformity), members may stay away from methamphetamine or actively participate in lobbying against it.

Explanations for "use of symbols to display group identity" – Explanatory theories such as those relating to values, group unity, cohesiveness, conformity, deindividuation, identity, and labelling may help to explain the Mongrel Mob's adoption of particular symbols. It has been suggested that the Mongrel Mob's name arose after a judge labelled the group members "a bunch of Mongrels" (Kemp & Tulloh, 2005).[24] If this account is accurate, it is likely that the group – already holding anti-authority attitudes – adopted this title as a representation of their anti-authority status. Similarly, other symbols that were adopted include the use of the colour red, swastikas, British bulldogs (usually displayed wearing German army helmets), the "Seig Heil" Nazi salute, swastikas, and motorcycle-club style gang patches. Because the Mongrel Mob is primarily conceptualised as a criminal group, such behaviours are taken to be a reflection of this criminality. The resulting reactions have therefore been to treat these behaviours as being criminal themselves. For example, proposals/attempts to ban gang patches at council and nation level throughout Aotearoa-New Zealand (Moir, 2018).

Yet, the desire to display anti-authority attitudes is not inherently criminal. By viewing the Mongrel Mob as a group (and thus not making a priori assumptions about the intentions of particular behaviours), it may be possible to gain a better understanding of why particular symbols were chosen. For instance, the core symbols of the Mongrel Mob (often displayed through tattoos and gang patches) are the British bulldog depicted with Nazi swastikas and German army helmets. As Mongrel Mob member Dennis Makalio describes (in Kemp & Tulloh, 2010), the British bulldog is a symbol of authority (as the British colonised Aotearoa-New Zealand), and they are depicting it alongside the symbols of their

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[24] It is necessary to note that confirmation of this account has been contested by some (Gilbert, 2013).

coloniser's historical enemies (the Nazis). By looking beyond assumptions of criminality, it is possible to see that this choice of symbols can be viewed as an act of legitimate political and symbolic protest (e.g., by comparing the actions of their colonisers to the atrocities committed by the Nazis during World War Two). Thus, attempts to ban the use of these symbols/protests reflect attempts to silence a voice of protest.

Similarly, by drawing solely on mainstream theories it is possible that heavy facial tattooing within the Mongrel Mob can be viewed as a means of unifying group members; representing group membership in prison (where gang colours and symbols are otherwise forbidden); and as a means of social control. Additionally, by drawing upon theories relating to the Aotearoa-New Zealand context, in which the Mongrel Mob exist, Mongrel Mob related facial tattoos may be seen as an example of *moko* (Nikora et al., 2007). While *tā moko* is a sacred cultural practice too complex to discuss in depth here (for more thorough discussions see Higgins, 2013), briefly, it involves tattooing an individual of Māori descent in a manner which typically draws upon and depicts their *whakapapa* or family lineage (Higgins, 2013).

5.5. Implications of Using a Group Three-Analysis

It is evident that utilising a three-analysis framework to develop an understanding of groups helps to extend researchers' focus to consider all aspects of what a group is and does. By shifting the focus away from ambiguous social constructs (e.g., gangs) and their necessary and sufficient conditions (e.g., criminality) the three-analysis approach outlines a systematic method of identifying robust typical features to instead act as valid targets of explanation. Additionally, during the explanation phase (*tier three*) the framework causes researchers to draw upon a range of individual, social, and developmental processes to explain the emergence and maintenance of typical features at different points. As a result, this approach provides better insight into the reasons that specific groups form and subsequently engage in

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particular behaviours, thus providing significant explanatory power over current approaches that rely upon gang definitions.

Additionally, by broadening the scope of investigation beyond attempts to explain "crime" and shifting the focus from gangs to groups, this three-analysis group framework approach is able to view "normatively problematic groups which engage in antisocial behaviour" in a holistic manner that does not construe them as inherently and perpetually criminal. Importantly, this avoids the negative impacts of labelling entire groups as criminals and facilitates the identification of mechanisms responsible for a range of behaviours. Thus, instead of taking an overly simplistic definitional approach to gangs, this three-analysis group framework acknowledges and accounts for the diversity and complexity of these dynamic and goal-oriented *groups* which engage in a range of behaviours (whether antisocial or otherwise) and can take a number of trajectories. In doing so, the three-analysis group framework provides a useful foundation that can ultimately be utilised to draw upon a group's strengths, capabilities, and motivations to pursue intervention goals, such as desistance, reducing victimisation, and promoting well-being.

In making the case for the systematic and foundational treatment of gangs as groups for theoretical purposes, this chapter brings to the forefront a key set of mechanisms for consideration when studying gangs, i.e., *group processes*. While gang researchers have previously highlighted the importance of including group processes into our understandings of gangs, they tend to take a deficit approach, concentrating on how group processes (or gang members' perceptions of their own group processes) might support antisociality and generate crime (see Decker et al., 2013; McGloin & Collins, 2015; Mozova, 2017; Wood, 2014). By utilising three-analysis and shifting the focus to groups rather than gangs, the current approach provides a more comprehensive and fruitful method of identifying how group processes may play a role in all aspects of gangs, including their role in producing outcomes

that we would deem as prosocial. For instance, how group processes within the Mongrel Mob (such as deindividuation, depersonalisation, conformity, groupthink), which are typically understood in relation to antisocial or undesirable behaviours, can be utilised to explain positive or prosocial behaviours such as the development of anti-methamphetamine attitudes, or acting as coping mechanisms to deal with personal difficulties such as the effects of trauma or anxiety.

Similarly, as demonstrated during the three-analysis of the Mongrel Mob, drawing solely on "western" explanations for concepts (e.g., facial tattooing within the Mongrel Mob) limits the kind of explanations that can ultimately be reached. Without understanding the practice of *tā moko* it is possible that facial tattooing of gang members could be falsely interpreted as a simple expression of antisociality, rather than being a manifestation, or an attempt to engage in, an otherwise prosocial cultural practice. By utilising a three-analysis approach there is appropriate scope to acknowledge a broad range of explanatory theories and overcome such limitations, providing a more holistically informed and responsive approach to understanding groups – and thus the groups we commonly refer to as gangs.

A gang theory should capture all aspects of what a gang is, even those that do not centre on criminality and by bringing the fact that gangs are a type of group to the forefront this chapter can help researchers to achieve exactly this. The framework outlined in this thesis explicitly demonstrates how researchers can draw upon not only individual and sociocultural level/scale explanations but also *group* research and *group processes* to better understand what has previously been defined as the "gang problem". By embedding an understanding of gangs within the robust foundations of *groups*, and by treating *group typical features* as targets of explanation, it will be possible to capture a balanced understanding of gangs whilst also targeting our explanations at a valid and theoretically useful construct.

5.6. Chapter Summary

This chapter first presents a rationale as to why researchers who are interested in developing useful theories to address the "gang problem" need to shift their attention beyond *gangs* and instead focus on *groups*. It is argued that such an approach will help to improve scientific theories of particular groups – including those commonly referred to as gangs – by allowing the separation of relevant phenomena from social judgments. Next, this chapter demonstrates that standard definitions – such as the Eurogang definition which are intended for empirical purposes such as measurement – are too crude to be useful in the finer aspects of the research process such as explanation and theory generation. Instead, three-analysis is presented as an alternative approach to conceptualisation because, I argue, it is better tailored to capture a dynamic, comprehensive, and detailed understanding of a phenomenon referred to by a concept. A three-analysis of groups is then constructed in order to move past the theoretical limitations of necessary and sufficient condition definitional approaches and to highlight how a rich description of groups can benefit gang research. Finally, this chapter highlights the types of explanations that can be used to explain the emergence of the typical features of groups and applies this to the exemplar of the Aotearoa-New Zealand "gang" the Mongrel Mob. In doing so, it provides a comprehensive framework for establishing a rich description of what a group (and therefore a gang) is, as well as how theories that explain group occurrences can be utilised to develop a deeper understanding of group/gang behaviours.

In sum, by utilising a three-analysis group framework it is possible to overcome a range of difficulties that are currently affecting gang research.[25] The key benefits of this novel approach are:

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[25] It is also important to recognise that the general critiques made throughout this chapter apply not only to constructs within gang research, but also to numerous other constructs within criminology. Thus, the implications of the approach presented in this chapter extend beyond gang research and may also be utilised to resolve issues in other research areas.

1) It overcomes the impracticalities of attempting to identify psychological and social mechanisms for abstract constructs such as "crime" or "gangs" by providing a host of concrete typical features as explanatory targets.

2) It provides a systematic method, which draws upon a range of diverse processes, to identify the mechanisms that produce these typical features…

3) …thus capturing a more comprehensive representation of groups, providing insight into the mechanisms producing both antisocial and prosocial behaviours;

4) It overcomes numerous ethical and social issues which stem from labelling entire groups as criminal.

5) It accounts for the fact that groups may take different trajectories (including desistance), where previous conceptualisations can view gangs as perpetually criminal.

6) By acknowledging the dynamic nature of groups and the mechanisms behind both prosocial and antisocial behaviours, the three-analysis group framework can ultimately help to inform practice and policy interventions that allow us to work alongside groups such as gangs to promote favourable outcomes.

Importantly, it is necessary to acknowledge that while this chapter presents novel material and provides a means of overcoming a number of significant issues currently facing gang research, there is still considerable work to be done. When demonstrating how three-analysis may benefit the understanding of groups, I have largely focused my efforts on providing a rich description of groups using exemplars and typical features. While it is demonstrated how to draw upon group theories to explain the emergence of the typical

features and how to apply this to specific exemplars, the actual explanatory work provided

here is limited. Further, with the presentation of a novel approach to defining gangs, the

question stands how does this approach fit into the current domain of gang research? The

remaining chapters of this thesis therefore seek to examine such considerations.

Chapter Six: Scientific Frameworks and Gang Research

As a core part of chapter five, I discussed the conceptual limitations of the Eurogang definition for facilitating theoretical development and presented one plausible alternative that addresses the limitations of the Eurogang approach (i.e., a three-analysis of groups). As described at the end of the last chapter, the question that naturally follows is: what does this mean for gang research? For instance, if the Eurogang definition is demonstrated to have significant limitations does it require abandoning? Should it be replaced with a three-analytic approach? How can novel developments be adopted into gang research?

To answer such questions, I extend my scope of analysis to consider the philosophical/organisational frameworks that guide scientific research and how they may be responsible for producing, contributing to, and addressing the issues that I have identified thus far. I characterise the framework underlying gang research as pursuing coordination through *unification*. Specifically, I consider different examples of how this unified approach is being pursued and the assumptions that accompany it. I then discuss a novel alternative to that of unification, namely *epistemic pluralism*, and discuss how an epistemically pluralist position diverges from one of unification. It is contended that an epistemically pluralist approach to coordinating research is likely to better serve the needs of gang researchers than a unificatory approach.

6.1. Unification in Gang Research

Like many concepts in the philosophy of science, the idea of "unification" has been associated with a number of different positions. What such unificatory positions typically share in common is the objective of developing unified accounts of the world's phenomena – usually facilitated through establishing some kind of shared conceptual, theoretical, and/or methodological foundations (Friedman, 1974; Kitcher, 1981, 1989; Schurz, 1999; Schurz & Lambert, 1994). In chapter four I described how the Eurogang Program was established,

some of the major motivations for doing so, and the kinds of strategies developed to facilitate

the goals of the programme – all of which are examples of attempts to coordinate gang

research through unification. To highlight this, I very briefly recap key aspects of the

Eurogang Program with particular emphasis on how they reflect unificatory ideals.

The overarching aim of the Eurogang Program has been to develop a scientific

understanding of gangs that can be utilised to inform effective, evidence-based policy and

practice to address gang harms (Weerman et al., 2009). As part of pursuing such a project,

there have been attempts to align researchers not only in name (i.e., under the Eurogang

umbrella) but also more meaningfully at the points of *epistemology*, *methodology*, and

method[26] – i.e., regarding the kinds of claims and justifications that are upheld as constituting

scientific "knowing" and how to pursue them. For example, the Eurogang Program endorses

values of positivism (viewing gangs as an objective, observable, and measurable entity), the

collection of data through qualitative and quantitative methods,[27] and the inference and

justification of claims through inductive and deductive reasoning[28] (Weerman et al., 2009; for

discussions of such trends see also Brotherton, 2018; Decker, 2016; Fraser, 2017; Hallsworth

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[26] I would like to note that I intentionally focus on "the points" at which alignment/unity is enacted
(e.g., methodology, methods, definitions etc.), as opposed to specific historical formulations of
unificatory positions themselves or the processes which constitute different kinds of unification (e.g.,
derivational versus ontological kinds of explanatory unification, Mäki, 2001; or synthetic unification
versus reductive unification, Morrison, 2000). This is for reasons both of clarity and brevity, given my
emphasis is on what unification means for conceptual strategies (such as gang definitions) and given
the overlapping emphases of differing unificatory positions and processes – the full detail of which,
while important, are beyond the scope of these discussions. Where examples of such positions are
given, this is done so for indicative purposes and is not intended to explore their subtleties.
[27] It is important to note however that, depending on the grain of analysis, there is arguably *some*
degree of pluralism with respect to methodology (i.e., the endorsement of multiple methodological
strategies as viable) in gang research, indicated by the endorsement of *both* quantitative and
qualitative methods. However, some may deem this to be a particularly charitable characterisation
(e.g., Andell, 2019).
[28] This description of induction and deduction is intended in the broader sense (i.e., in terms of the
kinds of reasoning used to draw conclusions in gang studies generally). I specifically wish to
distinguish such claims from more common discussions of inferential reasoning and the Eurogang
Program, such as those which centre on how Eurogang researchers determine whether a particular
group is a gang (or individual a gang member), where such inferences are examples of deduction (see
also Hagedorn, 2015).

& Young, 2008). In pursuit of such goals, the Eurogang definition, the associated Eurogang research instruments (e.g., city-level instrument, expert survey), and the Maxson and Klein typology (Klein & Maxson, 2006; Maxson & Klein, 1995) are all central tools and have been constructed in a manner that facilitates comparative empirical research. Both conceptually and practically, such tools attempt to unify gang research through the establishment of shared research objects, definitions, and classifications.

While less explored in chapter four, instances of *explanatory* unification are also observable in gang research. Explanatory unification relates to the notion that an explanation of "how or why a phenomenon (or phenomena) exists in a particular way" can, and should, be done in a unifying manner (Friedman, 1974; see also Kitcher, 1981, 1989; Schurz, 1999; Schurz & Lambert, 1994). This might involve reducing the number of *derivational patterns* (i.e., forms of argumentation/reasoning) used to account for distinct phenomena (Kitcher, 1989), reducing the number of phenomena to be accounted for, reducing the number of explanatory processes utilised to account for phenomena (Mäki, 2001), or integrating disparate processes or phenomena into a single theory (Morrison, 2000). Various forms of explanatory approaches which achieve such unification have been presented over the decades including those which utilise *covering laws*, *reductionism*, and *unified/multilevel theories*. I briefly expand on each below.

The covering law position maintains that explanations should take the form of universal principles from which answers to "how" and "why" questions regarding the nature of a phenomenon can be deduced (Hempel & Oppenheim, 1948). A more radical form of this position is the pursuit of *grand unification* (Carnap, 1928/1967) in which a "theory of everything" (i.e., a single theory of all of the world's phenomena) is thought to be achievable through identification and depiction of the fundamental/brute principles of the natural world (i.e., through unifying the fundamental forces of physics into a single theory or accounting

for them with a set of mathematical axioms, e.g., Gribbin, 1999; Hilbert, 1902; see also Laughlin & Pines, 2000). Such a position is closely related to that of *reductionism* (i.e., unification through reduction), which posits that the sciences can be unified by identifying the most fundamental account of a given phenomenon (Nagel, 1961). From this position, the details of "higher level" theories or explanations can be accounted for by the details of "lower level" theories/explanations, making lower-level theories more fundamental and, ultimately, more unifying.

In general, contemporary gang research has tended to avoid such single-level or reductionistic preoccupations (see Short, 1965, 1998), instead pursuing explanatory unification through the development of *integrated* or *multilevel* theories, i.e., theories which seek to preserve properties and processes across explanatory "levels" and incorporate them into a single theory (see Ward & Hudson, 1998; Wood & Alleyne, 2010). Some examples include: (a) Thornberry et al.'s (2003) *Theoretical Model of Gang Membership* – a model intended to explain gang membership and offending across the life course which builds upon Thornberry's (1987) *Interactional Theory* which itself attempted to integrate insights from *Social Control Theory* (Hirschi, 1969) and *Social Learning Theory* (Akers, 1977) to explain engagement in delinquency across the life-course by appealing to individual, peer, and social influences; (b) Howell and Egley's (2005; see also Howell et al., 2017) extension of the *Theoretical Model of Gang Membership*; and (c) Wood and Alleyne's (2010) *Unified Theory of Gang Involvement* – which seeks to build upon a number of criminological models of gang membership and offending to include greater consideration of the multilevel processes that may contribute to gang membership and offending (particularly emphasising the added value of incorporating psychological explanations for such occurrences). Additionally, Wood and Alleyne's theory attempts to include consideration of why individuals do not engage in gangs or offending.

It is important to emphasise that these discussions of unification neither assert, nor rely on the claim, that the *entire* gang field is unified. Rather, it is the *pursuit of unity* as an ultimate objective and the overarching "winner takes all" landscape of competition that are indicative of unificatory trends in gang research (see Chang, 2012). In other words, while there is currently a dominant perspective on how gang research ought to be conducted, this prescriptive framework does not necessarily facilitate or represent the interests of all gang researchers. There is limited consideration of how researchers with perspectives that differ from the dominant approach can meaningfully contribute under such a framework. As such, despite there being a multiplicity of extant approaches and perspectives in gang research this is often masked by a greater unifying label and is not cultivated or organised in a manner that maximises epistemic opportunities for growth or knowledge production (Chang, 2012). Indicatively, while a unified approach based on positivist assumptions may coordinate likeminded researchers with similar interests, there are numerous perspectives which it cannot accommodate.

For instance, constructionist and critical researchers often hold very different conceptions of gangs and the purpose of gang research, viewing the "gang" label as a socio-political construct used to blame marginalised groups for wider social problems (Fraser, 2017; Hagedorn, 2015; Hallsworth & Young, 2008; Smithson & Ralphs, 2016), or criminalise resistant identities (Brotherton, 2008, 2018). Similarly, White (2008) emphasises the fluidity of identity – including gang identities – and maintains that an individual can both *be* and *not be* a gang member simultaneously. Even positivist research positions which emphasise different definitional or conceptual depictions of gangs are seen as being in direct competition with the Eurogang approach. Rodríguez et al. (2017) assert that the Eurogang definition is not suitable for examining gangs as an international phenomenon and propose an alternative definition for such purposes (i.e., where the international definition would focus

on a group's *reputation for crime and violence* rather than its *criminal identity*). However, such a suggestion would introduce concerns that researchers were measuring different constructs,[29] thus undermining the Eurogang objectives of engaging in comparative cross-contextual research (Weerman et al., 2009). Similarly, Van Hellemont and Densley (2021) endorse a view of gangs as *violent* groups rather than *criminal* groups. For such an endorsement to be accommodated under a unificatory framework of gang research, current definitions would require a conceptual overhaul in line with this new perspective.

It would therefore appear that operating under a unified framework of research is not having the desired effect of coordinating more than a subset of researchers. In attempt to examine the likelihood that a unificatory framework is suitable for ultimately coordinating researchers (i.e., whether unification should still be upheld as an ultimate goal), in the next section I examine some of the assumptions underlying unificatory pursuits in gang research.

6.2. Conceptual Assumptions of Unificatory Pursuits in Gang Research

Attempts to unify gang research through the adoption of consensus methodologies, methods, definitions, classifications, and explanations reveal several assumptions about the nature of the conceptual strategies that researchers employ and the purposes for which they are employed, particularly assumptions that: (a) conceptual strategies are free from "non-scientific" judgements, (b) knowledge requirements are the same across different contexts and/or a single strategy is comprehensive enough to satisfy a diverse range of epistemic demands, and (c) conceptual strategies are accurate in their representations of target phenomena. I discuss these positions and potential counterarguments below.

6.2.1. Conceptual Strategies are Free of "Non-Scientific" Judgements

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[29] As they may well be given the lack of construct validity of the Eurogang definition in a Latin American context (Rodríguez et al., 2017).

This first assumption relates to the notion that conceptual strategies (such as gang definitions or theories) are predominantly driven by epistemic values, and are thus largely free of contextual, value-laden judgements that would constrain their utility/informativeness to particular contexts. The view that it is suitable to apply conceptual strategies (such as the Eurogang definition) that serve a specific purpose (e.g., I have argued in chapter five that the Eurogang definition is best suited to empirical tasks) to other tasks with different purposes, suggests that conceptual strategies are viewed as being largely independent of the contexts of their creation. However, objects of research do not come to the attention of researchers as fully formed phenomena (Boon, 2020; Haig, 2014; Massimi, 2011). Instead, they tend to begin in much "fuzzier" and approximate forms. For instance, as potential suggestions of patterns in data that warrant further investigation (Haig, 2014). Importantly, these initial patterns do not "emerge from nowhere", rather they are detected (Haig, 2014). While detection clearly depends on the features of a phenomenon, this is not the only factor that plays a role.

For example, depending on the quality of *pattern detection abilities/technologies* it may be harder or easier to detect data patterns and make sense of these regularities (e.g., the development of microscopic technologies and methods leading to the discovery/observation of microorganisms, which has since facilitated the detection and explanation of a range of phenomena including infectious disease causation, Gest, 2004; or various iterations of thermometer technologies which have contributed differently to theoretical conceptions of temperature, Chang, 2004). *Social and moral values* relating to what things are worth knowing will influence the attention that researchers pay to detecting relevant patterns (e.g., values relating to the sanctity of life may increase research interest in areas such as deadly disease prevention, increasing the investigative focus on data pertaining to such issues, and thus the likelihood of detecting relevant phenomena, see Brigandt, 2020; Douglas, 2009).

Epistemic values relating to what things are worth knowing and what "knowing" is (i.e., reflecting the accepted scientific values of the day), will influence how we determine what constitutes evidence for a phenomenon, how investigations into a phenomenon occur, and what happens once a phenomenon is detected (Chang, 2012; Douglas, 2009; Massimi, 2011; Thagard 2019b; Ward & Heffernan, 2017). For instance, *reliabilist* positions may consider knowledge to be justified when it is acquired using reliable processes or methods that extend beyond human reason (e.g., Goldman, 1986), while *coherentist* positions may assert that knowledge is justified when it coheres (i.e., is consistent) with other established beliefs or theories (e.g., Lycan, 1988) (see Haig, 2021, for greater discussion of these positions). As such, researchers may hold differing views on which practices or beliefs are considered scientifically defensible. For instance, differing interpretations of what constitutes construct validity (see Feest, 2020) or the roles of statistical significance testing (see Amrhein et al., 2019) and replication (see Haig, 2021).

In other words, the processes through which objects of research come to be the focus of scientific investigations are deeply value-laden and contextual. As Ward and Heffernan (2017, p. 50) state, "Failure to appreciate the pervasiveness of values in the generation of knowledge does not mean that they are not influencing research, but simply that it is unacknowledged. A danger of this lack of recognition is that theoretical and ideological allegiances may distort the detection and explanation of phenomena".

Importantly, the considerations that influence how and why research objects are investigated also determine the theories, and the foci of these theories, that are themselves considered pursuit worthy when developing the relevant understandings of these objects (Chang, 2012; Harding, 2015; Longino, 1990; Šešelja & Straßer, 2014; Thagard, 1992). Subsequently, it is clear why researchers who are interested in developing an understanding of gangs for a particular purpose (e.g., identification) are likely to be interested in different

aspects of "gangs" than researchers interested in other tasks (e.g., gang prevention). While both sets of researchers may work with the same underlying "thing" (e.g., gangs), the focus placed on aspects of gangs may be markedly different and in practical terms appear very different.

6.2.2. Knowledge Requirements are the Same Across Different Contexts and/or a Single Strategy is Comprehensive Enough to Satisfy a Diverse Range of Epistemic Demands

For a conceptual strategy (e.g., a definition of "gangs") to be considered transferable across research contexts, one of two key assumptions must be operating. First, that all tasks/purposes for which a particular strategy may be employed have the same/similar epistemic demands (e.g., empirical measurement tasks, hermeneutic/interpretive research into the history of gang representations, tasks involved with influencing behavioural trajectories, tasks involved with understanding how to manage community fears of gang violence). Second, that a single strategy is capable of providing the epistemic insights required to meet all possible tasks for which it may be employed without significant trade-offs (e.g., the notion that a single gang definition can be used to quickly discern gangs from non-gangs in a clear manner whilst also capturing the complexity and nuance of such groups in a manner that facilitates specific causal explanations of gang occurrences).

It is unlikely that the first aspect of this assumption would be defended by many. Plainly, different tasks are associated with different interests, otherwise it is unlikely that they would be considered distinct at all. However, beyond simply presuming such a difference, in chapter five of this thesis I specifically discussed how empirical tasks such as measurement/identification have different epistemic demands than more complex theoretical tasks such as causal explanation. Not only this, but I also discussed how a single conceptual approach is *incapable* of meeting the needs of both kinds of task, a discussion that I briefly

add to here in considering the second aspect of this assumption; the suitability of a single

conceptual approach for meeting various research needs.

In developing the Eurogang definition, Klein and Maxson (2006) directly comment on

their attempts to appease the diverse needs of different researchers and stakeholders.

Specifically, they reference critiques raised by Ball and Curry (1995) regarding the differing

requirements that empirical researchers, administrators, theorists, and police are all likely to

have of a gang definition. For instance, it is discussed how police may have practical

demands which focus on the ability to hold individuals responsible for criminal behaviour,

administrators may place emphasis on the standardisation of a definition for purposes of

record keeping, theorists may require a definition which integrates the construct of interest

into a larger postulatory framework, and empirical researchers are likely to require

standardisation and construct validity (Ball & Curry, 1995). As such, as part of the

foundation of the Eurogang Program, the existence of a variety of stakeholder and researcher

needs are acknowledged, the response to which is the construction of a *single* definition

intended to satisfy them all. Such a decision appears to reflect the fact that within the

Eurogang Program, a single approach to defining gangs is considered suitable, or at least

suitable enough, to meet all the various demands that may be placed on it without need for

significant concern (i.e., in a manner which does not majorly interfere with effective, ethical,

and accurate scientific practice).

6.2.3. Conceptual Strategies Accurately Represent the World's Phenomena

This assumption relates to the notion that conceptual strategies accurately capture

details of the world and its presumed contents with both integrity and entirety. Challenging

this, Potochnik (2017) specifically describes how many of the most successful models

employed by scientists are intentionally inaccurate in their construal of a target system and it

is these inaccuracies or *idealisations* (i.e., assumptions which falsify, abstract, or distort the

features/causal workings of a phenomenon) which give such models their value. One specific example that Potochnik presents in making this point is that of the ideal gas law. The ideal gas law makes several assumptions that intentionally contradict well-established evidence and belief about how gases otherwise appear to exist in the world – e.g., it assumes that gases are composed of point particles that do not interact with one another (yet interact with their containers), that these particles do not take up space, and that particles do not expend kinetic energy during collisions with their containers. All of these assumptions are incorrect. Yet "despite" such inaccuracies the ideal gas law is considered a useful and valid scientific tool with utility for approximating the behaviours of gases in various conditions. Further, given the value-laden nature of conceptual strategies (as discussed in relation to the first assumption), it should be contended that our conceptual strategies do not accurately represent phenomena as they may be thought to exist in the world; namely, due to the variety of non-epistemic values that play a role in the detection and construal of scientific phenomena (Brigandt, 2020; Chang, 2012; Douglas, 2009; Longino, 2013; Potochnik, 2017; Ward & Heffernan, 2017).

6.2.4. Summary

Belief to the contrary of any of the above assumptions is likely to call into question the validity of adopting a consensus conceptual strategy or unifying approach in gang related research and practice; different values, tasks, or perspectives necessitate the use of different strategies. Given the above refutations to each of these assumptions, it appears that a unified approach may not be the most suitable for progressing gang research or, at least, that alternatives should be explored.

6.3. Epistemic Pluralism

Epistemic pluralism has been construed in differing and divergent ways; however, it is generally considered to be a meta-theoretical approach to the structuring of scientific

research which recognises the need to actively cultivate a plurality[30] of "systems of knowing"[31] to maximise the likelihood of productive scientific development (Chang, 2012). Epistemic pluralism has received considerable endorsement as an approach to pursuing scientific research in recent years (Cartwright, 1983, 1999; Chang, 2012; Dupré, 1993; Giere, 2006; Kellert et al., 2006; Longino, 2013; Massimi & McCoy, 2020; Mitchell, 2003; Potochnik, 2017; Ruphy, 2016), and a number of recent works have sought to develop specialised meta-theoretical strategies for implementing epistemically pluralist approaches in different domains of research (e.g., Clack & Ward, 2019, 2020; Hawkins-Elder & Ward, 2021; Ward & Clack, 2019 in the domain of psychopathology). In many respects such pluralistic endorsements may be considered a response to the kinds of unificatory positions described in the previous section, which uphold values of unity and consensus as ultimate scientific objectives. In contrast, epistemically pluralist positions maintain that any single approach to depicting, describing, classifying and/or explaining features of a phenomenon will not be sufficient to meet all the possible epistemic or practical demands that researchers may have when investigating it (Chang, 2012; Kellert et al., 2006; Longino, 2013; Massimi & McCoy, 2020; Potochnik, 2017; Ruphy, 2016).

One of the major arguments against pursuing unification in the sciences comes down to the difficulty of capturing all aspects of a phenomenon (e.g., gangs) within a single account. The world and the phenomena within it are generally considered to be extremely complex (Cartwright, 1989; Dupré, 1993; Longino, 2013; Mitchell, 2003) or at least complex

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[30] For clarity of terminology, a distinction is made between the terms of *epistemic pluralism* and *plurality*. Epistemic pluralism is taken to refer to the normatively motivated scientific ideology of actively fostering a multitude of "ways of knowing" in science. Plurality is used as a general synonym for "multitude" and therefore does not itself refer to the *organised system of multiplicity* (as denoted here by the term *epistemic pluralism*).

[31] By focusing on "epistemic" pluralism and systems of "knowing" (as promoted by Chang, 2012 and Ruphy, 2016), claims about the ontological nature of the world (as may be present in other formulations of pluralist positions, e.g., Cartwright, 1999; Dupré, 1993; Longino, 2013) are largely avoided.

in relation to the capacity for human agents to understand and account for them (Chang, 2012; Potochnik, 2017; Ruphy, 2016). Unified accounts which attempt to capture every detail of a phenomenon are therefore likely to be so dense that they cannot be operated in "user-friendly" ways, as the information relevant for a specific task will be obscured by less immediately relevant detail (Chang, 2012; Potochnik, 2017; Ruphy, 2016). Instead, of relying on a "one-size-fits-all" approach, it follows that there is utility in developing multiple accounts of a phenomenon which prioritise varying aspects of that phenomenon according to the different purposes for investigating it (Chang, 2012; Potochnik, 2017; Ruphy, 2016).

As described in the previous discussions of unification, Potochnik (2017) has demonstrated how idealising aspects of phenomena in line with specific purposes results in the production of models which better serve the epistemic needs of researchers. Further, Potochnik argues that the domain-specific idealisations that researchers draw to facilitate such a process are in fact resistant to integration due to the often-conflicting nature of their depictions. As such, not only is a plurality of accounts considered to better meet the various needs of researchers than a single approach, but integration or unification of such models is considered unlikely due to the conflicting assumptions that occur during the modelling process, therefore necessitating a pluralistic approach.

Taking this further, Hochstein (2017) notes that individual strategies (e.g., explanations) within *both* unified and pluralistic frameworks make trade-offs in terms of their ability to satisfy different kinds of scientific/explanatory goals. It is therefore contended that the overarching values pursued by researchers in their accounts of phenomena (e.g., explanatory power) can *only* be satisfied by collaborative sets of strategies (i.e., models/explanations). Thus, requiring the pursuit of pluralistic yet collaborative (i.e., holist) accounts of scientific phenomena.

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Epistemic pluralism has also been promoted due to its endorsement of *epistemic humility*, i.e., the recognition that our knowledge about the world is partial, provisional, and fallible (Chang, 2012; Potochnik, 2017). Realistically, the concepts or theories that scientists endorse at a given point in time are unlikely to demonstrate the appropriate levels of "truth" (or verisimilitude) so as to avoid significant revisions in the face of novel challenges/developments (Kitcher, 1991). It therefore makes sense to recognise the fallibility of scientists and scientific approaches from the outset and pursue a number of different approaches at once. The result of doing so is not only the probabilistic benefits of, so to speak, "putting our eggs in many baskets, rather than just one", but is also more likely to foster competitive, collaborative, and cumulative progress where the best ideas from different systems can be adopted, adapted, and cross-pollinated in relation to their strengths for different purposes (Chang, 2012). Importantly, such an approach directly opposes a framing of pluralism as scientifically immature, particularly in relation to the ideological dogmatisms and paradigmatic inertias that can occur under a monistic or unified framework of science (Chang, 2012; Mitchell, 2002).

Where unified approaches appear to constrain researchers to a specific set of research guidelines, it may be feared that a pluralistic approach invites a relativistic "anything goes" approach to science. However, as Chang (2012) frames it, epistemic pluralism is not a matter of "anything goes", but rather "many things go" (p. 561). Such a view still necessitates the evaluation of "what goes, and where", and such decisions must necessarily be justified. For instance, there is a considerable difference between the "anything goes" position that may be extracted from claims made by gang scholars such as Goldstein (1991), and the conceptually systematic and rigorous position advocated by epistemic pluralists. In commenting on the various definitions that have been employed throughout gang research, Goldstein (1991, p. 3)

states:

> "What constitutes a gang has varied with time and place, with political and economic conditions, with community tolerance and community conservatism, with level and nature of police and citizen concern, with cultural and subcultural traditions and mores, and with media-generated sensationalism or indifference to law-violating youth groups" (p. 3)

Principally, Goldstein contends that because gang definitions are constructed relative to differing variables "in a real sense all are correct" (p. 3). An epistemically pluralist position however does not make the claim that any approach is acceptable (and certainly not "correct"), but rather proposes that researchers must elucidate their conceptual interests in relation to an object of study and justify their conceptual decisions accordingly (Chang, 2012). Thus, conceptual strategies such as gang definitions could still be considered in direct competition with each other where conceptual interests overlap, and different approaches can be considered better/worse in that context. The difference is that the result of such comparisons is not "winner takes all" as in a unified approach, but rather one where multiple approaches continue to be fostered even if some are considered stronger than others or selected for practical reasons at specific points in time (Chang, 2012) – e.g., favouring a particular gang definition for policy reasons.

Finally, some may argue that while epistemic pluralism has benefits for progressing science at this point in time, this does not mean that the pursuit of unification should be abandoned altogether and that understandings of phenomena cannot ultimately be unified (a position of *weak pluralism*, Kekes, 1993; see also Kitcher, 1991; Mitchell, 2003). While plausible, such contentions should be considered doubtful, given the above discussions of

human fallibility, and the complexity of phenomena and motivations for investigating them. Parsimony is indeed an epistemic virtue (Thagard, 1978), the question should therefore be asked, if unification is to be pursued as an ultimate scientific objective, what is the cost of doing so? Based on the above positions, it appears the cost would be substantial. I therefore endorse a position of *strong pluralism*, where ultimate unification is considered unlikely, unhelpful, and untenable (Kekes, 1993; see also Chang, 2012; Longino, 2013).

6.4. Chapter Summary

In this chapter it is described how attempts to coordinate gang research through pursuits of unification are occurring at the expense of developing useful conceptual and theoretical understandings of gangs. Particularly, attempts to establish a unified framework of gang research reveal an under consideration of the value-laden nature of scientific phenomena, the role of conceptual strategies in science, and the diverse requirements that stakeholders and researchers place on such conceptual strategies. Epistemic pluralism is discussed in terms of its ability to coordinate a domain of research whilst maintaining a commitment to scientific humility that acknowledges the value of cultivating a diversity of research perspectives, interests, and strategies. It is therefore anticipated that an epistemically pluralist approach is more likely to serve as a useful foundation for improving the state of gang research and practice. Accordingly, the following chapters seek to develop and discuss how an epistemically pluralist approach might look and function in gang research.

Chapter Seven: Epistemic Pluralism and the Justification of Conceptual Strategies in Gang Research

Drawing upon developments from the natural and psychological sciences I have argued that epistemic pluralism offers a viable alternative to unification as a framework for coordinating gang research. While the gang field largely appears motivated towards the ideals of unification, some elements of a pluralistic approach are arguably identifiable. For instance, the recognition that quantitative or qualitative methods alone are insufficient to capture an appropriately comprehensive understanding of gang-related phenomena may be considered an indication of a kind of methodological pluralism. Similarly, Andell (2019), in line with a thesis of critical realism, notes that "*Our ideas about gangs are partial and fallible* and this demands a methodological pluralism which involves a range of stakeholders when researching and formulating appropriate interventions" (p. 47, emphasis added). This highlights the need for not only a range of methods in researching gangs, but a range of ideas about gangs, which I take to include foundational conceptual and theoretical strategies. While such ideas are beginning to emerge and receive initial endorsements in the gang field there is little understanding what this approach might look like and how it may be conducted.

Drawing upon the work conducted in Wegerhoff et al. (2021), this chapter expands upon my arguments for an epistemically pluralist approach to coordinating gang research by detailing the kinds of considerations that occur when determining the best conceptual strategies for a task. That is, where I have previously argued for the overall utility of a pluralist approach to gang research, I now discuss the specific considerations that occur when designing such an approach. Centrally, this involves selecting, and justifying the selection, of specific conceptual strategies for specific purposes. The overarching theme of my arguments is that different conceptual strategies are demonstrably better or worse suited for different research tasks. Thus, to maximise chances of success, it is necessary to determine the specific

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requirements of a research task and utilise the conceptual strategies which are best suited to the demands of that task.

I begin with consideration of the different research aims (i.e., what I label *research tasks*) that gang researchers pursue and discuss how each task has its own unique conceptual focus with distinctive practical and knowledge requirements. In demonstrating how different conceptual strategies work together to capture the conceptual focus of a task, I explicitly discuss the interconnecting roles of *definitional*, *classificatory*, and *explanatory strategies*.

First, I demonstrate how *definitional strategies* apply the abstract *conceptual focus* of a research task more concretely in relation to a target system (e.g., gangs). I outline how definitional strategies direct research attention towards the aspects of a system that specific researchers consider to be the most likely to be worth investigating. Second, it is explained how *classificatory strategies* are used to "zoom in" on the descriptive focus (captured at the definitional stage) by identifying *classes with unique causal and/or compositional patterns*. I particularly focus on how classificatory strategies can be used to detect descriptive and explanatory patterns within a system that are of greatest relevance to drawing the insights required to achieve the practical and knowledge related aims of that task. Finally, I examine how *explanatory strategies* serve to account for the causal/compositional differences across the identified classes and ultimately provide the insights required to meet the needs of the research task. By clarifying the conceptual constraints imposed by different research tasks, and by explicitly considering the relationships between conceptual strategies, I contend that the Eurogang approach is not sufficient to unify gang research and that a pluralist approach offers greater scientific defensibility and fertility as a means of pursuing collaborative gang research.

7.1. Conceptual Strategy selection

Conceptual strategies (e.g., definitional, classificatory, and explanatory approaches), as I refer to them, are epistemic (i.e., knowledge-related) tools that, when employed appropriately, can be used to provide an understanding of the nature of a phenomenon for a given research task. Like tools in a practical sense, different strategies have different purposes, strengths, and limitations. As such, when selecting conceptual strategies for a particular task, it is necessary to (a) consider the overall purpose for which these tools are being applied (i.e., the practical aims), and (b) the kinds of insights (i.e., knowledge requirements) required to achieve these aims. By establishing these two overarching aims, it is possible to determine what the conceptual focus of a research task is, and the conceptual tools best suited to meeting the needs of this task. In other words, the nature of a research task (e.g., identification of gangs for risk management purposes) and the practical and epistemic motivations for engaging in different tasks place constraints on what strategies are most appropriate in a given circumstance.

It is my assertion that understanding how this process occurs (i.e., how the differing practical and epistemic interests across research tasks alter the conceptual focus and how this influences the selection of conceptual strategies) will both inform researchers on how to best select the appropriate conceptual strategies for a given task and clearly illustrate the necessity of adopting a pluralistic approach to the coordination of gang research. In other words, to achieve the objectives of a research task, the appropriate understanding of a target system (i.e., gangs) must be developed, an understanding which is enabled through the considered and coordinated use of various conceptual strategies. To ensure that the right kinds of conceptual strategies are being adopted, it is essential to consider how such strategies "mesh" together to provide different kinds of insight, and thus how to adopt the strategies that are most suitable for meeting the needs of a given task.

In the following sections I consider the kinds of research tasks pursued in gang research as well as the three major types of conceptual strategies (i.e., definition, classification, and explanation) and how they work together collaboratively to achieve the aims of these tasks. In doing so, I specifically describe the considerations that occur when identifying the conceptual focus of a research task (i.e., the practical aims and knowledge requirements sought for that task). I then describe how definitional strategies are used to capture this conceptual focus in relation to properties of the target system, and how classificatory and explanatory strategies "piggyback" on the resulting definition to deepen our understanding of these features. This occurs in a manner that directly aligns with the aims of the overarching conceptual focus and provides the task-specific insights required to meet the aims of a research task.

I present these constraint considerations below as questions and visually depict them in Figure 1 before discussing them in greater depth in the following sections.

(1) What is the *research task* in question (e.g., identification of gangs, managing risk, intervention etc.) and what kinds of insights/knowledge are researchers attempting to gain by investigating the target system (i.e., what is the *conceptual focus* for that task)?

(2) What *definitional strategy* best emphasises features of the target system in a manner which captures the relevant conceptual focus?

(3) How can features emphasised at the definitional stage be *classified* (i.e., clustered into categories) to emphasise patterns of relevance to the conceptual interests of the research task?

(4) What specific *explanatory strategies* can be utilised in conjunction with the identified classes to provide the kinds of insights required to meet the aims of the research task?

While these questions are somewhat linearly depicted, in practice the constraint considerations are always iterative and dynamic and require consideration of the influences from the research task and other conceptual strategies. Each of these considerations is expanded upon below.

Figure 1

Depiction of the Constraint Relationships Between Research Tasks and Conceptual Strategies
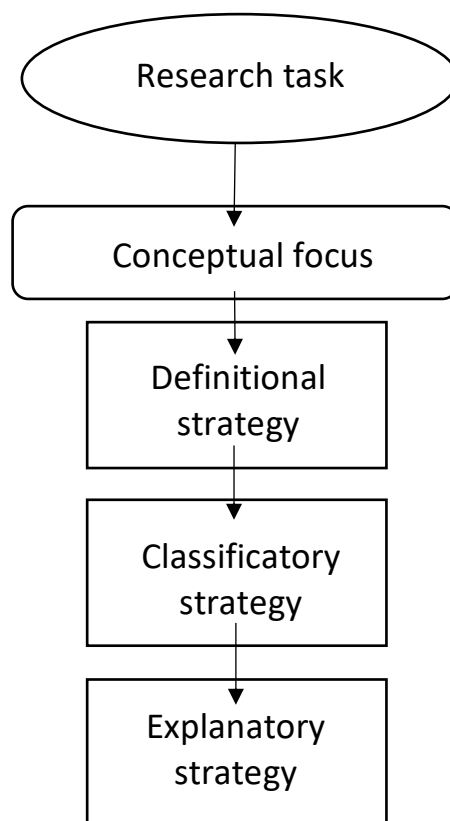
Note. This figure depicts the constraint relationships between research tasks and conceptual strategies (definitional, classificatory, and explanatory strategies). The nature of a research task determines what a "successful outcome" for that task is, and in doing so, requires a specific conceptual focus to meet these objectives. The conceptual focus constrains the three kinds of strategies required to meet the overall aims of the research task.

7.2. Research Tasks

The overarching aim of gang research has been to develop practical, evidence-based responses to address gang-related harms and promote positive outcomes for the community, and gang members. As argued in the opening sections of this thesis, my position is that a unified approach is incapable of providing the insights required to meet this goal, as it cannot offer both the breadth and specificity of understanding required to meet all possible research needs. Instead, I argue for an approach that considers the range of research interests that researchers pursue and for the development of specific tools to meet these interests.

This raises the question of how best to classify the diversity of gang research interests in order to determine which researchers have similar or divergent needs, and ultimately, what kinds of tools are best suited to meet these needs. In line with an overall pluralist perspective, I endorse the view that the classification of science – and therefore also gang science – can be undertaken in numerous valid ways (Bowker et al., 2015; Carter et al., 2021; Sandoz, 2021; Star & Griesemer, 1989). For instance, gang research interests could be organised according to: (a) *ontological* similarities – the shared objects of research (e.g., gang members, gangs as groups, gangs as networks, gangs as social phenomena, gang behaviour etc.); (b) *epistemological* similarities – the shared kinds of knowledge involved (e.g., focus on general laws or regularities, mechanistic explanations, probabilistic understandings etc.); (c) *methodological* similarities – the shared methods used to gather gang knowledge (e.g., *data gathering methods* – such as observation, interview, measurement; *methods of reasoning* – deductive, inductive, abductive etc.); (d) *teleological* similarities – the shared goals/purposes for which research is being conducted (e.g., to identify gang members, to stop gangs from forming, to facilitate positive gang outcomes) (see Sandoz, 2021 for a greater discussion of this typological approach to the classification of science).

Accordingly, if my construal of the general purpose of gang research is accurate (i.e., that the overarching aim is to inform approaches to decrease negative gang related outcomes and promote positive outcomes) then it is my contention that taking a teleological (goal-driven) approach to grouping research interests is of greatest relevance.[32] A teleological approach directly emphasises the *kinds of goals* being pursued by gang researchers, thus facilitating dedicated investigation into the conceptual strategies required to meet these goals. The benefit of a teleological framing is that, regardless of the object of study, or the nature of the discipline(s) studying such an object,[33] commonalities can be found in the general motivations for investigating such objects. The result of which is both the constraining of pluralism to action, and the fostering of collaborative systems of study which benefit from each of their contributing perspectives (Chang, 2012; Massimi & McCoy, 2020).

For example, where multiple disciplines study an object (broadly construed), teleological allegiance allows the unique contributions of different domains (e.g., tools, methods, domain-specific scale of investigations) to be utilised where they offer value to pursuing a particular goal. Similarly, where an object is seemingly tied to a single discipline

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[32] Of course, it is important to note that this is by no means the *only* aim of gang research and other research interests do arguably fall outside of the general framing I offer here. For example, research which focuses on the construal of gang identities as a counter to epistemic injustices, the chronicling of anthropologic group differences across contexts and cultures, and studies of gang representations and discourses. Each of these tasks is no less important than those I focus on here. However, due to the specific framing of this thesis in line with gang harms/responses and the Eurogang Program (of which a focus on informing gang responses for harm reduction and the promotion of positive outcomes is an integral goal; see Weerman et al., 2009) I constrain the majority of my discussions to such aims. This is not to say that disciplines with different aims cannot contribute to these objectives, however. For instance, anthropological studies may facilitate the identification of phenomena relevant to distinguishing gangs across contexts, or critical studies may better facilitate understanding of the motivations for gang membership and action (as well as a society's motivations for responding to gangs in particular ways). I would like to thank an anonymous reviewer of the paper "Epistemic Pluralism and the Justification of Conceptual Strategies in Science" (Wegerhoff et al., 2021) for prompting the clarification of this framing.
[33] Including the kinds of collaboration across/among disciplines. E.g., whether the object is studied by a single discipline, or in a multi-, trans-, inter-disciplinary manner. I do not dwell on the distinction between such terms here as the general point is that a teleological research framing can benefit research within, across, and among disciplines, regardless of how this is framed. For a discussion of the distinctions between such positions see Collin (2009).

of study, a teleological framing connects research practices with the purposes for which research is occurring and provides avenues for possible future collaboration with other disciplines. In both cases such a framing encourages collaborative, efficient, and goal-focused research practices.

In practice, grouping the goals of gang research can be undertaken in a number of ways. For instance, by focusing on *general moral goals* (e.g., harm reduction, promotion of positive outcomes); *stakeholder directed goals* (e.g., policing gangs, managing prison gangs); or *goals shared across stakeholders* (e.g., identifying gangs, gang prevention) to name a few.

I choose to focus on *goals shared across stakeholders* as I expect this approach will help highlight more practical, task-specific insights than a *general moral aims* approach without being so specific as to present issues of undue repetition as may arise with a *stakeholder directed goals* approach (e.g., identifying gangs for policing, identifying gangs for correctional management, identifying gangs for community intervention etc.).[34] I refer to these specific research interests/goals as *research tasks* to highlight the importance of their undertaking for successful gang research whilst also emphasising their divergence (i.e., that they are independent *tasks* which require their own sets of tools to pursue effectively).

The tasks I discuss are: *identification* (how to recognise gangs at various stages of development and complexity, particularly groups engaged in higher rates of crime and social harm); *prevention* (how to promote general functioning and lower the risk of gang-related problems before they occur); *risk management* (how to manage or control imminent gang-related threats); and *treatment/intervention* (how to promote specific positive functional outcomes and decrease recidivist engagement in harmful gang-related behaviour).[35] While

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[34] This is not to suggest that such categories are not of use, but simply that, when it comes to considering the overarching goals of gang research, looking at the common trends across stakeholders offers greater utility for directing conceptual focus, at this stage.

[35] I consider these tasks to be broadly representative of gang research interests, however this is not intended to be the final word on gang research tasks and is open to revision.

some might argue that important tasks have been omitted (e.g., prediction), I contend that such tasks are subsumed within the identified categories.

For example, prediction is more usefully viewed as a sub-task, as it is only useful when specifically tailored to a broader purpose (e.g., prediction for the purpose of preventing gang joining or a first offence vs prediction for rehabilitative purposes and predicting likelihood of recidivism). As such the above tasks are taken as indicative of the general research tasks that researchers may pursue, however they are not intended to be the final word on gang research tasks and are open to revision.

7.3. Conceptual Focus

The *conceptual focus* of a research task is the emphasis placed on a broad target system (e.g., gangs) as constrained by the unique practical and epistemic (knowledge related) objectives of that task. That is: what aspect of "gangs" as a concept is the researcher most interested in at this particular time? The *practical aims* of a research task are the specific motivations for researching gangs and the gang-response that may be achieved upon developing this understanding (i.e., what will be achieved by meeting the needs of the research task?). The *knowledge requirements* of a research task are the kinds of research insights (i.e., descriptive/explanatory understandings of a target system) that are required to inform approaches to meet the practical aims of that task (i.e., what kinds of insights into gang-related phenomena are required to meet the practical aims of the task?). The appropriate conceptual focus for a research task, therefore, considers both the practical aims of the research task and the knowledge requirements to meet these practical aims. In making the consideration of the conceptual focus an explicit step in the research process there is greater transparency around the considerations being made at different research stages and research attention is directly streamlined towards achieving the objectives that are most central to that task.

To give some examples, the practical aim of the task of identification can be construed as seeking *to recognise groups at various stages of development and complexity, particularly groups engaged in higher rates of crime and social harm*. The knowledge requirements needed to meet these practical aims are therefore largely *descriptive*; as a descriptive understanding of what gangs are, what gangs are not, and what gangs look like at various stages of development will suffice to meet the practical aims of this task. Subsequently, the relevant conceptual focus is one that captures a *descriptive understanding of the patterns of features which differentiate gangs from non-gangs, and depicts what gangs look like at various stages of development*.

Alternatively, a task such as treatment/intervention has practical aims concerned with *promoting prosocial behavioural and functional outcomes for established gang members whilst reducing recidivism and other harmful outcomes*. Because this task involves understanding and intervening with behavioural/functional processes to influence particular outcomes, the kinds of knowledge requirements are different to those of a task such as identification. A descriptive understanding of gang behaviour or function (i.e., labelling different behaviours or motivations for gang membership etc.) will not on their own be sufficient to inform intervention responses. Instead, a more complex *explanatory* understanding of gang behaviour/function is required, particularly an explanatory understanding that provides *specific causal* insight into gang behaviour/function to identify treatment targets. Thus, the appropriate conceptual focus for treatment/intervention is one that provides an *explanatory understanding of specific causal factors which can be targeted to positively influence individual and group behaviour/functioning and reduce recidivist gang outcomes*. See Table 1 for a depiction of the considerations that occur when identifying the conceptual focus for each research task, specifically how the practical aims of a task and the knowledge requirements determine the relevant conceptual focus to guide research efforts.

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Table 1

Relationships Between Research Tasks, Target Systems, and Conceptual Foci

Research task	Target system	Practical aims	Knowledge requirements	Conceptual focus
Identification	Gangs	To recognise groups at various stages of development and complexity particularly groups engaged in higher rates of crime and social harm	Descriptive	Descriptive understanding of patterns of features which differentiate gangs from non-gangs, and gangs at various stages of development
Prevention	Gangs	To promote better general functioning and lower the risk of gang-related problems before they occur	General causes	Predictive/explanatory understanding of the general causal factors which can be targeted to promote functional outcomes and influence the likelihood of particular gang-related outcomes before they occur/escalate
Risk management	Gangs	To manage or control imminent gang-related threats	Compositional	Explanatory understanding of the gang related compositional factors/processes which can be interrupted to reduce harm-causing actions
Treatment/ intervention	Gangs	To promote specific positive functional outcomes and decrease recidivist engagement in harmful gang-related behaviour	Specific causes	Explanatory understanding of specific causal factors which can be targeted to influence individual and group behaviour/functioning and reduce recidivist gang outcomes

Note. Table 1 depicts the unique knowledge requirements and practical aims of different research tasks. The requirements/aims of a research task determine the most appropriate conceptual focus to place on a target system for that task.

7.4. Definitional Strategies

Definitional strategies apply the conceptual focus of a research task more concretely in relation to a target system. Specifically, definitional strategies highlight descriptive features of a system (e.g., aspects of gangs) in a way that directs research attention towards detecting descriptive and explanatory patterns required to achieve the practical and knowledge related aims of that task. This involves two key considerations: (1) the *descriptive emphasis* to place on a target system (i.e., the properties of the target system that can be emphasised to capture the conceptual focus of the research task); and (2) the *definitional form* in which features are depicted (i.e., the method through which to present these features). These considerations are depicted in Table 2 and discussed further below. Example definitions combining these considerations are also presented.[36]

7.4.1. Descriptive Emphasis

Having established the conceptual focus of a research task, it is possible to determine which descriptive emphasis to place on a target system to capture this focus, i.e., the descriptive features of a system that can be highlighted to increase the likelihood of identifying task-relevant descriptive or explanatory patterns.

For instance, the conceptual focus for the task of identification relates to being able to *identify gangs and their members at various stages of development*. Therefore, a relevant descriptive emphasis should highlight *features which relate to the status of an individual/group as being a gang/gang member* (i.e., should capture important *identity features*). Further, the emphasis should be on features which are *readily observable/measurable* – as this is central to the practical requirements of being able to

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[36] Please note that where relevant I have not provided example definitions in an exemplar format for clarity of discussions. Example definitions therefore reflect necessary and sufficient conditions, operational, or typical features approaches – a distinction which would be more apparent when practically employed.

Table 2

Relationships Between Conceptual Foci and Definitional Approaches

Task	Conceptual focus	Descriptive emphasis	Definitional form	Example definition
Identification	Descriptive understanding of patterns of features which differentiate gangs from non-gangs, and gangs at various stages of development	Observable identity properties	Necessary and sufficient/ operational	Any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity
Prevention	Predictive/explanatory understanding of the general causal factors which can be targeted to promote functional outcomes and influence the likelihood of particular gang-related outcomes before they occur/escalate	Features of general functioning	Typical features/ exemplar	Group which engages in crime/social harm to satisfy desired goals/functions.
Risk Management	Explanatory understanding of the compositional factors/processes which can be interrupted to reduce harm-causing actions	Features of gang-related activities which cause harm	Typical features/ exemplar	Group which poses a security or safety threat to individuals/ systems around them.
Treatment/ Intervention	Explanatory understanding of specific causal factors which can be targeted to influence individual and group behaviour/functioning and reduce recidivist gang outcomes	Features of agential functioning	Typical features/ exemplar	Group which engages in crime/social harm to satisfy desired goals/ functions.

Note. Table 2 depicts the kinds of definitional strategies (with differing descriptive emphases and definitional forms) most relevant to meeting the needs of each research task (i.e., best suited to capturing the conceptual focus of each task).

identify gangs and their members (i.e., physical properties are more practically accessible than sub-personal traits or psychological qualities). Because the conceptual focus is concerned with identifying gangs not only cross-sectionally but developmentally, it is also necessary that such features can be/are considered across temporal scales (i.e., at various stages of group development or membership).

For a task such as prevention, the conceptual focus is concerned with developing a *predictive/explanatory understanding of the general causal factors which can be targeted to influence the likelihood of particular gang-related outcomes before they occur/escalate and promote functional outcomes*. It therefore stands that an appropriate definitional strategy should emphasise all relevant *domains of human functioning*, and the features within them, as these can subsequently be investigated for predictive/explanatory patterns relevant to achieving such outcomes during classificatory and explanatory stages.

7.4.2. Definitional Form

Having identified the descriptive emphasis required to capture the conceptual focus of a research task, it is important to select a definitional method which depicts such features in a form that aligns with the knowledge requirements of that task. Definitions can take many forms and features of interest can be captured through multiple definitional methods. Common examples of different definitional approaches include: (a) *necessary and sufficient conditions approaches* which list the features that can and/or must be present to determine if an object is considered within or beyond the scope of conceptual focus (Hospers, 1994); (b) *operational approaches* which operationalise necessary and sufficient conditions approaches in relation to a set of measurement instruments (Feest & Steinle, 2016); (c) *exemplar/prototype approaches* which highlight common examples of category members to broadly capture their conceptual similarity without requiring strict definitional boundaries (Murphy, 2006); and (d) *typical features approaches* which highlight the conceptual

similarity of category members by emphasising the features that are typical of a category member without presenting strict definitional cut-offs (Thagard, 2019b). Importantly, each of these approaches have their own strengths and weaknesses and should thus be selected according to the aims of a research task.

For research tasks such as identification that are primarily descriptive and concerned with clearly discerning category members, *necessary and sufficient conditions* and/or *operational* definitional approaches (such as that used in the Eurogang definition) are likely to be useful as they specifically emphasise the boundaries between category and non-category members and provide a clear yardstick for comparatively efficient category discernment. Yet, while such an approach is well-suited to a task like identification (with descriptive knowledge requirements), drawing "hard lines" between categorical boundaries can be seen as a somewhat crude form of demarcation which fails to capture the nuance or the continuity/overlap that may occur between category members (Thagard, 2019b; Wittgenstein, 1953/1958). For tasks which have more complex explanatory requirements (e.g., prevention, risk management, and treatment/intervention) hard line forms of definition will likely obscure or truncate important task-relevant details (see Wegerhoff et al., 2019). *Typical features* or *protype/exemplar* approaches are therefore expected to better capture the definitional emphasis in a more detailed, conceptually nuanced, and descriptively rich manner, ultimately providing better opportunity to uncover explanatory patterns of interest (Thagard, 2019b; see also Wegerhoff et al., 2019).

For example, the task of risk management centres on developing an understanding of how to manage or control imminent gang-related threats. The conceptual focus is concerned with developing an *explanatory understanding of the compositional factors/processes which can be interrupted to reduce harm-causing actions* and the descriptive emphasis points generally at *the features of gang-related activities*. Due to the more complex *explanatory*

(i.e., compositional) aims of the risk management task, the definitional form must be suited to representing features of interest in a befittingly nuanced manner. Hence the appropriateness of *typical features* or *exemplar* approaches.

Having identified the features of a target system which appropriately emphasise the conceptual focus of a research task, and the form through which to depict these features, specific definitions can be developed to act as the foundations for subsequent classificatory and explanatory tasks. A typical features definition of gangs for risk management may therefore be *gangs are a group which pose a security or safety threat to individuals/systems around them*.

7.5. Classificatory Strategies

After capturing the conceptual focus of a research task using definitional strategies, classificatory strategies are used to demarcate and group together robust sub-patterns (i.e., classes) of phenomena, or features of phenomena, within this broader scope of emphasis. By carving out such groups, the aim is to identify unique patterns/clusters which offer insights (e.g., descriptive and/or explanatory differences) relevant to achieving the objectives of that task. Thus, the selection of appropriate classificatory strategies relies upon considering not only the definitional emphasis placed on a target system, but also the overall practical aims and knowledge requirements for investigating that system (i.e., the conceptual interests). Below I discuss several specific considerations that occur when determining the appropriate *classificatory emphasis* along which to group features of a target system, including *non-arbitrariness and discreteness*, *inferential and explanatory utility*, and *classificatory scale*. The classificatory emphasis for each research task is also depicted in Table 3 upon considering the constraints provided by the descriptive emphasis and conceptual focus of each research task.

Table 3

Relationships Between Conceptual Foci, Definitional Approaches, and Classificatory Approaches

Task	Conceptual focus	Definitional emphasis	Classificatory emphasis
Identification	Understanding of the descriptive features which differentiate gangs from non-gangs, and gangs at various stages of development	Observable identity properties	Classes of variables that are associated with gang membership, development, and identity features.
Prevention	Understanding of the general causal factors which can be targeted to influence individual and group behaviour/functioning and pre-empt offending/ escalation of offending	Features of general functioning	Categories/classes of risk and protective factors.
Risk Management	Understanding of the compositional factors/ processes which can be targeted to reduce harm-causing actions	Features of gang-related activities which cause harm	Categories related to community safety such as levels/kinds of harm posed by gang activities.
Treatment/ Intervention	Understanding of specific causal factors which can be targeted to influence individual and group behaviour/functioning and recidivist crime	Features of agential functioning	Categories that reflect types of implicit or explicit goals the individual and group have.

Note. Table 3 depicts the classificatory emphasis relevant to each research task. For each task, the features/properties emphasised by the definitional approach are clustered into categories to highlight patterns of conceptual relevance to that task.

7.5.1. Non-Arbitrariness and Discreteness

When classifying phenomena, or features of phenomena, it is necessary that the identified categories are both *non-arbitrary* and *discrete*. Non-arbitrariness requires that the demarcation of categories reflects *meaningful divisions*, i.e., in terms of the stable and task-

relevant intrinsic or relational properties of a target system (Ludwig, 2018). As such, different patterns of emphasis will be more or less relevant for each task (discussed further below). Importantly, demarcation of categories must capture these patterns in a meaningfully discrete way and key features, or patterns of features, found in one category should be substantively different from those in other categories (i.e., minimal correlation of key features across classes) (Ward & Carter, 2019).

7.5.2. Inferential and Explanatory Utility

Given the various descriptive foci of different research tasks and their unique conceptual interests, classification must take place on a task-by-task basis in order to ensure that the classes have the greatest inferential/explanatory utility for that task. That is, there is more than one valid way to classify gang related phenomena. Effective classification should therefore demarcate features of a target system in a manner which highlights descriptive/explanatory patterns that are most relevant to providing the conceptual insights required for the task in question (Brigandt, 2020; Ludwig, 2018); for example, statistical/predictive differences, compositional divergences, and/or causal independence.

For instance, classification in terms of *different kinds of gang behaviours/offences* may be useful for a task such as risk management – as the classes may highlight patterns/properties which, when elucidated further in explanatory stages, offer insight into how to manage the risks posed by such behaviours. It is unlikely however that these same categories would offer the relevant kinds of inferential or explanatory utility for all other tasks. For instance, as described previously, the tasks of prevention and treatment/intervention require insight into the factors which *causally* influence individual and group behaviour. Because behavioural/offence classes are primarily drawn in terms of *moral/legal differences* they are likely contain similar mixes of contextual, motivational, and proximal variables (Ward & Carter, 2019; Ward & Heffernann, 2017). This does not pose an

issue for a task such as risk management where such features are not the focal point of emphasis/demarcation (as they do not provide task-relevant inferential/explanatory utility and thus issues concerning discreteness do not arise). However, such categories would not be suitable for tasks such as prevention or treatment/intervention where the lack of discreteness in relation to variables of interest weakens the possibility of obtaining the *causal* insights needed for these tasks (Carter et al., 2021; Ward & Carter, 2019). Further, because gangs and their members are thought to engage in a diverse range of antisocial behaviours (i.e., "cafeteria style" offending; Klein, 1995) it is unclear that offence classes would be considered the most useful approach to demarcation anyway, as such categories are unlikely to meaningfully differentiate between groups or group members in a manner which reveals (or facilitates the revelation of) *unique and targetable causes* for different offending behaviours (Ward & Carter, 2019).

7.5.3. Classificatory Scale

While there are numerous valid ways to classify phenomena (i.e., various features/properties at multiple scales/levels can serve as the basis for demarcation), it is impractical to include all of the features of relevant phenomena – instead it is most important to highlight features or properties which are most central to the task at hand (Carter et al., 2021; Kutschenko, 2011; Potochnik, 2017). Thus, in order to identify pragmatically and epistemically relevant patterns within features of a target system, it is necessary to consider the scale at which relevant patterns are expected to occur (Potochnik, forthcoming; Potochnik & de Oliveira, 2020). This can be achieved in a task-relevant manner by taking the conceptual focus and descriptive emphasis identified for a research task and specifying groups based on features relevant to this scale of analysis.

For instance, the descriptive emphasis for risk management focuses on being able to *identify features of gang-related activities which cause harm*, and the overall conceptual

focus is to *develop a compositional understanding of gang harms in order to identify opportunities to manage them*. It therefore follows that classifying in terms of the *kinds of activities* that gangs engage in, or the *kinds of harms* that these activities cause, will highlight patterns of features that can be expanded upon in explanatory stages to provide specific insights into how to manage such harms.

For tasks such as prevention and treatment/intervention the overall aims are similar – differing primarily in terms of the temporality of engagement, i.e., targeting gang problems *before* they arise and cause problems vs. targeting *recidivist* gang problems. Because of this general similarity, the aims and interests of these tasks (although different) can be superficially captured by the same sample definition (see Table 2). This illustrates the importance of explicating the specific conceptual focus and descriptive emphasis of each research task during previous steps. Doing so allows these interests to be the focus of demarcation during classificatory stages – ensuring task relevance and inductive/explanatory utility where such emphases may otherwise be overlooked (particularly when definitions for a task are not developed systematically, or in relation to specific aims of the research task they are being applied to). For example, the descriptive emphasis for prevention focuses on *features of general functioning* and is conceptually concerned with developing a *predictive/explanatory understanding of the general causal factors which can be targeted to promote functional outcomes and influence the likelihood of particular gang-related outcomes before they occur/escalate*. This necessitates a general understanding of the *domains of human functioning* (e.g., personality, associates, familial relationships, thinking style) that can generally be targeted to improve the likelihood of desired outcomes for general populations and specific groups/individuals (Bonta & Andrews, 2017; Heffernan & Ward, 2017). Because the task of prevention involves a considerable predictive component (as individuals have not yet engaged in problematic gang behaviours), *categories/classes of risk*

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and protective factors are likely to be of particular utility for identifying and classifying domains of functioning for the task of prevention (Heffernan & Ward, 2017; Ward & Fortune, 2016a).

Alternatively, the descriptive emphasis for treatment/intervention focuses more on *features of agential functioning* and the task is conceptually focused on developing an *explanatory understanding of the specific causal factors which can be targeted to influence individual and group behaviour/functioning and reduce recidivist gang outcomes*. Importantly, because the conceptual and descriptive interests are different between the tasks of prevention and treatment/intervention, it is more than likely that different descriptive/explanatory patterns will be required to meet the aims of these tasks, and as such, will necessitate the identification of different categories. Supporting this there is considerable literature that would suggest that risk and protective factors, by virtue of the properties which make them suitable predictive constructs (and therefore useful for tasks such as prevention), are not suitable constructs for tasks such as of treatment/intervention which require a more specific causal understanding of human behaviour (Heffernan, Ward et al., 2019; Heffernan, Wegerhoff & Ward, 2019; Ward & Fortune, 2016a). Instead, categories that reflect different kinds of *individual/group goals and motivations* are more likely to directly highlight patterns of interest in a manner that is most salient for treatment/intervention tasks (Ward & Carter, 2019).

7.6. Explanatory Strategies

Classificatory strategies group together features of a target system (as emphasised at definitional stages) along dimensions which are expected to highlight meaningful trends or patterns within a phenomenon, or group of phenomena. Explanatory strategies account for the distinctions between these task-specific classes by accounting for the causal and/or compositional differences responsible for their demarcation, i.e., they explain how/why

differences in categories exist (Craver, 2007; Craver & Kaplan, 2020; Kaiser, 2015; Salmon, 1984). It is expected that by accounting for differences in classes, researchers will have the information required to meet the overarching practical and knowledge related aims of the research task. In accounting for such differences, explanations can take many forms and different forms provide different kinds of explanatory insight by appealing to different *irreducible* explanatory features and/or processes at different scales (Hochstein, 2016a; Potochnik & de Oliveira, 2020). As such, some explanatory strategies are likely to be better at providing insights for particular tasks or domains of interest. The appropriateness of a strategy therefore depends on the constraints imposed by both the identified classes and the kinds of insights required to meet the needs of a research task. Different kinds of etiological and compositional explanatory approaches are discussed below before being considered in relation to specific research tasks.

An *etiological* explanation explains the existence of an entity by giving reasons or identifying the causes for how that entity came to be. For instance, explaining that a person developed a disease due to inheriting it from their parents (*reason*) or explaining how a person developed that disease by describing the specific mechanisms of inheritance (*causal).* On the other hand, a *compositional* explanation explains why an entity is the way that it is by referring to its sub-entities (i.e., the parts that compose the whole). For example, in relation to explanations of sex offending, Beech and Mitchell (2005) compositionally explain the mechanism of "intimacy deficits" in the sex offending literature by elucidating the sub-mechanisms that constitute it (e.g., depleted production of oxytocin, an "intimacy hormone", impaired attachment models, social skill deficits). These sub-mechanisms do not *cause* intimacy problems in an etiological sense, instead they *comprise* intimacy problems.

Given the multilevel nature of gangs, and gang study (Short, 1985), it is necessary that both etiological and compositional explanatory strategies consider processes and features

across levels for greatest explanatory utility. There are numerous valid approaches to engaging in etiological and compositional explanation (see Mantzavinos, 2016). While a comprehensive discussion of explanatory strategies is beyond the scope of the thesis, I highlight some below which may be pertinent to gang research.

(1) *Narrative explanations*: the explanation of phenomena by providing a story or logically sequenced historical account for their occurrence (see Thagard, 2019b). E.g., explaining a group's violence against another group as retaliation by describing the historical rivalries between the two groups.

(2) *Covering law/regularities explanations*: the explanation of phenomena by appeal to certainties (laws) of the world (i.e., if *a* occurs then *b* follows). This account is typically deemed too restrictive for social sciences as it does not allow for exceptions to the rules/laws, where social phenomena frequently involve nuance that cannot be explained by an overarching rule. A more moderate form of this approach which allows for some exceptions, relying instead upon identifying regularities or generalisations, is more suitable (see Gundersen, 2018, for a thorough discussion of this account termed "Woodwardian explanation", in the style of Woodward, 2003). E.g., explaining that individuals will typically act in line with group norms if they are more deeply embedded within that group.

(3) *Mechanistic explanations*: the explanation of phenomena by elucidating the constituents and constituent interactions which produce the phenomena in question (Craver, 2002, 2007). E.g., explaining that individuals will typically act in accordance with group norms if they are more deeply embedded within the group by elucidating the various mechanisms that produce this relationship (e.g., the causal and compositional mechanisms of social identification, social corroboration, deindividuation, and/or conformity).

(4) Probabilistic/statistical explanations: the explanation of phenomena by appeal to statistical probabilities (Mantzavinos, 2016). E.g., explaining offending by referencing individuals' or groups' exposure to risk factors (and absence of protective factors) for that offence.

(5) Intentional explanations: the explanation of actions through appeal to the agents' mental state(s), i.e., beliefs or desires (Dennett, 1989). E.g., explaining individuals' perpetration of violent acts due to a desire to obtain social status with peers.

(6) Dispositional explanations: the explanation of phenomena produced by a system through appeal to (putatively causal) properties of that system (Vanderbeeken & Weber, 2002). E.g., explaining an individual's offending behaviours as a result of being highly impulsive, having poor problem-solving skills, inappropriate self-regulation skills, and lacking in empathy.

In line with a thesis of explanatory pluralism, I hold that there is no one best way to explain phenomena, but rather the most useful approaches to explanation are determined by what one hopes to accomplish with them (Salmon, 1989; Mantzavinos, 2016). Thus, while it is necessary to consider a multitude of levels/scales of explanation and explanatory strategies to explain phenomena, it is possible to draw upon both the conceptual focus of the research task (which highlights the explanatory concerns) and the identified classes to highlight which kinds of strategies and levels of explanation are most salient in a given instance. I therefore direct my focus towards strategies and levels I expect to be most relevant for each of the identified tasks. In this sense it is emphasised that distinct categories must highlight *unique* etiological and/or compositional relationships, otherwise their distinction serves little to no explanatory purpose.

For instance, *dispositional explanations* of gang-related phenomena (see Vanderbeeken & Weber, 2002 for a discussion of dispositional explanations) which appeal to

individual temperamental/personality traits (e.g., self-control; Gottfredson & Hirschi, 1990) are likely to be of utility for offering insights into some of the *personal* factors which may contribute to gang occurrences. Such an explanatory approach is therefore likely to be of greatest relevance when considering gang occurrences at that particular scale (e.g., as one aspect of the personal variables considered when developing comprehensive/tailored approaches to prevention or treatment/intervention). Yet may be of less relevance when considering and responding to other gang-related phenomena (e.g., gang rivalries), or for framing gang research perspectives as a whole (see Pyrooz et al., 2021).

Because there are many different forms of explanation which can be used to elucidate different aspects of the same phenomenon, it is necessary to directly consider which particular approach will provide the *most* useful insights for the task at hand. For instance, appealing to dispositional explanations may offer some utility when accounting for the differences in categories for the task of treatment/intervention, which could focus on the different kinds of goals or motivations that gangs and their members hold. However, this approach is unlikely to comprehensively explain the major differences between categories, capturing only part of the explanatory pattern and/or placing an emphasis on certain features of the explanatory pattern at the expense of others. Instead, *intentional explanations* which detail how and why individuals and groups develop different goals/motivations are likely to capture more of the explanatory picture and provide better, task-relevant insights. However, this is not to say that one single explanatory approach is solely relevant for each task. Rather, the most suitable explanatory approaches for a task are those which best account for the details in phenomena, or patterns of phenomena, as identified at classificatory stages.

See Table 4 for a depiction of how different explanatory strategies can be utilised to account for distinctions drawn at classificatory stages in a manner which provides insights relevant to satisfying the conceptual interests of each research task.

Table 4

Relationships Between Conceptual Foci, Classificatory Emphases, and Explanatory

Strategies

Task	Conceptual focus	Classificatory emphasis	Explanatory strategy
Identification	Understanding of the descriptive features which differentiate gangs from non-gangs, and gangs at various stages of development	Classes of variables that are associated with gang membership, development, and identity features	Regularity explanation: What patterns of variables are associated with gangs and gang membership at various stages of development?
Prevention	Understanding of the general causal factors which can be targeted to influence individual and group behaviour/ functioning and pre-empt offending/escalation of offending	Categories/classes of risk and protective factors	Etiological explanation: What are the risk and protective factors for gang involvement?
Risk Management	Understanding of the compositional factors/ processes which can be targeted to reduce harm-causing actions	Categories related to community safety such as levels/kinds of harm posed by gang activities	Compositional mechanistic explanation: What are the constituents of gang-related activity?
Treatment/ Intervention	Understanding of specific causal factors which can be targeted to influence individual and group behaviour/functioning and recidivist crime	Categories that reflect types of implicit or explicit goals the individual and group have	Intentional explanation: What goals are being sought? What needs are being meet?

Note. Table 4 depicts the explanatory strategies relevant to different research tasks.

Explanatory strategies account for classificatory patterns in a manner that provides task-

relevant conceptual insights.

7.7. Chapter Summary

How a target system (e.g., gangs) is construed should be determined by the

overarching interests which motivate different research tasks and the kinds of pragmatic and

epistemic insights most useful for a given purpose. Research tasks constrain the appropriate conceptual emphasis to place on a system of interest as well as the kinds of conceptual strategies which are relevant to this process. I argue that without an appropriate consideration of the constraints imposed by a research task, it is not possible to defensibly justify the use of one definitional, classificatory, or explanatory strategy over another. Ultimately, by explicitly embedding these considerations within the process of selecting and justifying conceptual strategies, I contend that researchers will be able to better elucidate descriptive and explanatory patterns within a target system that are relevant to meeting their various research needs.

The value of the model I have developed is that it offers one useful way of considering the division of epistemic labour in a domain of research. In other words, I have mapped out the kinds of conceptual and theoretical insights that are required for different purposes and highlighted the most fruitful paths to attaining them. Importantly, this model makes the conceptual considerations of the research process highly transparent. Assumptions that may previously have been held implicit about a target system and how to investigate it are instead explicitly mapped out. Researchers are therefore able to see where their interests and expertise lie, offering more specific opportunities for collaborative research. In other words, because my approach rests on taking a conceptually transparent and openly teleological approach to the organisation of gang research, researchers are primarily aligned by the goals of their investigations. This offers a more specific and ultimately more *useful* approach to collaboration by aligning researchers in terms of what they hope to achieve and guiding collaborative ways to achieve this, rather than being "unified" due to superficially conforming to the conventions of an elected research program with an overarching definition.

To be clear, I agree with the overarching aims of the Eurogang Program and greatly acknowledge the considerable efforts and achievements of the Eurogang contributors over the

years. However, as part of pursuing a collaborative, comparative, and methodologically diverse approach to gang research, I also recognise that developing a comprehensive understanding of gangs requires conceptual and theoretical acknowledgment of the diverse perspectives, motivations, and strategies required to achieve this aim. By presenting my arguments for a pluralistic approach to the definition, classification, and explanation of gang-related phenomena and demonstrating the constraint considerations that necessitate this pluralism, I offer a viable alternative to approaching collaborative research. As such, in the following chapter, I use the model discussed here to highlight examples of conceptual strategies from within and beyond gang research that may be useful for different research tasks. In doing so I aim to produce a pluralistic framework that can be used to coordinate gang research.

Chapter Eight: The Conceptual Framework for Gang Research

The purpose of this chapter is to build upon the conceptual considerations elucidated in chapter seven in order to present a practical example of what a pluralist framework for organising gang research may look like. I present *The Conceptual Framework for Gang Research* (Wegerhoff et al., 2020) as one possible means of pursuing collaborative gang research. The purpose of this framework is to facilitate the identification of putatively useful definitional, classificatory, and explanatory strategies for the tasks of identification, prevention, risk-management and treatment/intervention. By clearly endorsing a pluralist approach to definition, classification, and explanation in gang research, and by providing a framework to coordinate these pluralistic efforts, it is expected that researchers will be able to prioritise a range of useful strategies depending on the task they are engaged in. Further, it is expected that such an approach will help to prevent the misuse or inappropriate importation of strategies across research tasks and guide the development of effective research strategies. I draw upon relevant examples from research into gang, group, and individual behaviour to demonstrate how such a framework may function and to emphasise where different kinds of strategies may offer utility for different tasks (summarised in Table 5).[37] Finally, I consider some of the limitations of the epistemically pluralist framework I have presented.

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[37] I note here that Table 5 is different to the *Conceptual Framework for Gang Research* table presented in Wegerhoff et al. (2020). Specifically, without the space limitations of a journal article I have been able to include the examples of each conceptual strategy discussed throughout the chapter.

Conceptual Strategies	Research Tasks			
	Identification What features and processes of a gang or group of interest (i.e., potential pre-gangs, post-gangs) can be distinguished to describe the group and its stage of development for the purpose of recognition?	**Prevention** What features and processes need to be targeted to enhance the prosocial functioning of individuals/groups and/or reduce the likelihood of gang-related problems *before they occur*?	**Risk management** What features and processes need to be targeted in order to control *current/imminent* gang-related threats?	**Treatment/intervention** What features and processes need to be targeted in order to enhance the prosocial functioning of groups/group members and/or reduce the likelihood of *recidivist* gang-related problems?
Definitions i.e., how do we define a gang?	Group with a historical, current or predicted engagement in crime/social harm. e.g., Eurogang definition (Weerman et al., 2009), Klein (1971) definition	Group which engages in crime/social harm to satisfy desired goals/functions. e.g., Sánchez-Jankowski (1991) definition, Brotherton & Barrios (2004) definition	Group which poses a security or safety threat to individuals/systems around them. e.g., FBI (1991) definition, National Alliance of Gang Investigators' Association (2005) definition	Group which engages in crime/social harm to satisfy desired goals/functions. e.g., Sánchez-Jankowski (1991) definition, Brotherton & Barrios (2004) definition
Classificatory strategies i.e., how should we classify gangs/gang members?	Classes of variables that are associated with gang membership, development, and identity features. e.g., Gang embeddedness (Pyrooz et al., 2013), McLean's (2017) Evolving Gang Model	Categories/classes of risk and protective factors. e.g., Risk and protective factors for violence (Gebo, 2016; Haegerich et al., 2013)	Categories related to community safety such as levels/kinds of harm posed by gang activities. e.g., Offending/behavioural typologies, Durrant's (2020) evolutionary/moral violations account of crime	Categories that reflect types of implicit or explicit goals the individual and group have. e.g., Mallion & Wood's (2020a) primary human goods of gang joining, Ward & Carter's (2019) motivational systems approach
Explanatory strategies i.e., how do we explain general gang occurrences?	*Regularity explanations* What patterns of variables are associated with gang memberships? e.g., Eurogang discussions of definers and descriptors of gangs (Weerman et al., 2009)	*Etiological explanations:* What risk factors predict gang involvement? What protective factors predict decreased involvement? e.g., theoretical models of gang membership (Howell & Egley, 2005); models/framework for understanding behaviour/offending (Heffernan & Ward, 2017; Heffernan et al., 2019; Strauss-Hughes et al., 2019; Ward & Fortune, 2016a)	*Compositional mechanistic explanations:* What are the constituents of gang-related activity? e.g., understandings of gang activity as demonstrated by Operation Cul-de-sac (Lasley, 1996), or those referred to when proposing legislation around the availability of substances or firearms	*Intentional explanations:* What goals are being sought? What needs are being meet? e.g., Dennett's (1989) intentional stance; theories/frameworks of offending behaviour (Bonta & Andrews, 2017; Ward, 2002); Brotherton (2015, 2018) and Fraser & Hagedorn's (2018) agentic view of gang behaviour/function

Table 5. *The Conceptual Framework for Gang Research (CFGR)*: *Identifying Conceptual Strategies for Gang Research Tasks*

8.1. Identification

Most, if not all, stakeholders responsible for responding to gang-related problems will engage in the task of identification. Subsequently, the task of identification has received considerable attention throughout the extant gang literature. Identification typically involves the recognition of features and processes of gangs and gang-like groups in order to describe that group and its stage of development.

Research question: What features and processes of a gang or group of interest (i.e., potential pre-gangs, post-gangs) can be distinguished to describe the group and its stage of development for the purpose of recognition?

8.1.1. Definitional Strategies for Identification

Rather than capturing a solely static picture of groups that might be considered currently active "stereotypical gangs", the task of identification requires that researchers are able to identify gangs in a variety of forms across various stages of development regardless of whether they can be labelled as a "bona fide gang" in the current instance (i.e., gang-like groups, groups of interest, pre-/post-gangs etc.). Researcher interest for identifying gangs, typically centres on the criminality of these groups – as the omission of criminality tends to render the scope of identification too broad to be useful (see Wood & Alleyne, 2010). It is therefore applicable that in such cases definitions indeed emphasise such features. However, because the research question is interested in identifying groups of individuals with a *historical*, *current* or *predicted* engagement in crime/social harm, it is necessary to consider that for the purposes of identifying gangs at various stages of development criminality is not a strict static feature and can imply past or predicted criminality.[38] Doing so will direct

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[38] Note: it is important to reemphasise the level of discussion that is occurring regarding this point. Here I am describing definitional approaches for research purposes, i.e., identifying gangs at various stages of development. I am in no way implying (as misreading the level of analysis might suggest) that "groups predicted to be future gangs" or "groups that have desisted from gang life" should in any

researcher enquiry towards groups of interest while preserving a developmental perspective that is omitted from a static interest in current criminality. Examples of relevant definitions may include (1) the Eurogang definition of street gangs (Weerman et al., 2009, p. 20) "a street gang … is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity", and (2) Klein's (1971, p. 13) definition, which views a gang as "any denotable adolescent group of youngsters who (a) are generally perceived as a distinct aggregation by others in their neighbourhood; (b) recognise themselves as a denotable group (almost invariably with a group name); and (c) have been involved in a sufficient number of delinquent incidents to call forth a consistent negative response from neighborhood residents, and/or law enforcement agencies".

8.1.2. Classificatory Strategies for Identification

In order to classify gangs and their various stages of development and complexity for the purpose of identification, it is necessary to discern factors commonly associated with groups at these various stages and identify robust patterns. As such, strategies which elucidate *classes of variables* that are associated with gangs, gang membership, development, and identity features, are one means of classification for identification.

One approach for classifying gang members at the individual level is the *gang embeddedness* approach (Pyrooz et al., 2013). Due to the difficulty of classifying individual gang members categorically (e.g., as core or peripheral members), recent advancements have seen the development of the gang embeddedness approach which provides a continuous individual-level measure of an individual's immersion within a deviant network (Pyrooz et al., 2013). Embeddedness is determined by taking a multidimensional approach to capturing immersion within a gang, including consideration of an individual's structural/organisational

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way be *treated* by stakeholders in practical circumstances as if they are current gangs as this would undoubtedly present numerous ethical concerns.

position within a gang, participation in gang-related behaviours, and psycho-social connection to the group and other members (Pyrooz et al., 2013). Similarly, this approach emphasises that it is possible to be embedded within a gang without necessarily being an active/current participant in illegal activity offering utility for the consideration of multiple trajectories (i.e., escalation, maintenance, desistance) when assessed longitudinally.

At the group level, numerous approaches have been developed for classifying features associated with gangs and gang membership. Common approaches include delineation of groups based on key features, such as descriptive characteristics or *descriptors* (i.e., tattoos, ethnicity, names, colours etc., Esbensen & Maxson, 2012), and generation of typologies based on structural features (e.g., Klein, 2002) and behavioural features (e.g., Fagan, 1989; Huff, 1989; C. S. Taylor, 1990) (see Bolden, 2018 for a greater discussion of gang typologies).

Some criticisms have however been drawn against typological approaches which classify gangs based on a single factor, as they fail to capture the multidimensional and dynamic (i.e., evolving/developmental) nature of such groups (Bolden, 2014; Spindler & Bouchard, 2011). Examples of gang typologies which take an evolving approach to classification include those that consider the escalating criminality and sophistication of such groups (e.g., Knox, 2006; McLean, 2017; J. P. Sullivan & Bunker, 2007, see Bolden, 2018). For instance, McLean's (2017) *Evolving Gang Model*. considers the variables of age range, relationships of members, social terminology, membership style, and group activities to identify three kinds of groups: young street gangs, young criminal gangs, and organised criminal groups.

8.1.3. Explanatory Strategies for Identification

The task of identification is largely descriptive, in this sense explanatory strategies are not used to elucidate causal explanations for the groupings of phenomena as such, but rather

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explain what a gang or gang member at various stages of development looks like, and why distinctions between gang or gang member categories (or dimensional positions) are drawn. In this sense, explanation for the purpose of identification can be viewed as a higher-level descriptive or classificatory task, i.e., as justifications for the definitional and classificatory parameters drawn for the task of identification. *Regularity explanations* which serve to identify patterns or generalisations are therefore one way of achieving these higher-level descriptive aims, by explaining what patterns of variables are associated with gangs and gang membership and why. For instance, explaining why a particular gang is considered a "street gang" as opposed to another kind of gang by highlighting the covariance of key features/properties associated with that group (e.g., expressions of territoriality, public/neighbourhood disruptions) and describing how they overlap most closely with representations of groups typically considered as street gangs. A relevant example of such discussions may include the Eurogang Program's separation of definers from descriptors when discerning properties of gangs (Weerman et al., 2009).

8.2. Prevention

As conceptualised here, the aim of prevention is to promote positive social functioning and/or to reduce the likelihood of gang-related problems before they occur. This involves (a) universal promotion of prosocial functioning and/or reduction of gang-related risks for the general population, and (b) promoting prosocial functioning for "at risk groups or individuals" or "groups or individuals currently causing problems" (but not "gang problems" per se) and/or preventing them from engaging in future problem behaviours or developing in unwanted ways (e.g., engaging in crime, developing criminal network connections etc.). These aims align with what is often termed universal and selected prevention in the public health literature and primary and secondary prevention elsewhere (Gebo, 2016; McDaniel & Sayegh, 2020). Therefore, to engage in the research task of

prevention it is necessary to identify features that, when targeted, reduce instances of gang-related problems before they occur and prevent unwanted problem development and/or promote positive outcomes for general or selected populations (e.g., improve functioning, well-being, social outcomes, etc.).

Research question: What features and processes need to be targeted to enhance the prosocial functioning of individuals/groups and/or reduce the likelihood of gang-related problems, before they occur?

8.2.1. Definitional Strategies for Prevention

Based on the aims of prevention research, appropriate definitions should emphasise that gangs are groups of individuals that engage in goal-directed behaviours and are influenced by developmental, social, and contextual processes within and beyond a group setting. The typical features here may therefore emphasise that gangs are groups which engage in activities such as crime/social harm to satisfy desired goals/functions (where goals/functions are necessarily influenced by contextual constraints). To capture this picture, it is important that causal or correlational features of gangs are not conflated as intrinsic properties of these groups themselves (see Ball & Curry, 1995), but that the gang/group is represented in such a way that the focus of enquiry is directed towards the factors which influence individual and group functioning (including those that may lead individuals to join gangs or for groups to develop in unwanted ways) that can subsequently be targeted for preventative measures. Examples of definitions that may be relevant include: (1) Sánchez-Jankowski's (1991, p. 28-29) view of a gang as "an organized social system that … plans and provides not only for the social and economic services of its members, but also for its own maintenance as an organization; that pursues such goals irrespective of whether the action is legal or not" and (2) Brotherton and Barrios' (2004, p. 23) view of a gang as a street organisation, specifically as "a group formed largely by youth and adults of a marginalized

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social class which aims to provide its members with a resistant identity, an opportunity to be individually and collectively empowered, a voice to speak back to and challenge the dominant culture, a refuge from the stresses and strains of barrio or ghetto life and a spiritual enclave within which its own sacred rituals can be generated and practiced".

8.2.2. Classificatory Strategies for Prevention

Because the aims of prevention are to target factors and processes which enhance individual/group prosocial functioning and/or reduce gang-related problems before they occur, it is necessary that classificatory strategies carve groups of interest in a manner that directly facilitates such objectives. It naturally follows that classificatory strategies which identify *categories or classes of risk and protective factors* for problem occurrences are directly relevant. Because of the multilevel nature of gang joining/membership (Short, 1985) and human existence generally (Bronfenbrenner, 1979) predictive factors relevant for gang membership should be considered across levels/scales, including: individual (e.g., biological, psychological, personal historical), relational (e.g., peers, family, mentors), community (e.g., school, neighbourhood), and societal (e.g., social, cultural, and legal norms and opportunities) – see also Klein and Maxson (2006); Matsuda (2014); and McDaniel and Sayegh (2020). By identifying classes of risk and protective variables across and within domains, it is then possible to identify which individuals or groups are at greatest risk of developing in unwanted ways or functioning in a manner which undermines their own agency (or possibility for positive outcomes), and thus, those which are in greater need of preventative efforts – and correspondingly, the domains (and features of these domains) which are relevant for preventative efforts.

Importantly, despite the relevance of a risk and protective factor approach to classifying the variables relevant for prevention, considerable research into the identification of risk factors for gang membership and gang-related offending has proven difficult. In fact,

researchers typically have a better understanding of risk factors for preventing offending generally (e.g., risk factors for violence perpetration) than risk factors relevant to preventing gang membership itself (Gebo, 2016; Haegerich et al., 2013). It has also proven incredibly difficult to identify *unique* risk factors which differentiate generally violent individuals from gang members, instead distinctions are usually reflected in the amount or degree of risk factors present (Gebo, 2016). It is also recognised that there is a considerable lack of understanding of protective factors against gang joining/involvement (Gebo, 2016; Howell et al., 2017; McDaniel & Sayegh, 2020). Accordingly, it may be considered by some that classification specifically in relation to gang membership is less relevant for the aims of prevention and instead consideration of risk and protective variables for delinquency and/or prosocial functioning are a plausible way of grouping features of interest.

8.2.3. Explanatory Strategies for Prevention

Due to the aims of preventing gang-related problems from developing before they occur, *etiological explanations* which elucidate why and/or how these problems develop are of particular relevance for prevention. Building upon the classes identified in classification for prevention, etiological explanations can be developed to answer questions such as "what factors predict outcomes such as violence or gang involvement?" and "what factors predict decreased likelihood of gang involvement or perpetration of violence?". In their standard form as multivariate composite constructs (see Ward & Fortune, 2016a), risk factors are useful for the explanation of *why* an outcome occurs – or at least why a problem is more likely to occur – thus highlighting general factors that can be targeted in preventative efforts. To answer the question of *how* an outcome occurs it is suggested that more theoretical work might be required depending on the degree of insight sought. For instance, risk factors can be incorporated into developmental explanations to understand the influence of variables associated with gang membership from a life-course perspective – such as Howell and

Egley's (2005) extension of Thornberry et al.'s (2003) *theoretical model of gang membership* (see Howell et al., 2017 for an updated practical discussion of this model's utility). Other possibilities include consideration of risk variables in relation to models of agentic functioning (Heffernan & Ward, 2017), or specifically in relation to agentic functioning within a cultural and historical context (Strauss-Hughes, Heffernan, & Ward, 2019). Similarly, Heffernan, Ward, Vandevelde, and Van Damme's (2019) *risk-causality method* or Ward and Fortune's (2016a) *dynamic risk factor research framework* may offer utility for increasing the specificity of explanations by giving greater insight into the causal components of composite risk variables, thus facilitating more precise *mechanistic etiological explanation* (and therefore offering greater specificity for prevention efforts).

8.3. Risk Management

An important task in responding to gangs is managing the risks they pose. Gang researchers must therefore be able to identify the features of a group that need to be targeted in order to control current or imminent gang-related threats.[39] Risk management as described here can be seen as analogous to "symptom management" in healthcare; symptoms of a problem are managed in order to alleviate presenting complaints and provide temporary relief without necessarily focusing on the root causes of the problems themselves.

Research question: What features and processes need to be targeted in order to manage current or imminent gang-related threats?

8.3.1. Definitional Strategies for Risk Management

The purpose of this task is to elucidate groups which actively cause harm to individuals and social systems so that such threats can be effectively managed. It is therefore

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[39] While the word "imminent" can be viewed as before the event – in which case some might argue that this meets my understanding of prevention – I view the distinction between the two as proximal and distal; where "imminent" refers to an immediate and highly-likely threat (i.e., a risk management concern) and preventative considerations relate to more distal possibilities of threats.

relevant for the definitional focus to highlight these aspects of gangs, recognising that gangs can cause varying levels of harm to those around them. Therefore, typical features which emphasise the antisociality of gangs – with specific respect to the security or safety threat that they pose – are of particular salience. Examples of relevant definitions may include (1) the United States Federal Bureau of Investigation (1991) definition of a criminal street gang as "A group of people who form an allegiance based on various social needs and engage in acts injurious to public health and morals. Members of street gangs engage in (or have engaged in) gang-focused criminal activity either individually or collectively; they create an atmosphere of fear and intimidation within the community" (as cited in Allender & Marcell, 1999, p. 8), and (2) the National Alliance of Gang Investigators' Association (2005) street gang definition "A gang is a group or association of three or more persons with a common identifying sign, symbol, or name who individually or collectively engage in criminal activity that creates an atmosphere of fear and intimidation" (as cited in Smith et al., 2013, p. 2).

8.3.2. Classificatory Strategies for Risk Management

The aims of risk management are to manage "gang symptoms" and reduce their impact on broader society (without necessarily addressing the underlying causes of these symptoms themselves). For the purpose of risk management, relevant categories may therefore relate to *community safety* (including gang and non-gang individuals), for instance, by grouping phenomena according to the *kinds* and/or *levels* of harm that gang activities can pose.

Examples of such approaches may include classification in terms of gang activity/offence types, or classification in terms of the different kinds of harms that offences can cause. Offence and behavioural typologies are ubiquitous throughout gang research and practice (as well as correctional research and practice generally). Usefully, such approaches may highlight similarities in the kinds of behaviours being enacted which may be central to

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risk management responses (i.e., such similarities may offer unique insights into how to appropriately interrupt or control the harms presented by such behaviours). Similarly, approaches such as the *evolutionary, moral foundations account* offered by Durrant (2020), which look at the underlying *kinds of harm* that offences cause, may present a means of classification that facilitates understandings of why different kinds of behaviours are objected to and criminalised across contexts, offering insights relevant for managing such harms.

8.3.3. Explanatory Strategies for Risk Management

Classifying gangs in terms of the activities or kinds of harms they pose may elucidate commonalities across problem behaviours that can then be targeted to reduce the harms associated with such actions. In such cases, explanatory approaches such as *compositional mechanistic explanation* might offer utility for understanding the constituents of gang-related activity and elucidating compositional mechanisms which can be targeted to reduce current/imminent gang harms, without necessarily addressing the etiological causes of those harms themselves. I tentatively highlight that explanatory approaches which facilitate the targeting of the constituents of gang activities may offer utility for informing effective risk management responses. However, it is also necessary to mention that ethical considerations pertaining to such suggestions must also be taken into account – particularly when emphasising definitions of gangs which focus on the criminality of such groups to conduct explanation and inform practices. Namely, due to the overrepresentation of minority groups in criminal statistics[40] and the conscious and unconscious biases around who engages in crime or belongs to a gang, it is necessary to avoid engaging in practices which may serve to legitimise the oppression of minority groups (Durán, 2009).

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[40] As a direct result of the continued processes and systems of slavery, colonisation, systemic racism, inequality and inequity, and social and cultural dislocation (Atkins-Loria et al., 2015; Sampson et al., 2018; for a detailed discussion see Cunneen & Tauri, 2019 and Strauss-Hughes et al., 2019).

There are a range of anti-gang and gang suppression approaches employed by those tasked with addressing gang harms, which arguably focus on targeting constitutional features of gangs and gang activities in attempts to achieve their objectives (e.g., approaches which target key gang members, prevent associations between members, prevent congregation in given areas etc.; see Wood et al., 2016 for a discussion). However, it has been documented that targeting components of gangs or gang activities, without first developing an *appropriately thorough* compositional understanding of such groups and their activities, can have effects opposite to those intended; not only limiting effectiveness but also creating further harms. Illustrating this, Wood et al. (2016) discuss how overlooking the role of *group processes* is likely to have directly impaired gang deterrence responses. For instance, arresting gang leaders can create a power vacuum contributing to greater violence as others attempt to fill this vacuum (Vargas, 2014) or suppression approaches might inadvertently result in increases of gang cohesiveness (Klein & Maxson, 2006). Additionally, one of the most pressing contemporary gang problems is a practice known as *cuckooing*, where individuals involved in the distribution of illicit substances occupy a vulnerable individual's residence as a means of covertly engaging in criminal activity (Spicer et al., 2020). Cuckooing is thought to have emerged as a means of expanding drug markets whilst avoiding law enforcement or community responses which directly seek to target individuals such as gang members and their activities (for a greater discussion of cuckooing see Spicer et al., 2020). Therefore, a focus on identifying how to target the constituents of gang activity to effectively "manage gang symptoms" in a manner which does not create ethical problems or additional harms is a necessary aspect of such considerations.

It is emphasised that detailed compositional understanding of gang activities and consideration of constituents *beyond* the members or groups themselves may be of particular importance. One approach might involve moral considerations of the kinds of harm which

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different actions impose and developing responses which prioritise reducing the most urgent harms (e.g., legalisation of illicit drugs in attempts to decrease demand for gang supplied substances and reduce victimisation, exploitation, and violence that occurs with gangs competing for distribution territory or engaging in practices such as cuckooing). Similarly, a practical example of such an approach might include Operation Cul-de-sac (Lasley, 1996) in which outcomes such as inter-gang violence were reportedly reduced by introducing traffic barriers to prevent drive-by shootings.

Further, given the role of firearms in the exacerbation of gang violence (see *Section 1.3. Violence*), it may be suggested that policy directed at decreasing the availability of such weapons would have considerable impact on reducing gang violence (Carlock & Lizotte, 2015). Banning firearms is unlikely to fix gang violence, or even gang perpetrated gun violence (as more serious criminal groups, or those with contacts to more serious criminal groups, may still gain access to such weapons, see Hureau & Braga, 2018; Roberto et al., 2018), yet reducing the availability of such weapons may influence the severity/frequency of harms. Specifically, the benefit of this would come from addressing some of the components of gang violence that create harm. For instance, by reducing the "ease" of lethal violence facilitated by firearms (i.e., altering the effort-lethality ratio). Or by reducing the likelihood of bystanders accidentally being caught up in gang violence such as drive-by shootings (i.e., altering the real and perceived threats to communities).

8.4. Treatment/Intervention

Treatment/intervention aims to work with groups or group members who are already participating in serious problematic behaviours in order to promote prosocial functioning and/or to reduce the likelihood of future problem behaviours. These aims align with what is often referred to as indicated prevention in the public health literature, and tertiary prevention elsewhere (Gebo, 2016; McDaniel & Sayegh, 2020). In order to facilitate the practical aims

of effective treatment/intervention, researchers must be able to identify the features and processes that, when targeted, lead to the promotion of positive outcomes for the groups and members involved (e.g., improve functioning, well-being, social outcomes etc.) and/or reductions in the likelihood of recidivist gang-related problems (e.g., reduced frequency and/or severity of offending, termination of antisocial behaviours).

Research question: What features and processes need to be targeted in order to enhance the prosocial functioning of groups/group members and/or reduce the likelihood of recidivist gang-related problems?

8.4.1. Definitional Strategies for Treatment/Intervention

Due to the similarities between the general aims of prevention and treatment/intervention, foundational conceptualisations of gangs and gang members are likely to be very similar for the two tasks. Because the aims of treatment/intervention are to promote prosocial functioning and a reduction of problem behaviours, it is pertinent here that typical features draw attention to relevant aspects of such groups. Specifically, it may be relevant to consider gangs and gang members as intentional agents who engage in goal-directed behaviours (including crime/social harm) to satisfy desired goals or functions. Examples of definitions that may be relevant include: the Sánchez-Jankowski (1991) and Brotherton and Barrios (2004) definitions presented in section *8.2.1. Definitional Strategies for Prevention* (p. 169–170).

8.4.2. Classificatory Strategies for Treatment/Intervention

As suggested above, for the purpose of treatment/intervention, it is relevant to emphasise that gangs and gang members are agentic goal-directed actors who navigate physical, social, temporal, and cultural contexts. As such, one relevant approach to classifying gang-related phenomena for treatment/intervention research could involve the demarcation of *categories that reflect types of implicit or explicit goals* that individuals and

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groups have (i.e., the prospective aims of individuals/groups as constrained by the opportunities and limitations of the agents' capacities and the need to navigate local and broader contexts; Heffernan & Ward, 2017). By identifying trends in the kinds of goals that gang members pursue it may be possible to delineate features of gangs and gang members in a manner that directly highlights phenomena salient for treatment/intervention.

It is not uncommon for gang typologies to include some reference to the goals/motivations of different kinds of gangs and/or gang members, however it is much less common that such features are the major emphasis of demarcation (e.g., Cloward & Ohlin, 1960; J. P. Sullivan & Bunker, 2007; C. S. Taylor, 1990) – i.e., while differences in goals may be noted across types, these differences are not the basis for delineation and it is not guaranteed that such categories offer utility for inferring the relevant detail required for treatment/intervention. Instead, approaches which are specifically designed to delineate gangs or gang members along such dimensions may be a fruitful way forward. Recent investigations into gang member goals may offer a useful starting point for such a project.

For instance, Mallion and Wood (2020a) review a range of motivational factors relevant to joining street gangs and describe how they converge upon ten overarching goals associated with general human functioning (which have been identified as central to strengths-based rehabilitation; Ward, 2002). Similarly, frameworks which highlight the functional or motivational systems that produce human behaviour may also be relevant. For example, the *Functional Offending Behaviour Classification Framework* (FOBCF; Ward & Carter, 2019) highlights categories specifically relevant to the explanation of human behaviour, including offending (see Dixon & Wride, 2020 for a discussion of the theoretical utility of the FOBCF for progressing intimate partner violence research).

8.4.3. Explanatory Strategies for Treatment/Intervention

In instances where classification is conducted based on the kinds of goals that agentic actors (individual or group) pursue, the role of explanatory strategies are to answer questions such as "what goals are being sought?", "what needs are being met", and "why has this behaviour been chosen to meet this goal?". Therefore, *intentional explanatory approaches* that emphasise the role of agency and explain why and how individuals select and pursue specific goals are likely to be highly relevant. For instance, the intentional stance offered by Dennett (1989), necessitates consideration of an agent's mental states – i.e., beliefs, desires, and goals (informed by the agent's context) – to appropriately understand the behaviour of that agent. While multiple levels/scales of explanation are of course relevant, it is salient to emphasise the level of intentionality (i.e., first-person perspective) given one of the central features of desistance from criminality (specifically *true desistance*, see Carlsson, 2012; Kazemian, 2007), is the active adoption and pursuit of a prosocial identity and way of being (Maruna & Roy, 2007).

Two examples of relevant frameworks that can facilitate intentional explanation for treatment/intervention are The Risk-Need-Responsivity Model (RNR; Andrews & Bonta, 2010; Bonta & Andrews, 2017) and the Good Lives Model (GLM; Ward, 2002). The RNR model – theoretically underpinned by the General Personality and Cognitive Social Learning perspective of crime (GPCSL) – views individuals as rational, reward-oriented actors and includes some acknowledgements of an individual's beliefs and desires. However, this acknowledgement is typically criminogenic (i.e., offence supportive attitudes, sexual attraction to children) and modular (i.e., presence of risk factors increases risk of crime) in nature, largely avoiding complex and contextual acknowledgement of human intentionality (for a discussion see Dent et al., 2020). The GLM, which was designed to work complimentarily to the RNR, specifically addresses these deficits by necessitating the

elucidation of the goal-directed intentional processes – developed as a means of navigating one's contexts – which led an individual to engage in behaviours such as crime.

Additionally, the work of gang scholars such as Brotherton (2015, 2018) and Fraser and Hagedorn (2018) which position gangs as agentic actors within a larger cultural and historical context may provide utility in informing research and responses that not only focus on the harm reduction aspects of intervention, but also aspects which pertain to overcoming social and group-level marginalisation and promoting prosocial functioning (i.e., development of autonomous capacities, desires, identities, and opportunities to engage in prosocial behaviour and promote well-being of members and associates).

For example, many definitions, explanations, and responses to gangs are typically *pathological* (i.e., definitions include necessary features of criminality; explanations of individual behaviour refer to the criminogenic influence of gang membership, and; individual level treatment/intervention approaches encourage and facilitate gang exit) and/or *monolithic* (i.e., seek to represent often broadly different cases as similar based on properties/features as identified and imposed by top-down methods) (see Brotherton, 2015 and Fraser & Hagedorn, 2018 for detailed discussions). However, conceptual, and specifically explanatory, approaches which recognise the variability, intentionality, agentic status, and functionality of groups at a group-level directly emphasise the need for group-level intervention approaches which go beyond perpetually pathological or "one-size-fits-all" conceptualisations, with direct opportunities for investigating group-level desistance responses (e.g., examinations of capacities for prosocial group-level agentic function and outcomes such as group transformations).

8.5. Summary

The CFGR is founded in the principles of epistemic pluralism and draws upon the model developed in chapter seven for considering the constraint relationships between

conceptual strategies and research tasks. The CFGR serves to identify specific examples of the kinds of conceptual strategies, both within gang research and beyond, that are likely to be useful for the tasks of identification, prevention, risk management, and treatment/intervention. By providing an array of conceptual strategies suited to different purposes the CFGR acts as a conceptual toolkit that can be referenced by researchers when undertaking different projects.

8.6. Implementing the Conceptual Framework for Gang Research

In this section I discuss some of the considerations relevant to the implementation of the CFGR. I first begin by addressing potential concerns that implementing a pluralist approach may regress gang research by reigniting problems such as the over-identification of gang members. I argue that due to the systematic epistemic considerations built into the model for conceptual strategy selection, such concerns are no more prevalent within a pluralist framework for gang research than a unified one. Next, I clarify the relationship between research tasks and responses to gang problems and therefore how research derived from the CFGR relates to, and can be used to inform, practical responses to gangs.

Beyond providing a conceptual toolkit for researchers to draw upon when structuring their research, I also demonstrate the utility of the CFGR and its underlying model for addressing contemporary debates within gang research. I discuss two examples to make this point. First, I discuss debates regarding the use of gang databases in light of ethical critiques. Second, I consider debates around the appropriate conceptual focus to place on gangs, particularly in relation to recent recommendations to change from a focus on crime, to a focus on violence.

8.6.1. The CFGR and Concerns of Over-Inclusivity

A pluralistic approach to the development of conceptual strategies may raise concerns for some researchers, particularly those worried that adopting a plurality of gang definitions

could lead the field backwards by (re-)introducing issues such as over-inclusivity (i.e., the attribution of the "gang" label to groups that should not be considered gangs).[41] I would respond that issues of over-inclusivity relate solely to the task of identification, and thus that the use of other definitions for other tasks does not present cause for concern. The use of multiple gang definitions for other tasks only influences how gangs are conceptualised when undertaking those specific tasks. Within the task of identification, there will naturally be pragmatic constraints that influence how definitions are developed and selected. For instance, effective identification depends upon the reliable recognition of gangs across contexts. Therefore, even though several gang definitions might feasibly be suitable for the purpose of identification, it would be reasonable to expect that researchers elect one of those possible definitions as the standard definition for identification (e.g., the Eurogang definition) in order to meet the research needs of that task.

Thus, issues of over-inclusivity would come down to the features of the definition(s) selected within the task of identification[42] rather than the existence of multiple definitions across tasks. The pluralistic approach to gang research that I advocate for here argues that conceptual strategies should be tailored to the specific requirements of each research task. If one of the leading requirements within the task of identification is the reliable cross-contextual recognition of gangs and their members, then it is entirely consistent within a pluralist framework to utilise a primary definition for that task – provided that the selected definition is capable of meeting the requirements of that task and that competing alternatives do not better serve these requirements. However, it is also necessary to recognise the limits of

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[41] I would like to thank an anonymous reviewer of the paper "The conceptualization of gangs: Changing the focus" (Wegerhoff et al., 2020) for raising this point.
[42] For example, gang definitions excluding criteria such as "criminality" would generally be considered overly inclusive (see Wood & Alleyne, 2010); similarly, "criminality" as included in the Eurogang definition may present issues of over-inclusivity by encompassing peer groups which are not typically considered gangs but engage in activities such as illegal raving or illicit substance use (Aldridge et al., 2012; Medina et al., 2013).

such a definition, namely that a single definitional approach is not capable of meeting the requirements for all research tasks. Instead, a plurality of approaches across tasks is crucial.

8.6.2. Relating Research Tasks to Gang Responses

Within this thesis I have taken a teleological approach to the organisation of gang research by aligning researchers and the strategies they use in terms of the overarching goals they are pursuing (focusing on identification, prevention, risk management, and treatment/intervention). It is important to emphasise that these categories relate to *research interests* and in practice different kinds of responses may draw upon insights from *multiple* research tasks. In other words, a programme will have multiple practical components which are informed by more than one research task.

For example, while primarily focused on therapeutic and desistance outcomes, a rehabilitation programme for gang members may draw upon insights from the research tasks of *identification*, *risk management*, and *treatment/intervention* at different stages. Conceptual strategies from the research task of *identification* are likely to be of relevance for determining *who* this particular programme is most suitable for (i.e., identifying gang members to be enrolled in the programme). Insights from the research task of *risk management* may provide understanding of how to limit gang harms from occurring before, during, and immediately after programme sessions. Finally, the research task of *treatment/intervention* is likely to be of greatest relevance for informing the *structure and content* of the programme itself by determining how to effectively target the causes of undesirable outcomes and promote prosocial/functional outcomes.

Recognising that research tasks relate to *domains of research interest* rather than as specific *domains of practice* is important for two reasons. First, it highlights that responses will likely draw upon the findings of different research domains, therefore encouraging researchers and stakeholders to be more reflective of the various practical tasks they are

involved in and the corresponding aims, purposes, and strategies relevant to these tasks. Second, it will prevent undue criticism of the kinds of conceptual strategies employed for one research task according to the pragmatic and epistemic constraints of another.

For instance, if the research task of treatment/intervention is conflated with (and therefore viewed as equivalent to) actual gang treatment programmes, the three-analysis definitional approach might be falsely accused of being too vague to accurately identify gang members for treatment. While these remarks may appear obvious, I argue that this is only due to the disentanglement of research objectives that the CFGR has provided. Indicatively, in the next sections I discuss two contemporary debates that have arisen in gang research which I argue are reflective of such conflations. I then demonstrate how situating them within the CFGR can help to untangle them, offering workable solutions to complex problems.

8.6.3. Gang Databases: Understanding and Addressing "Problems of Importation"

One of the major limitations of a unified approach to gang research is that it requires the use of "one-size-fits-all" strategies. As such, conceptual strategies that were developed in relation to one task are "imported" into different tasks with different epistemic and pragmatic demands. Examples of these "importation problems" are evident throughout the gang field. One current example is that of gang databases. To highlight the utility of the CFGR for addressing contemporary problems in gang research I discuss some of the current problems with gang databases and how attempts to solve these problems within a unified framework face several limitations. Alternatively, I demonstrate how considering concerns around gang databases in relation to the CFGR can untangle the different purposes gang researchers and stakeholders are pursuing and thus highlight appropriate strategies and solutions to such problems.

While the aims, structures, and contents of gang databases may vary (e.g., documenting details of gang members/associates vs. identifying existing gangs and detailing

their activities) their aims are largely similar. Namely, gang databases serve to facilitate the identification, monitoring, resource distribution, decision-making, and responses to gangs, gang members, and gang crimes (Huff & Barrows, 2015). Yet, while gang databases may be useful for identifying/researching putative gangs and gang members, a considerable number of serious criticisms have been made about their usage when these databases are taken to inform responses directed at members recorded on such lists.

In reviewing the evidence for criticisms of gang databases, Densley and Pyrooz (2019) identify that critiques have been raised in relation to: (a) the role gang databases play in legitimising the over-policing and over-punishment of minority groups; (b) the notion that gang membership is not measured accurately; (c) the lack of due process surrounding placement in gang databases; and (d) the unintended punishing consequences of being named in a gang database. Following their evaluations, the authors conclude that, while there is evidence supporting a number of the above criticisms, the cost of abandoning gang databases, particularly for identification purposes, is too great and that it is instead necessary to seek to improve our database practices to try and mitigate these harms. Specifically, Densley and Pyrooz (2019) conclude that gang databases are too valuable to abandon but they "must function in a way that upholds the civil rights of those included in them, and without any unlawful discrimination" and thus "the status quo is not an option" (p. 22).

Within a unified framework, the solution is therefore centred on the development of a strategy that can facilitate the identification of gangs while also avoiding ethical concerns. Namely, developing a consensus operational/legal definition which provides specific guidelines around who and what should be considered gangs, gang members, and gang-related activities while avoiding criteria which may involve subjective decision making or are not supported by empirical evidence. Notably, features such as criminality which are commonly included within research and legal definitions of gangs cannot be used within

future definitions. This is because minority groups are typically over-represented in criminal statistics as a direct result of the continued processes and systems of slavery, colonisation, systemic racism, inequality and inequity, and social and cultural dislocation (Atkins-Loria et al., 2015; Sampson et al., 2018; for a detailed discussion see Cunneen & Tauri, 2019 and Strauss-Hughes, Heffernan, & Ward, 2019). Definitions of gangs which include such criteria and therefore further direct law enforcement attention towards minority groups will inevitably serve to legitimise disproportionate responses against them and undermine their civil rights. The solution based on this response would therefore be to develop an operationalisation of gangs which does not include criminality – however this presents concerns of over-inclusivity, undermining the pragmatic requirements of being able to identify individuals engaging in harm.

In response, it is my position that a single definitional approach is incapable of meeting all of the diverse epistemic and pragmatic aims of gang researchers and that failure to recognise this ultimately limits abilities to inform effective and ethical responses to gang problems. By considering the database problem in relation to the CFGR, it appears that difficulties have arisen due to the overburdening of a single definitional approach with a range of conflicting epistemic and pragmatic demands. Specifically, one definitional approach has been unfeasibly required to serve as the solution to problems relating to a range of identificatory tasks and other tasks involved in responding to gangs (such as risk management, treatment etc.). By understanding the different research tasks identified in the CFGR, and the tailored roles of conceptual strategies for different tasks, it is more readily apparent how different conceptual approaches might serve different purposes, thus establishing the extent of their suitability.

If definitions of gangs which include criminality offer unique pragmatic value for the purpose of identification, particularly for directing law enforcement research and practice

most efficiently to reduce the harms associated with crime, then it makes sense to preserve

such strategies. However, in this case the role of such definitions needs to be explicitly clear.

If definitions centred on criminality are to be used to identify/measure gangs, then it is vital

that the interpretations, responses, and practices directed towards these identified groups do

not stem from the same conceptualisations. Instead, these tasks must be founded in a

conceptual and theoretical understanding that does not include pathologizing definitional

criteria and instead represents these groups in a humanistic and agentic manner.

By disentangling the various epistemic and pragmatic demands at play in the database

problem, the solutions become both more apparent and more readily achievable. Notably,

identificatory concerns are separated from concerns relating to the prevention, risk

management, and treatment/intervention practices directed at gangs that give rise to ethical

problems (e.g., in terms of how identified gang members are treated by law enforcement and

the justice system). If law enforcement and justice system practices are informed by more

ethically sound conceptualisations of gangs (as promoted within the CFGR), then the

unethical treatment of gang members is avoided.

Importantly, this highlights how without developing prevention, risk management,

and treatment/intervention approaches founded in less harmful depictions of gang members,

the identification of gang members is likely to *always* pose ethical problems. Accordingly,

the importance of pursuing conceptual development across all research tasks is paramount to

improving gang research and practice, and the contributions of this thesis serve as a useful

step toward achieving such goals.

8.6.4. Facilitating Conceptual and Representational Progress

A recent special issue curated by Gravel and colleagues (2021) has considered what

the relationship between gang research and the policing of gangs might look like in light of

heightened calls to defund the police (following a number of events including the high-profile

murder of George Floyd in 2020). Within the special issue, the editors call for gang researchers to pay greater attention to both the social context in which gang research occurs and the contexts to which it contributes (Gravel et al., 2021). Many of the points raised within this issue are valuable and considered, and they represent mainstream gang researchers raising the same kinds of points that have been drawn by critical and indigenous researchers for decades regarding the role researchers play in perpetuating ideals of White supremacy and legitimating the oppression of minority groups (see Cunneen & Tauri, 2019).

Within the special issue, Van Hellemont and Densley (2021) contend that one way to address some of the concerns regarding the efficacy and ethicality of policing practices is to stop targeting gangs themselves as the problem. It is argued that gangs are commonly targeted by policing strategies due to the conceptual conflation of *gangs* and *crime*, largely due to the inclusion of crime within gang definitions. The authors instead suggest that *violence* should be the major focus of gang conceptualisations. It is apparent that this recommendation is founded in a belief that a shift in *conceptual emphasis* can help to address the current problems with responding to gang harms. Conceptual emphasis is indeed important to consider. However, as discussed in the elaboration of my model for pursuing conceptual strategy pluralism, it is only *one part* of the consideration. Conceptual emphasis is determined by the pragmatic and epistemic demands of the research task and must be enacted in a suitable *form*. Without considering the *form* through which such a conceptual emphasis is represented and the specific *purpose(s)* of this change (i.e., relevant research task/s), I argue that such recommendations are less likely to have their desired impact. To emphasise the unique contributions of the CFGR for improving conceptual considerations in gang research I briefly discuss some of the issues with Van Hellemont and Densley's (2021) recommendations in their current form and how the insights presented by the CFGR might be used to improve them.

Within a unified framework of gang research, a single gang definition directs the majority of research intended to inform relevant responses to gang harms. Within gang research the definition of gangs has predominantly utilised a necessary and sufficient conditions strategy, as is also apparent with the modern Eurogang definition (Weerman et al., 2009). Within this current framework of practice, a conceptual shift in the representation of gangs is most likely to be enacted through similar practices. In other words, through an adjustment of the dominant gang definition to focus on violence instead of illegal activity. Yet, the conflation of *gangs* and *violence* would arguably be just as likely as the current conflation of *gangs* and *crime*, due to framing as a *necessary* definitional feature. Given the common criminological treatment of gang violence as inherently antisocial (see Murer & Schwarze, 2020), the extent to which such changes would alter gang theory and/or practice must be questioned. Further, as I have argued throughout this thesis, definitions which rely upon necessary and sufficient condition are best suited to tasks with minimal epistemic demands (e.g., measurement/identification) and offer little utility for more theoretically complex tasks (e.g., causal/compositional explanation as required for tasks such as risk management or treatment/intervention). A shift in conceptual *emphasis* without a shift in *form* is therefore unlikely to facilitate the kinds of theoretical advances that Van Hellemont and Densley (2021) are aiming for.

Alternatively, within the CFGR, the conceptual foci and strategies utilised for different kinds of research tasks are separate from one another. A conceptual focus on violence can be enacted in different ways depending on the tasks that researchers are interested in without affecting the strategies for others. For instance, for the task of identification, violence could be captured using necessary and sufficient conditions approaches without influencing the interests or strategies of other tasks. Whereas for prevention, risk management, and treatment intervention tasks, a three-analysis approach may

be utilised. Further, for risk management, violence may be primarily considered a *kind of*
gang harm that is relevant to the category of *community safety*. And for
treatment/intervention, violence may be considered a behavioural phenomenon requiring
explanation with reference to functional, motivational, and intentional systems (see Table 5.).

It is my contention that to address not only gang problems but also the harms caused
and contributed to by gang *research*, both through failure to address gang problems and
through the justification of harmful responses to gang problems (e.g., police suppression
activities), then the kinds of developments suggested by researchers need to be conceptually
and theoretically capable of facilitating such change. By considering the overarching
frameworks guiding gang research, I have presented one possible way of organising and
pursuing conceptual and theoretical development so as to maximise the likelihood of
epistemic and pragmatic success in an ethical manner.

8.6.5. Limitations

One of the most notable limitations of the epistemically pluralist approach I have
endorsed throughout this thesis is that it moves us away from the kinds of unificatory ideals
commonly defended as ultimate goals within science and held as intuitive by many
researchers. While I argue that this is a step in a productive direction, such a move invites
several difficulties worth briefly considering. Notably, I anticipate that adopting an
epistemically pluralist framework of gang research will require considerable cognitive and
administrative labour to remain both appropriately coordinated and defensibly pluralistic –
particularly as greater complexity will be introduced to gang research in the active
maintaining of numerous conceptual approaches for different research tasks. Understanding
how these different approaches do (and do not) relate to one another will require a certain
degree of conceptual and theoretical literacy, which may itself require a change to education
around conceptual strategies and research structures (see Ward, 2019). Further, while the

pluralistic approach I have advocated for is entirely compatible with scientific realism (particularly the *active scientific realism*[43] endorsed by Chang, 2012), it is plausible that without proper theoretical rigor and appropriate maintenance, the strategies suggested within this thesis may, in practice, regress into an unchecked relativism that is not compatible with the ideals of scientific realism (active or otherwise). It is therefore anticipated that maintenance of rigorous and scientifically defensible conceptual plurality will require time and effort to navigate effectively – an expense above and beyond that required within a unified approach.

Further, when put into practice there may be some ambiguity around the "kinds of pluralisms" at play. Not only have I introduced a range of discrete research tasks which maintain unique and distinct conceptual commitments (i.e., an epistemic pluralism in the style of Chang, 2012), but within each task itself it is possible to maintain a plurality of conceptual strategies. It is therefore necessary that the relationships between different strategies *within* a given research task are also considered.

To provide an illustrative (but non-determinative) example, two different kinds of explanatory strategies may be seen as viable/useful for the task of treatment/intervention, e.g., one as an example of an intentional explanation and one as an example of a dispositional explanation. The question follows that if both offer utility for that particular task how do we decide which takes priority at a given point in time, should one even take priority? Can they be integrated into a single account, or should they remain separate? To answer such a question, it will require researchers to be explicit in their conceptual processes. First,

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[43] Chang's (2012) active scientific realism (or active realism) is a position which endorses the primary goal of learning *from* nature and considering what different kinds of "learning from" allow us to do (i.e., positioning the pursuit of scientific progress as a primary objective). Notably, this position differs from common representations of scientific realism which position the pursuit of truth or knowledge *of/about* the world as primary objectives. Chang (2012) argues that such standard scientific realist positions are untenable and unrealistic, particularly given the futility of notions such as "truth" or "knowledge of/about" in relation to an unknowable/inaccessible world.

researchers will need to consider whether they are referring to the same phenomenon, or perhaps different parts of the same phenomenon as well as the manner in which they are doing so (e.g., are they referring to them at the same level/scale?). Next, it will be necessary to consider how such strategies relate to one another (e.g., a particular dispositional explanation and an intentional one). Are they: (a) referring to a phenomenon/different parts of a phenomenon in an integrative way whereby different strategies provide explanatory value by considering variables at different "levels" of the same phenomenon? (e.g., facilitating an *integrative pluralism* such as that endorsed by Mitchell, 2003, see also Kronfeldner, 2015); (b) referring to phenomena in potentially *complimentary* but not necessarily comparable or integrative ways? (e.g., by addressing different explananda and/or providing explanatory value by considering different causal patterns at different "scales" of a phenomenon for different purposes, Hochstein, 2016a, 2017; Longino, 2013; Potochnik, 2017), or (c) in active competition and therefore resistant to integration or complementation without major changes? (e.g., as competing explanations within a given level of explanation, see Mitchell, 2003, or as competing historically situated kinds, Chang, 2012).

Alongside the references provided above and general discussions throughout this thesis, I anticipate that the work of Hochstein (2022) which discusses how different "levels" views of science serve to foreground/background different kinds of descriptive and explanatory information in different ways will be particularly valuable for reflecting upon such questions. Evidently, consideration of these kinds of conceptual strategies and their relationships will require dedicated time and effort.

Chapter Nine: Conclusions

In the opening chapter of this thesis, I discussed the well-documented relationship between gangs and a range of serious social, health, and economic harms (Chu et al., 2012; Pyrooz, 2014; Pyrooz et al., 2016; Wood et al., 2017; Wu & Pyrooz, 2016). In chapter two I discussed the effectiveness of the practice and policy responses that have been developed to address such harms. While some approaches have indicated promise, it is apparent that the development of effective and ethical responses to gang harms has remained elusive (Bjerregaard, 2015; Boxer, 2019; Decker, 2016; Klein, 2001; Mallion & Wood, 2020a, 2020b; McDaniel & Sayegh, 2020; Pyrooz & Decker, 2019; Roman, 2021; Thornberry et al., 2018). In chapter three I discussed some of the conceptual difficulties with gang research have that have limited our ability to develop effective responses to gang problems. Discussions focused on two major difficulties, namely an inability to develop definitional/measurement approaches that accurately capture what gangs are (i.e., problems of conceptualisation), and difficulties establishing of causal understandings of gang occurrences (i.e., problems of explanation).

In chapter four I introduced the Eurogang Program; a recent initiative within gang research intended to coordinate gang researchers and overcome the barriers to informing effective gang policy and practice. I also discussed the instruments at the core of this initiative with particular emphasis on the Eurogang definition intended to unite gang researchers and stakeholders. Given the centrality of the Eurogang definition to the Eurogang Program's objectives in chapter five I conducted a conceptual examination of the Eurogang definition in terms of its ability to improve the conceptual and explanatory landscape of gang research. It is acknowledged that the establishment of the near-consensus Eurogang definition has contributed significantly to the conceptualisation of gangs for identificatory/measurement research purposes. However, I demonstrate that it is not suitable as the conceptual

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foundations for research tasks with more complex epistemic demands (e.g., causal explanation). As such, I turned to the field of natural philosophy and – drawing particularly upon the work of Thagard (2019a, 2019b) – developed an approach to conceptualising gangs that is better suited as the foundation for more theoretically demanding investigations. Specifically, I produced a three-analysis approach to conceptualising gangs as groups and demonstrated the utility of this approach for understanding a specific gang exemplar.

To investigate how this novel three-analysis approach might be adopted into gang research, in chapter six I turned my attention to examine the meta-theoretical frameworks that guide scientific research. I demonstrated that the promotion of the Eurogang Program and its associated practices best reflects attempts to achieve coordination through a framework of *unification* (Friedman, 1974; Kitcher, 1981, 1989; Schurz, 1999; Schurz & Lambert, 1994). The conceptual assumptions underlying such an approach were discussed and it was found that unificatory pursuits result in considerable epistemic and pragmatic sacrifice. Centrally, given such an approach requires the privileging of particular research perspectives and strategies to achieve coordination, it was apparent that under such a framework the Eurogang definition and the three-analysis approach could not co-exist despite both offering unique value for different purposes (i.e., measurement vs explanation). Following this I introduced a contemporary philosophical framework that has been developed as an alternative to unification, *epistemic pluralism*; in which researchers do not pursue consensus, but rather cultivate multiple systems of knowing to serve a variety of different research purposes (Chang, 2012).

In chapter seven I then demonstrated how an epistemically pluralist approach to gang research can better serve the needs of gang researchers and developed a model for considering how such an approach might function in the gang field. This involved specific examination of the various aims of gang researchers and a novel explication of the roles that

conceptual strategies (i.e., definitional, classificatory, and explanatory approaches) play in the process of knowledge production and justification. This included discussion of (a) how the unique epistemic and pragmatic requirements of different research tasks constrain the kind of conceptual focus that should be placed on a target system and (b) the interrelationships of definitional, classificatory, and explanatory strategies and how they together scaffold the elucidation of task-relevant insights.

In chapter eight I identified examples of specific conceptual strategies within the behavioural, psychological, and social sciences (including gang research) that aligned with the general kinds of strategies identified in chapter seven. This was used to produce the *Conceptual Framework for Gang Research* (CFGR); an organisational framework that provides a conceptual toolkit to be referenced by researchers when undertaking different projects. It was demonstrated that, by explicating the kinds of conceptual assumptions that are often held implicit by researchers, this novel approach offers greater opportunities for more meaningful kinds of research coordination and maximises the likelihood of establishing the conceptual and theoretical understandings of gangs required to improve gang policy and practice. This was specifically illustrated in relation to several recent debates within gang research. I then concluded chapter eight by commenting on some important limitations of my approach to conducting gang research.

Throughout this thesis I have discussed the value of my various contributions, particularly in relation to the development of the three-analysis of gangs/groups, the model for epistemic pluralism, and the CFGR. In order to emphasise the original value of this thesis I now discuss some of the major contributions that this thesis has made both to gang research and beyond.

9.1. Contributions to Gang Research

In an advanced posting of *The Annual Review of Criminology*, there is a review titled "Gang Research in the Twenty-First Century" by C. L. Moore and Stuart (2022). C. L. Moore and Stuart discuss the current state of gang research and some pressing concerns for the future, remarking:

> Moving forward, we suggest that rather than continue quarreling over one single, master definition of gangs, researchers may be better served by recognizing that definitions are strategic choices—decisions that correspond to the analytical needs of, historical conditions shaping, and epistemological positions guiding any particular research agenda. What policies and interventions do certain gang definitions promote, facilitate, and naturalize? What do they preclude or render inappropriate? (p. 6)

Clearly, C. L. Moore and Stuart envision a framework of gang research that is not bound by Sisyphean attempts to develop a gang definition that meets the needs of all researchers (without epistemic or pragmatic sacrifice). For such a vision to be substantiated it is imperative that gang research moves beyond pursuits of unification. The current thesis provides a full and robust justification as to *why* such claims should be taken seriously, and further, goes a considerable way in devising *how* such an approach may function.

For instance, asking researchers to consider questions such as "What policies and interventions do certain gang definitions promote, facilitate, and naturalize?", requires a clear understanding of the relationships between definitions and gang responses. This thesis provides a framework for considering exactly that. It is demonstrated that to understand the relationships between gang definitions and responses, one must understand the conceptual interplay of definitional, classificatory, and explanatory strategies and how these strategies cumulatively provide the kinds of insights required to inform practical or political responses

to gangs (lest we falsely burden definitions with explanatory demands). By highlighting the various aims of gang researchers and the kinds of strategies most useful for such aims, this thesis offers a useful framework for considering the division of epistemic labour in the field. It also goes a considerable way in mapping out the kinds of conceptual and theoretical insights that are required for different purposes and identifying relevant strategies for pursuing them. It is therefore apparent that the contributions of this thesis are well-timed to act as a roadmap for navigating future research into gangs and gang occurrences.

It is important to note that what C. L. Moore and Stuart (2022) do not explicitly consider is how an alternative to unification might be pursued without undermining one of gang research's most historically prized objectives – the establishment of a collaborative, comparative, and coordinated programme of research. Afterall, it is this very objective that has been upheld as the primary justification for the establishment of a unified framework of research. Pre-empting such concerns, the epistemically pluralist approach developed in this thesis facilitates coordination, collaboration, and comparison, whilst preserving plurality and the epistemic benefits that accompany it. This is achieved by organising researchers around their different purposes for engaging with the general conceptual domain of "gangs" rather than in relation to specific representations of the "gang object" as has historically been pursued (e.g., realist vs constructionist positions on whether gangs do or do not "exist", are natural or social kinds, how they exist etc.). Such an approach can not only facilitate more meaningful kinds of coordination, but it also allows for a kind of research coordination that is unattainable under a unified framework – the coordination of researchers with different and even contradictory views on gangs.

Pursuing coordination through consensus requires researchers to hold shared conceptions of gangs and thus limits the kinds of perspectives that can contribute to gang study. Alternatively, the epistemically pluralist approach offered by the CFGR allows

researchers with various ontological, epistemological, methodological, and methodical positions to collaborate where the purposes of their research overlap and remain independent where they do not. To adapt an example from Chang (2017),[44] it is therefore possible for researchers to hold multiple conceptions of gangs, and even simultaneously endorse both the views that "gangs exist" and "gangs do not exist". This is because, within the CFGR, conceptualisations are tied to specific research tasks, and it is accepted that the kinds of conceptualisations used across tasks are often incommensurable. Resultantly, the CFGR allows researchers to consider where their interests align and what their expertise/perspectives offer for a specific purpose, while avoiding potential deterioration into endless critiques of conceptual strategies employed for other purposes.

The description of how insights from different research tasks can be used to improve responses gangs in section *8.6.2. Relating research tasks to gang responses*, provides one example of how holding differing conceptual understandings of gangs does not undermine research or practice but rather offers the opportunity to tailor strategies to specific epistemic and pragmatic purposes. In this example it is described how the *epistemic products* of identification, risk management, and treatment/intervention research tasks can be collaboratively drawn upon improve the real-world treatment of individuals identified as gang members.

In offering a roadmap to guide gang research, the CFGR also directly highlights avenues for future research. Most notably this is likely to take the form of researchers collaborating to further develop the kinds of conceptual strategies identified within the CFGR for different research purposes. By discussing the kinds of conceptual strategies from within and beyond gang research that might be useful for different purposes, I was able to highlight areas which appear to have received comparatively less research attention than others. For

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[44] This example was initially made in reference to psychological perspectives on schizophrenia.

example, there is very little conceptual or practical focus on group-level treatment/intervention approaches. Even with recent promotions of strengths-based treatment for individuals, strengths-based treatment aimed at group transformations appears to have been comparatively overlooked. This gap highlights the need for future work to understand groups as agentic entities; group scale goals, functions, and/or motivational systems; and the development of transformative group-level rehabilitation approaches.

Indeed, the purpose of the epistemically pluralist CFGR, is – as its name suggests – to facilitate the conceptual processes involved with gang *research*. In highlighting some future steps for gang researchers, I therefore propose that (a) researchers begin considering where they (and their associated research interests, methodologies etc.) fit into the CFGR, and (b) structural changes are made to gang research systems to facilitate coordination around key research objectives.

In presenting the CFGR it is my hope that researchers will begin to draw upon the framework to consider where their particular research interests lie, reflect upon the kinds of strategies they currently utilise in pursuit of particular objectives, and draw upon the suite of strategies highlighted within the CFGR as a means of beginning to address some of the key difficulties in gang research. By organising research around the CFGR and beginning to work through it in collaborative ways, it will be possible to develop an understanding of the kinds of strategies most worth pursuing for each task. By working through each task, the various pragmatic and epistemic needs of researchers will be able to be specified with greater precision allowing for consideration of where/how different kinds of strategies are likely to be best suited. It may therefore follow that existing research programmes (e.g., the Eurogang Program) are extended and reorganised around the kinds of research tasks highlighted in this thesis. For instance, institutional and research systems could be set up around the kinds of tasks I have suggested to maximise the likelihood of productive epistemic development and

meaningful collaboration. This may include the structuring of education programmes, conferences, and journals around the kinds of tasks I have presented. Similarly, research into the different tasks could warrant the establishment of dedicated research teams/working groups focused on each task, as well as any others that may be deemed relevant.

9.2. Contributions Beyond Gang Research

This thesis offers an innovative and systematic case study of why and how an epistemically pluralist approach might be pursued within a domain of research by emphasising the constraint relationships between research tasks and conceptual strategies. As such, although the discussions of this thesis were primarily conducted in relation to gang research, this thesis offers value to any field pursuing epistemic pluralism – or at least those in which a teleological framing of research tasks is viable.

To emphasise that the discussions made throughout the thesis have implications beyond gang research, I will now briefly discuss the relevance of my contributions to domains with varying levels of similarity to gang research. Specifically, I consider what my contributions may offer to *forensic psychology* and *correctional classification* and the study of *psychopathology* and *mental disorder*. I then move beyond the behavioural, psychological, and social sciences in which this thesis has thus far been situated and briefly discuss the contributions of thesis in relation to the *natural sciences*. In conducting these discussions, I also consider how my approach differs from recent epistemically pluralist advances in each of these areas and what added value it brings.

9.2.1. Forensic Psychology and Correctional Classification

The domains of correctional classification, forensic psychology, and gang research, all share considerable practical and epistemic connection. Not only are there considerable similarities in the target systems studied (e.g., individuals who have offended, offence types) but also the kinds of practical tasks involved (e.g., risk assessment, treatment, risk

management). The discussions and contributions within this thesis are therefore likely to be highly transferable to such domains. For instance, not only do the *general* discussions within this thesis offer value (in terms of explicating constraint relationships and the roles of conceptual strategies in research), but some of the *specificities* of how these constraints determine the appropriate strategies for given tasks are likely to be directly applicable (e.g., the use of risk-based classes for tasks with predictive needs, Heffernan & Ward, 2017; Ward & Fortune, 2016a). Differences between such domains are thus most likely to emerge at an applied level (e.g., in the precise risk-based classes selected) or the kind of teleological structuring of differing domains (e.g., *stakeholder directed goals* versus *goals shared across stakeholders*).

Two recent works by Ward (2019) and Carter et al. (2021) have discussed the value of epistemic pluralism for addressing difficulties in forensic psychology and correctional classification. Ward (2019) advocates for greater pluralistic development in forensic psychology as a means of overcoming the dogmatic pitfalls of current monistic pursuits, presenting the indicative example of an overreliance on predictive constructs (dynamic and protective risk factors) for a variety of epistemic purposes (prediction, explanation, treatment). Carter et al. (2021) advocate for a framework of classificatory pluralism in which classification systems are justified in relation to their ability to support different correctional stakeholders (e.g., researchers, psychologists, custodial staff) and the tasks they use these classifications for (e.g., treatment, explanation, custodial management). Valuably, this classificatory pluralism is centred around identifying the objects of classification that can meet various *stakeholder directed goals* and understanding how different stakeholders interact with such objects.

As such, not only are the contributions of this thesis applicable to the forensic and correctional domains generally, but they can add unique value to current pluralistic projects.

For example, I have focused on the *goals shared across stakeholders*, how such goals constrain the conceptual requirements of different investigations, and interrelationships of definitional, classificatory, and explanatory strategies in producing task-relevant knowledge and in the process of justification. As such, the discussions within this thesis are complementary to such projects as they offer an alternative way of pursuing pluralism whilst also adding greater epistemic depth to the cartographic work that has been conducted in the area thus far.

Notably, it has been argued that one of the major barriers to conducting effective forensic and correctional research has been a lack of conceptual and theoretical literacy among researchers (Ward, 2019; Ward et al., 2021). Ward (2019) contends that: (a) uncritical and dogmatic acceptance of existing theories; (b) stipulative definitions of science as strictly empirical in nature; (c) failure to clarify the meaning of key constructs; (d) seeking for the "one true theory" and rejecting epistemic pluralism; (e) embracing impoverished theories of method; and (f) failure to distinguish distinct epistemic tasks, have caused major harm to the progress of correctional research. Based on such arguments, it is my position that the contributions of this thesis, while specifically targeted at gang research, likely offer a number of useful strategies to overcoming such difficulties in the broader correctional/forensic domain.

Specifically, it is apparent that the contributions within this thesis: (a) require the active consideration of multiple different conceptual and theoretical approaches for different purposes, necessitating critical consideration of an approach's strengths and weaknesses relative to different epistemic and pragmatic tasks; (b) place theoretical and conceptual considerations at the forefront of scientific development alongside empirical research; (c) provide structured frameworks for elucidating and justifying conceptual commitments regarding constructs of interest; (d) actively promote epistemic pluralism; and (f) actively

distinguish the distinct epistemic (and pragmatic) tasks of different researchers. Further, while not explicitly discussed within the body of this thesis, I would contend that the pluralistic approach I have endorsed is indeed compatible with robust theories of method such as Haig's (2012) Abductive Theory of Method (ATOM) – a theory of method specifically endorsed in Ward (2019). To put it briefly, rather than drawing upon the stages of ATOM to detect and explain phenomena in a general sense, I contend that its various considerations can be explicitly tied to different research tasks and constrained by their particular epistemic and pragmatic demands, thus playing a role in the process of depicting and explaining phenomena for different purposes.

Not only have I have contributed several strategies that can usefully serve gang research but – given their suitability for overcoming some of the key barriers to effective correctional/forensic research – I argue that extension of these strategies could benefit the forensic research domain more broadly. It would therefore be anticipated that with greater consideration of the research tasks in the correctional/forensic domain and the kinds of conceptual strategies relevant to each of these tasks, the arguments put forward within this thesis are applicable beyond gang research. One way of adapting the contributions of this thesis to the broader domain of correctional/forensic research might therefore begin with different researchers/research groups considering the model of epistemic pluralism presented in chapter seven and applying it to the tasks and concepts within their own particular domains of research to produce research frameworks specific to their areas of expertise.

9.2.2. Psychopathology and Mental Disorder

Examples of recent arguments and advances in favour of epistemic pluralism in the domain of psychopathology include the work of: Kendler (2005), Mitchell (2009), Ward and Clack (2019), Clack and Ward (2019, 2020), Maung (2020), Hawkins-Elder and Ward (2021), and Jerotic and Aftab (2021). In all of these examples, the authors have largely

framed *definition*, *classification*, and/or *explanation* as the overarching objectives of their epistemic investigations. Strategies for understanding a target system (e.g., anhedonia) are therefore constructed in relation to the myriad ways one might seek to explain features of that phenomenon (and its constituent parts, e.g., Ward & Clack, 2019). Accordingly, what such advances offer are valuable and well thought out approaches to considering the processes involved with analysing their target system for the epistemic purpose of explanation. The result of which is a detailed account of how to detect and construe clinical phenomena for explanatory purposes, and how to pluralistically model the constituent and etiological variables responsible for that phenomenon.

The framing presented in the thesis however begins with a consideration of the research tasks within a domain (and their epistemic and pragmatic demands), and views definitional, classificatory, and explanatory strategies as tools for meeting such demands, rather than as goals themselves. The benefit of this is a more specific, action-oriented organisational approach that emphasises where and how different kinds of conceptual strategies can work together and which tasks they are best suited to. This novel approach to pursuing epistemic pluralism may therefore be of benefit to the study of mental disorders. Interestingly, the overarching epistemic and pragmatic interests of gang and mental disorder research also appear to bare considerable similarity, meaning the research tasks I have discussed are likely to have some degree of transferability.

For instance, both domains appear to have tasks focused on *identification* (e.g., gang identification; mental disorder diagnosis[45]), *prevention* (e.g., gang prevention; general mental health promotion), *risk management* (e.g., risk management of gang members; management of symptoms, distress etc.), and *treatment/intervention* (e.g., desistance from offending;

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[45] I note that this framing of diagnosis as descriptive may raise some objections given the various functions of diagnosis (see Maung, 2019). For this point however I am emphasising that diagnosis itself involves the identification of a disorder, what this identification is used for is another question.

treatment of mental disorder/distress).[46] Given this teleological closeness, it may also follow that some of the discussions around constraint relationships and kinds of conceptual strategies themselves may be transferable. Thus, even in domains for which epistemically pluralist approaches have been suggested and elaborated upon, the contributions of this thesis offer value through the systematic constraining of such strategies to the epistemic and pragmatic demands of different research tasks.

9.2.3. Natural Sciences

One interesting avenue for future research would be to examine the applicability of the contributions of this thesis beyond the behavioural, social, and psychological sciences, for example, in the *natural sciences*. This seems a plausible avenue given that I have drawn on the work of philosophers who have developed their positions in relation to the study of natural phenomena (e.g., Hasok Chang, Angela Potochnik). For this approach to offer utility to such areas, the applicability of a teleological approach in such domains must first be examined. Particularly given that the motivations underlying research in the natural sciences may not immediately reveal discernable practical objectives, centring instead on cognitive or epistemic objectives. In the meantime, the elucidation of specific constraint relationships and the interrelationships of conceptual strategies may nonetheless offer value to discussions in such areas.

Overall, this thesis provides a comprehensive and coherent case study for developing an epistemically pluralist framework in a given domain of research and for considering the role of conceptual strategies in science. Understanding the roles of conceptual strategies in science and how to pursue pluralistic understandings of phenomena have both been identified

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[46] It is also important to reiterate that these research tasks are not exhaustive and other tasks may be relevant both within and beyond gang research.

as vital steps towards overcoming some of the major barriers to scientific progress (Ward, 2019). Such contributions therefore offer value to both research and educational spaces.

9.3. Final Conclusions

The field of gang research is populated by an abundance of extant definitions, typologies, and theories of gangs. In order to overcome the challenges associated with this uncoordinated multiplicity, researchers have begun to pursue a coordinated approach to gang research that is best characterised as reflecting the ideals of unification (e.g., the establishment of international cross-disciplinary working groups, adoption of shared definitions and research instruments, pursuit of unified theories). In this thesis I draw upon insights from the philosophy of science to highlight the limitations of a unified approach to gang research and ultimately caution against such a trajectory. Specifically, I emphasise that adopting a shared set of conceptual foundations rests upon the assumption that a single foundational account of gangs is suitable for facilitating all research into gang-related occurrences. I critique this assumption by highlighting that objects of study are, or at least should be, construed in relation to the investigations which they are intended to facilitate. Thus, to adopt a single foundational approach is to privilege a single account from a specific perspective, which may not be best suited to the requirements of other important tasks.

Instead, I argue for coordination via an alternative approach, epistemic pluralism, where conceptual approaches are specifically tailored to the requirements of the task they are intended to serve, thus requiring a plurality of conceptual approaches to satisfy the diverse aims of gang researchers. It is demonstrated how tailoring conceptual strategies to the aims of distinct research tasks serves to establish conceptual representations that directly facilitate the drawing of explanatory inferences most relevant to the aims of that task. The consequence of which, is the ability to better inform practice and policy responses intended to address the serious harms that gangs and gang members perpetrate, contribute to, and experience.

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