

ADOLESCENTS' VALUE ORIENTATION DEVELOPMENT IN LIGHT OF SOCIO-CULTURAL INFLUENCES

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LIST OF ABBREVIATIONS

DSP / DST = Developmental Systems Perspectives / Theories

SDT = Self-Determination Theory

GRO = Gender Role Orientation

GSP = Gender-Specific Parenting

WPA = Work Place Autonomy (Parental)

SES = Socio-Economic Status

SDO = Social Dominance Orientation

Declaration and Copyright

I, Aiden Sisler, declare that: no portion of the work referred to in this dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning; except where due acknowledgement has been provided, the work alone is mine; the content of the dissertation is the result of work carried out since the official commencement of the doctoral studies; ethics procedures and guidelines have been followed.

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ABSTRACT

Sisler, A. (Directed by Prof. Dr. Angela Ittel, PhD and Prof. Dr. Itziar Alonso-Arbiol, PhD, Chaired by Prof. Dr. Sabine Hark, PhD). Department of Developmental Psychology, Institute of Education, Berlin Institute of Technology, August 25th, 2015.

Value orientations are central to developing adolescents' well-being, relationships, and life prospects, yet prior work focuses on specific de-contextualized relationships, contributing to a lack of integrated socio-cultural study. To address this gap, the dissertation depicts adolescents' value orientation development considering socio-cultural influences across multiple contexts. The first contribution analyses the intrafamilial socialization of gender role orientation (GRO) in adolescent sibling dyads by highlighting same- and cross-gender transmission pathways in micro-level familial (gender-specific parenting, GRO) and macro-level (parental workplace autonomy, socioeconomic status) factors through a cross-lagged design. The second article sets the sibling relationship in international and cultural context, synthesising research on the interplay between socio-cultural value change and human development, and how it comes to bear on brothers and sisters, and their ecologies during the formative adolescent years. The final contribution models interrelationships between girls' and boys' academic goal orientations (mastery, performance, and social motivations) and school climate (democratic input in decision-making and harsh disciplinary practices dimensions) across three cultures (Kenya, Spain, Germany).

Overall, analyses indicated adolescents develop their value orientations through a transactional process with their embedded contexts and key socialization agents in the face of socio-cultural variables. Findings confirmed adolescent-in-context ecological models of development and social change, and were reflective of value orientation-environment dynamics tied to the relative fulfilment of basic psychological needs. Taken together, the research suggests contextual support of

adolescents' positive value orientation development through promotion of intrinsic values connected to core needs. In closing, the thesis argues for increased ecological approaches summarized as 'integrative pluralism' in study and education on values in adolescence.

Chapter 1: Introduction and Overview

1.1 Introducing Adolescent Values Study in Ecological Context

Value orientations are pivotal in developing adolescents' personal, social, and cultural lives, significantly impacting their relationships, identity, well-being, and life prospects across time and place. Cross-cultural scholarship suggests that when value sets are extrinsically-tied or external goal-oriented, they relate to increased stress and maladjustment, lower levels of empathy and harmful intergroup attitudes and behaviours, and ecologically-detrimental modes of living (see Kasser, 2011; Schwartz, 1994a, 1994b). Conversely, when values are self-transcendent or intrinsic goal-oriented, that is, toward autonomy and agentic growth, close affiliative relationships and community-connectedness, and widespread harmony, they broadly link-up with greater life satisfaction, well-being, and prosociality (Grouzet et al., 2005; Kasser, 2002; Maio, Pakizeh, Cheung, & Rees, 2009).

What is more, value orientations predict children's current and prospective well-being at the national-level when aligned toward egalitarian and harmonious relations, as per the latter set of intrinsic values, in contrast to hierarchical and dominance value orientations (Kasser, 2011). Troublingly, recent study into young people's values signals the increasing preference for externally-oriented value sets and coterminous constructs such as materialist and narcissistic tendencies, including strivings for fame and aggressive competition (e.g., Konrath, O'Brien, & Hsing, 2010; Twenge, Konrath, Foster, Campbell, & Bushman, 2008; Uhls & Greenfield, 2012; Uhls, Zgourou, & Greenfield, 2012). Value orientations of this nature have been further associated with prejudice, depressed quality of life, and alienation (e.g., Duriez, Vansteenkiste, Soenens, & De Witte, 2007; Fergusson, Kasser, & Jahng,

2011; Kasser, Ryan, Zax, & Sameroff, 1997; Nichol & Rounding, 2013; Sheldon & Kasser, 1995). Understanding the manner in which values coalesce and impact maturing individuals is therefore fundamental in addressing the underpinning socio-ecological determinants of well-being at the personal and societal level, in varied cultures over time (Oishi, 2014; Viner et al., 2012). Without access to critical information on values and their socio-cultural correlates, guardians, educators, policy makers, and other stakeholders are at a loss as to how to effectively foster youths' positive development¹. Ultimately, the future well-being of people and planet is at stake, considering the necessity for sustainable and equitable value orientations across diverse environments in accord with mounting consensus (Iniesta-Arandia, García-Llorente, Aguilera, Montes, & Martín-López; Kasser, 2011; Rockström, 2015; Schwartz, 2007).

Crucially, adolescents' overarching values represent core guiding principles of their lives and lives to come, shaping their identities (Marcia, 1980) as well as their adaptation to, and acceptance into, their respective socio-cultural worlds (Erikson, 1968; Rogoff, 2003). Amongst the vicissitudes of adolescence, with its vast physiological changes (Greenspan & Deardoff, 2014; Steinberg, 2014) and accompanying social development (Smetana, 2010), cultural, social, and personal values in particular hold substantial implications (Rohan, 2000). Values constitute primary measures of the “conscious and unconscious social psychological orientations that represent more or less desirable available options” and potentials for action variable among individuals, societies, and cultures (Longest, Hitlin, & Vaisev, 2013, p. 1499). As such, social equality-tied values (e.g., Fiske, 1992; Hofstede, 2001; Jost,

¹ Terms relating to development (e.g., ‘positive’, ‘negative’) and even ‘development’ itself are understood as a pluralistic conceptualization of human maturation with respect to outcomes (e.g., higher levels of stress), and not worth. The current work refrains from ranking the diversities of developmental trajectories.

2011; Pratto, Stewart, & Zeineddine, 2013; Schwartz, 1992, 2004, 2005, 2006, 2007, 2009), relative to aesthetic values, for instance, are decisive for developing individuals' sociality (Boer & Fischer, 2013) and sense of self (Hitlin, 2003), which constitute key developmental processes and universal tasks in adolescence, in turn (Greenfield, Keller, Fulgini, & Maynard, 2003).

Moreover, values lay at the core of how it is that a young person comes to form their personal and social identity (Erikson, 1950; Kagitcibasi, 2013; Kroger, 2007; Kroger & Marcia, 2011; Marcia, 1980), and socio-cultural understanding (e.g., social equality, intergroup cognition, and prejudice (Aboud, 2005; Allport, 1954/1979; Dovidio, Glick, & Rudman, 2005; Poteat, Espelage, & Green Jr., 2007)). Values serve as interactive hubs for emotions and preferences influenced by socio-cultural milieus (e.g., Suh, Diener, Oishi, & Triandis, 1998) as well as the attitudes, beliefs, and behaviours they give rise to (Feather, 1980). Nevertheless, despite the centrality of adolescents' value orientations evidenced in individual development and their significance for later outcomes (Duriez, Luyckx, Soenens, & Berzonsky, 2012; K  ppler & Morgenthaler, 2012; Steinberg, 2008), a dearth of systematic dynamic ecological systems-based knowledge integrated from multiple contexts prevails (Granic, Hollenstein, Dishion, & Patterson, 2003; Greenfield & Quiroz, 2013; Trommsdorff & Chen, 2012c). To these ends, Figure 1.1 presents an ecological conceptual model of adolescent value development examined in the forthcoming work.

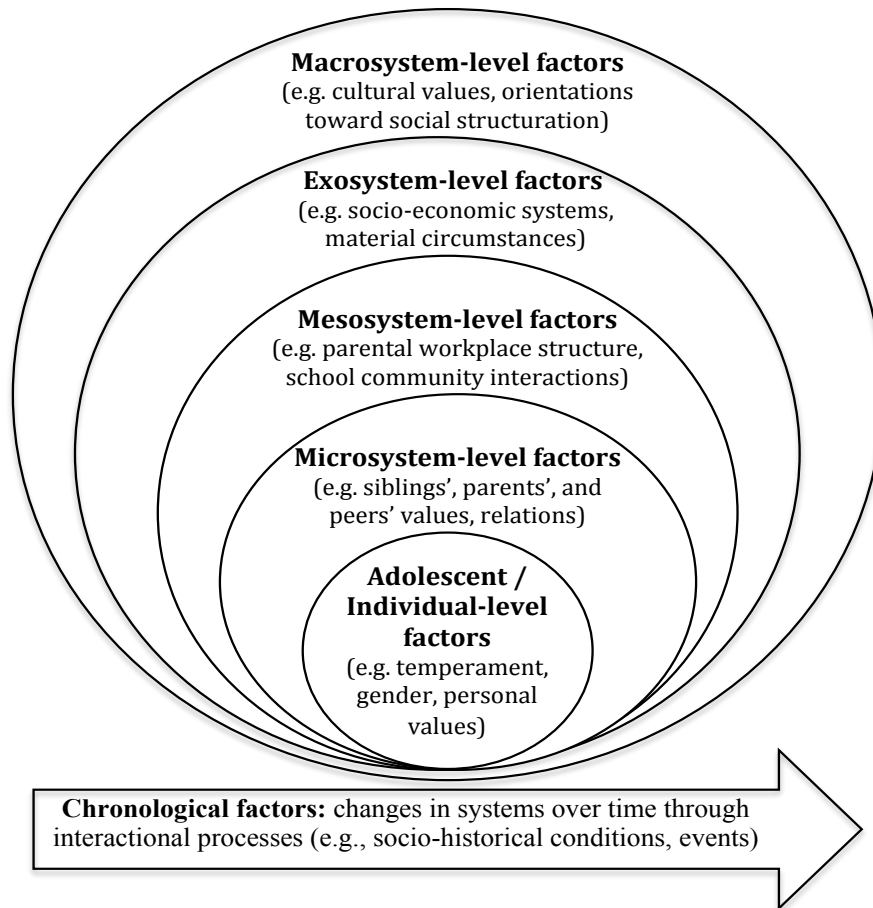


Figure 1.1 Ecological model of adolescent value development (based on Bronfenbrenner, 1986)

Bearing in mind values' pre-eminence in social life, one would assume comprehensive understanding would have been attained or some form of methodical inquiry would be well underway as in the case of motivation, personality, or social membership and structure research (D'Andrade, 2008). Expansive theorizing on adolescent value development and socialization notwithstanding (e.g., Grusec & Kuczynski, 1997), these and other issues surrounding values, socio-attitudinal orientations, and political ideologies (Hibbing, Smith, & Alford, 2014; Hitlin & Pinkston, 2013; Jost, Nam, Amodio, & Van Bavel, 2014) remain muddled with conceptual inconsistencies (Fischer, 2014; Hitlin & Piliavin, 2004; Rohan & Zanna, 2001), and continue to be under-investigated with respect to developmental cross-

contextual ecological views (e.g., Barni, Ranieri, Scabini, & Rosnati, 2011; Roccas & Sagiv, 2010). As Bloch (1988) observed, “Much culturally transmitted knowledge seems to be passed on in ways unknown to us” (cited in Lancy, 2012, p. 7). In short, the field of developmental value orientation study in adolescence is in want of comprehensive socio-ecological theoretical frameworks from which to launch empirical investigation (Rohan & Zanna, 2001).

Various social scientists, however, like that of Schwartz and colleagues (e.g., Cieciuch, Davidov, Vecchione, Beierlein, & Schwartz, 2014; Schwartz et al., 2012), Rohan (2000), Hitlin (e.g., 2003, 2011), and Fischer (2014), have succeeded in taking stock of the extensive body of values research, and have ventured their accounts of contributing factors to the lack of integrated research across related fields. To this point, Rohan (2000) succinctly summarizes a core culprit, namely that “definitional inconsistency has been epidemic in values theory and research” (p. 255). Fischer (2014) expounds the growth of the field itself, linking pioneering theories, such as Kluckhohn and Struck’s (1954) anthropological and ethnographic work, Parsons’ contributions to social action theory (e.g., Parsons, 1951, Parson & Shils, 1951), Simmel’s sociological perspectives on sociability (Simmel & Hughes, 1949), Weber’s foundational social and economic analyses (1947), and Milton Rokeach’s modern values research (1968, 1973, 1979). This trajectory has lead to broad multi-disciplinary theorizing on the acquisition of values and their socialization - meaning, how individual group members “adapt to and internalize the norms, values, customs, and behaviours” of their given socio-cultural groups (Perez-Felkner, 2013, p. 119).

Further postulated reasons abound for the scarcity of work on adolescent value socialization specifically and development generally, spanning from current re-conceptualizations and philosophical tensions in depictions of human development (Dux, 2011) to the preponderance of Western-derived euro-centric models (e.g.,

Henrich, Heine, & Norenzayan, 2010; Kagitcibasi & Poortinga, 2000; Nsamenang, 1999, 2006, 2011), and the logistics of cross-contextual developmental inquiry (e.g., Sameroff & MacKenzie, 2003a, 2003b; Whiteman, McHale, & Soli, 2011). Add to the mix implicated contestations within the field of developmental sciences as a whole which attempts to speak to human nature, and in particular, anthropological, social constructivist, and ethnographic 'versus' socio-biological or evolutionary accounts (e.g., Haidt, 2001; Mace, 2014; Weingart, Mitchell, Richerson, & Maasen, 2013). Such debates are indeed beyond the purview of this thesis, though nevertheless noteworthy for contextualizing the state of the research. Seeing as how ideological or so-called 'culture wars' (Jost, 2012) might alternately hinder and advance theory, other researchers question the purpose behind such work, and ask to keep in mind that a shortage of dialogue and integration of multiple disciplines from diverse settings comes at the material and immediate loss of those particularly neglected populations who would serve to benefit (Arnett, 2008; Boyer, 1990; Christopher, Wendt, Marecek, & Goodman, 2014).

In essence, the above-cited phenomena can be brought together and consolidated through a pluralistic examination of what Sandra Mitchell (2003, 2004) regards as a manifestation of a wider cultural and global process concerning the convergence of interdisciplinarity and complexity theory. In consequence, apposite theoretical and empirical investigations into ontological universals and variances can be undertaken. It is therefore maintained that contextualized adolescent value study offers up an area ripe for inquiry toward deepening understanding of the complex interplay between humans and their diverse socio-cultural ecologies (Greenfield, 2009; Oishi, 2014).

It has only been in the course of the past decades that channelled interest among developmental researchers has instigated novel interdisciplinary dynamic ecological systems examination, though contention - and this is not unique to developmental study - continues to foment divisive politics within and outside of scientific research (Jost, 2012). Unfortunately, this may contribute to hesitance toward

questioning the development of certain ‘sensitive’ or ‘political’ topics (Hammersley, 1995). Invocations of cultural relativism to imposed universalism stand out among such oppositional stances and general reluctance (Kagitcibasi, 2000). Connected issues range from basic sex-based research in neuroscience (Beery & Zucker, 2011) and gender studies (Bose & Kim, 2013) to strands of capitalism-critical investigation and related values orientations of materialism and individualism (e.g., Kasser, Kanner, Cohn, & Ryan, 2007; Pugh, 2011; Schwartz, 2007), and have in common the examination of hierarchy, power, social stratification, and related implications of inequality and privilege (World Trust, 2012).

1.1.2 Socio-Cultural Influences, Inequality and its Maintenance

“Inequality is a fact. Equality is a value.” – Mason Cooley (1927-2002)

Accruing evidence points to the detrimental impact of inequality, that is - as per the Oxford Dictionary’s definition - a “difference in size, degree, circumstances, etc.,” including social, economic, racial, educational, gender, participation, and health-based inequalities, and so on (WHO, 2015). In taking stock of current expert and public perceptions alike, inequality is frequently cited as “the greatest danger to the world” (Pew Research Institute’s Global Attitudes Project, 2014); it poses significant risks to societal and global cohesion as well as eco-social well-being (Canadian Public Health Association, 2015). Inequality - and its related constructs of social hierarchy and stratification - provokes political violence and unrest; increases repression and prejudicial belief systems such as racism, and their institutional manifestations; and reproduces itself in recursive manner (Amnesty International, 2015; Atkinson, 2015; Coburn, 2000; Wilkinson & Pickett, 2010). It is thus particularly essential to address the social formation and maintenance of inequality and social hierarchy from an ecological or socio-cultural standpoint, and the values

which support its continuance, or conversely, mitigation (Dorling, 2011; Pratto & Stewart, 2012; Pratto, et al., 2013; Sidanius & Pratto, 2001).

The current state of the literature indicates socio-cultural and individual values and relationships are co-constitutive of ecologies which foster agentic, prosocial, intrinsic, and transcendental, interdependent values, motivations, and goals over those which are extrinsically-tied, imposed, and dictated (e.g., Kasser, 2014; Ryan & Deci, 2000a; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004; Wray-Lake & Syvertsen, 2011). Intrinsic socio-cultural and personal values including harmony, benevolence, universalism, and self-direction are themselves largely linked to overall positive prosocial and individual behaviours and outcomes (e.g., Eisenberg, Hofer, Sulik, & Liew, 2014; Sheldon, Nichols, & Kasser, 2011), and negatively associated to inequality's related precipitates of support for hierarchy, dominance, traditionalism, power, and focus on external rewards (e.g., Dittmar, Bond, Hurst, & Kasser, 2014; Maio et al., 2009; Vohs, Mead, & Goode, 2006). Moreover, as Wilkinson and Pickett (2010) established through their in-depth longitudinal epidemiological analyses, inequality in social relations within and between groups impacts the overall health and well-being of societies, groups, and individual members, though the underpinning mechanisms (e.g., lack of social cohesion (Coburn, 2000); social comparison and competition (Kasser et al., 2007; Schwartz, 2007)) through which this configuration predominantly manifests remain to be seen.

In tying together the import of value orientation study to obtain a richer understanding of inequality's roots and mechanisms, and, conversely, egalitarianism, a number of theorists cite adolescence as a particularly fruitful time of focus and development (e.g., Dewey, 1933; Erikson, 1968; Rohan & Zanna, 1996). As previously mentioned, value orientations steer individual choices, behaviour, and decision-making (Kluckhohn & Strodtbeck, 1961). Thus, the study of value orientations assists in shedding light on cultural transmission, socialization, learning of cultural value systems, and personal value development (Heine, 2011). As it currently stands, there is a conspicuous deficiency of wide-reaching study on

adolescent value development in relation to equality influences in the field of social psychology on the whole (e.g., Killen & Smetana, 2010), and considering gendered and cultural variances, in specific (Eccles & Roeser, 2009; Thomas, 2000; Wigfield, Tonks, & Eccles, 2004). This serves to further encumber both theoretical and empirical advance. As such, researchers and practitioners alike are left attempting to draw together how diverse groups of adolescents develop and express their values and socio-attitudinal orientations across different contexts in a piecemeal manner.

Past views portrayed adolescents' socialization experiences as static or uni-directional, top-down processes (e.g., Lancy, 2010; Perez-Felkner, 2013), aiming to apportion out 'so-called independent variables' (Greenfield, 2009). Recent theories, however, increasingly consider diverse reciprocal relationships (e.g., Kerr, Stattin, & Kiesner, 2007; Kuczynski, 2003); multiple realms of joint influence (Amnå, Ekström, Kerr, & Stattin, 2009; Bukowski & Lisboa, 2007); and the very dynamic and emergent nature of culture itself (Erez & Gati, 2004; Kitayama, 2002). Nonetheless, there have been few attempts to bind these perspectives under one ecological analysis in terms of their application to adolescent values and socialization. What is more, this non-unified, fragmented method manifests in scattered findings that generally enlist 'the usual suspects' (Bukowski & Lisboa, 2007) like that of the parent-child relationships (e.g., Parke & Buriel, 1998; Laursen & Collins, 2009) or adolescent peers (e.g., Dishion & Tipsord, 2011; Harris, 1995)).

More often than not, these specific foci, whilst providing key descriptive accounts, such as inheritance of political party identification (Niemi & Jennings, 1991), come at the cost of acknowledging other *concurrent* and *interacting* critical relationships and contexts of adolescent development such as that of the under-acknowledged sibling relationship (Edwards, Hadfield, Lucey, & Mauthner, 2006; Kretschmer & Pike, 2010b; Sisler & Ittel, 2014) and within-family systems study (Daniels, 1986; Kreppner & Lerner, 2013; Parke, 1988, 2004; Plomin, 2011; Plomin & Daniels, 1987), including the role of fathers (Cabrera & Tamis-LeMonda, 2013). This contributes not only to an aperture in knowledge but methodological oversight in

the case of the latter (see Pike, 2012 on the importance of intrafamilial study to adolescent and developmental research).

Last but not least, the great wealth of developmental research on values is drawn from readily accessible, non-majority world samples, typically taken as mid- to high socio-economic status University-attending students (Haushofer et al., 2014) (however, see Kagitcibasi's (e.g. 1990, 1997, 2000, 2005, 2007, 2011, 2013) and Trommsdorff's (e.g. Trommsdorff, 1995, 2012a) respective bodies of work that address this gap) which, as Henrich and colleagues elucidate (2010), come at the cost of the study of diverse groups and individuals. Such a narrowing of the field potentially contributes to an inability to generalize in addition to the neglect of individuals' rights to inform and benefit from scientific advancements (Timmermann, 2014); thereby delimiting our combined understanding of diversity on the whole and for developing youth expressly (Jensen, 2012). Other responses to the call for greater 'non-Western Educated Industrialized Rich Democratic (WEIRD) background' examination include incorporating diversification of individuals studied with a diversification of methodology and context (Ceci, Kahan, & Braman, 2010).

1.2 Addressing the Problem: Research Aims and Rationale

So as to redress the aforementioned current imbalance, the thesis at hand seeks to tackle these issues by setting adolescent equality-related value orientations in context. It does so by adopting dynamic developmental approaches and their basic tenets in the tradition of Bronfenbrenner's ecological systems view of human development (1979, 1992) and those stimulated, directly and indirectly, by Von Bertalanffy's (1950) systems-based science (e.g., Developmental Systems Perspectives (hereafter taken as DSP)) to human development (Scheithauer, Niebank, & Ittel, 2009). To these ends, Figure 1.1 assists in conceptualizing such complex interrelationships across multiple realms of influence. The present work will provide both specific examples as well as analysis of broad-spanning patterns of equality-related value orientations during the developmentally critical period of adolescence.

Through the conceptual framework of socio-ecological and systems-based study, the current research aims to extend the disjointed present state of knowledge in adolescents' values. Furthermore, it does so in consideration of social equality-tied influences, whilst casting light on key variances among a diverse survey of adolescence. Specifically, it examines particular instances of adolescent values with respect to relational, cultural, and gender variances and other implicated socio-cultural forces. In order to do so, an apposite multi-context ecologically-based methodology is enlisted, enabling investigation of variegations and commonalities among adolescents' value orientations. It is in this way, more nuanced understanding of the multitudinous forces at work in adolescents' value development and expression can be attained.

A caveat of the current research: it is worth stating from the outset that this thesis aims to provide vital complementary insight, cutting across subdisciplines of developmental science, appealing to broad interest with its generalist approach. That said, it does not overlook those foregoing pieces of work of more in-depth localized interest, where detailed depictions of antecedents, process- and content-based influences are essential (see Granic, Dishion, Hollenstein, & Patterson, 2003, for more on structure versus content-grounded adolescent and family research).

That is to say that while this study presents a snapshot across contexts by blending multiple disciplinary analyses, it does not represent an all-encompassing account of adolescent equality-related values development expression, a task too great for any one analysis. What it gains from the cross-contextuality of disparate explanations, it thus must cede certain aspects of specificity as well as generalizability, particularly as the samples enlisted were not taken to be necessarily socio-demographically representative (e.g., derived from balanced sampling or large-scale survey) on a global level. As Sandra Mitchell states,

The types of scientific representations and the very methods we use to study biological systems must reflect both that complexity and

variety. Developing models of single causal components.... give valuable, if partial, accounts. These explanations need to be integrated in order to understand what historical, proximal, and interactive processes generate the array of biological phenomena we observe. (2004, p. 81)

Mitchell further argues for adaptation of an ‘integrative pluralism’ position, as “contributing factors must be integrated to yield the correct description of the actual constellation of causes and conditions that brought about the event to be explained” (p. 81). Mitchell’s exposition does well to remind of assertions regarding causal models as “abstractions that will always remain idealizations” whereas, “in actual cases, multiple causes are likely to be present and interact, and other local elements may also contribute to a specific causal history” (2004, p. 81). This approach resonates with Berry’s (1989) ‘imposed etics-emics-derived etics’ integrated methodology in the dual pursuit of the generation of culturally-specific and comparative research generation (Kuczynski & Daly, 2003). This thesis draws then on multiple lines of inquiry from various relevant fields enlisting socio-cultural variables for both sample-specific and comparative understanding.

In following, the present dissertation reaches beyond the extant corpus and contributes to the literature on contexts of adolescent value orientation development, with a focus on equality-related socio-cultural influences, in several key ways. Firstly, the it puts forth a multi-faceted dynamic portrait of adolescent value development by pulling together insight from multiple relationships and contexts as guided by dynamic holistic models (e.g., ecological (Bronfenbrenner, 1979) and DSPs (Kunnen, 2012; Scheithauer, Niebank, & Ittel, 2009)). Secondly, as most prior work contributes important albeit seemingly unconnected, non-contextualized information on values

and their correlates (e.g., socio-attitudinal and motivational orientations, perceptions) during childhood and adolescence, the current research addresses this gap through its drawing upon rich, varied samples (e.g., gender-balanced and culturally-diverse) embedded in their contexts, that moves beyond static, single sample, and overly-sampled study (Henrich, et al., 2010). Finally, the research contributes to advancing the current state of knowledge in offering a new perspective to adolescent value orientation development beyond isolated contexts and constructs by synthesizing methods and data (Tashakorri & Teddlie, 2009).

As researchers like Turkheimer and Waldron (2000) expand, it is not sufficient to examine the complexities of human development through singular lenses. Combined approaches are paramount in addressing weaknesses in their theoretical counterparts when soundly laid out (Onwuegbuzie & Teddlie, 2003). In this manner, crosscutting examination of interacting systems of influence is enabled, thereby uncovering similarities and discrepancies in value orientation development. Moreover, by considering the adolescent as an *active agent*, embedded in and interacting with their environments, vital developmental processes involving continuity and change across contexts can be informed (see Bandura, 2002 for a lucid account of interactive agentic processes in socio-cognitive development; Blakemore & Mills, 2014; Roest, Dubas, & Gerris, 2010; Schönplflug, 2001).

To these ends, the three contributions comprising this dissertation are presented in brief in Table 4.1. The first and third investigation make use of a selection of innovative quantitative methods, specifically designed to target under-researched topics: cross-lagged mixed-gender dyadic analyses through multi-level structural equation modelling (first contribution) and multiple indicator multiple group analyses of gender and cultural variances (third contribution), respectively. Additionally, the second article provides a qualitative overview of theoretical and international empirical findings gleaned from a survey of international siblings project research, examining social values change as applied to human development in the context of familial and siblings relations in different cultures.

The subsequent chapter first presents an overview of the state of the literature on adolescent value development, defining key terms and elucidating core theoretical perspectives on value orientation development. Following this broad-brushed depiction, the second part of the chapter brings developmental systems and related ecological systems approaches to the study of adolescent development to bear, highlighting the apposite nature of the approach for the task at hand. The fourth chapter expounds the central research aims and consequent research questions gleaned from the literature review. The three studies on equality-related values and socio-cultural influences are presented in turn from the specific developmental contexts of: (1) The familial system and sub-systems; (2) Cultural and international contexts with a focus on the reciprocal sibling relationship; and, (3) School-based setting across three distinct cultural contexts.

The final chapters of the thesis synthesize the research articles' findings and proffer a multi-angled discussion on the benefits and limitations of the current work. They further assist in the integration of the diverse contributions: assembling and situating the results, and comparing and contrasting the discoveries. Finally, as the thesis seeks to extend the current state of knowledge, suggestions for future research and praxis are presented, thereby providing a theoretical and empirical contribution to the study of adolescent value development in light of socio-cultural influences by privileging a socio-ecological approach.

THEORETICAL SECTION / LITERATURE REVIEW

Chapter 2: Theoretical Approaches Toward Adolescents' Value Orientation Development

The following chapter provides an overview of central theoretical approaches toward value development in adolescence considering socio-cultural influences. In this vein, it firstly sets out to define the key terms of values, culture, and adolescence, and to elucidate their interrelationships. As well, the chapter will speak to the concepts involved in their formation and expression like those of cultural transmission, socialization, acculturation, and enculturation processes, and concurrent socio-demographic factors. Secondly, the primary socio-ecological models of human development and their core theoretical foundations and empirical evidence are laid out, along with complementary schools of thought. This dual-aspect literature review assists in grounding why the application of DSP, its heuristic tools, and other multi-contextual, socio-ecological approaches are necessitated for furthering adolescent value orientation study. Throughout, the chapter brings together empirical findings from various developmental science subdisciplines in order to establish a base from which to address the gaps in the literature and current research aims.

2.1 Values

Among the key areas of interest in adolescent cultural socialization, the study of values can be considered a primary focal point as they stimulate both the continuance or, conversely, changing of cultures, demarcating cultural and individual specificity (Barkow, Cosmides, & Tooby, 1992; Boyd & Richerson, 1985; Coleman, 1988). Values are cognitive structures or mental representations (Maio, 2010; Maio, Pakizeh, Cheung, & Rees, 2009; Schwartz & Bilsky, 1987) or belief schemas that may function beyond conscious awareness (Bardi & Schwartz, 2003). These values signpost what individuals desire in life (e.g., security versus openness) and encompass

relatively stable cross-situational preferred abstract goals which act as guiding directives of behaviour. Values drive motivations, choices, evaluations, perceptions, and steering developmental pathways (Bardi, Calogero, & Mullen, 2008; Greenfield et al., 2003; Rokeach, 1973; Schwartz, 1992). Moreover, values are internally arranged within a person according to their relative rankings of significance such that the preference for one value over another moulds cognitions and actions (Rokeach, 1973, 1979; Schwartz, 2012).

Extensive cross-cultural survey seems to suggest identification of a set of motivationally distinct values, indicating that individuals as well as entire cultures differ in their relative *preference* of a specific value (see Schwartz's Quasi-Circumplex Model of Human Values, Cieciuch, Davidov, Vecchione, Beierlein, & Schwartz, 2014; Schwartz, 1992, 1994a, 2004, 2005, 2006, 2009, 2012; Schwartz & Bardi, 2001). Beyond these 19 core values, there appears to be a level of convergence in cross-cultural research regarding universal sets of values as determined by canonical analyses of Schwartz's and Inglehart's (e.g., 1977, 2000) value structures (Dobewall & Strack, 2014). Others contend that this normative imposed etic approach is inappropriate for cultural study of values, which may or may not be both internal and external to an individual (see Hwang, 2015).

Nonetheless, Schwartz (2009) makes an articulate case for culture as the 'press' upon individuals within a society, meaning that culture holds immense weight in structuring social relations. This press in the form of values, or the "cognitive representations of three universal human requirements" (Hitlin & Piliavin, 2004), springs from the ways in which social life is organized across groups (Schwartz, 1992). Here, values offer an orienting influence, integrating emotion-laden and cognitive components whereby members of social groups can solve three central issues of social life: (1) biological dictates to satisfy a living being's needs, (2) social demands relating to inter-reliant interactions and organization, and (3), institutions' requirements to promote group survival and well-being (Hitlin & Piliavin, 2004; Schwartz, 1992).

While such forces are often ‘unseen’, they exert tangible impacts on the individual, groups, and society, and indeed, interdependent and interconnected material and cultural worlds (Schwartz, 2007; Sparke, 2012). From gender equality (Fischer, Hanke, & Sibley, 2012; Schwartz & Rubel-Lifschitz, 2009) and its relations to poverty (ONE Report, 2015) to democratic institutional organization and structure (Inglehart, 2000) to policy measures (Levin, Henry, Pratto, & Sidanius, 2003; Mishler & Rose, 2001; Sidanius & Pratto, 2001), various socio-political constructs and social system configurations (e.g., egalitarian versus non-egalitarian, progressive versus conservative (Hibbing et al., 2013; Jost, Federico, & Napier, 2009)) are seen to mirror, reproduce, stem from or link back to these underlying values on multiple levels (Fischer, 2014; Fischer & Poortinga, 2012; Schwartz, 2009). Complex systemic interdependencies and aggregated influences (Jost, Banaji, & Nosek, 2004; Sidanius & Pratto, 2001; Pratto, Sidanius, & Levin, 2006) co-act, producing distinct and dynamic socio-cultural value orientations (Greenfield, 2009).

That considered, values in the main fall into a *relative* hierarchy of personal and cultural standing (Schwartz, 1992). Exactly how this hierarchy forms is not firmly grasped. Some accounts indicate that value orientations take shape and, to a lesser extent, continue to adjust - through an interplay of the developing individual’s cumulative biological and socio-cultural predispositions and collective experiences. Importantly, these motivational forces are adopted in part through choice, though they might occupy a background role outside of immediate conscious awareness at any given point in time (Bardi & Schwartz, 2003). The following sections elaborate the process by which individuals develop such values sets. Though values reflect the development of self, including self-concept, and indicate that identity formation is at its core a fundamentally social process (see Oyserman, 2001), these aspects are not focused upon in order to restrict the scope of the present review.

2.2 Value Orientations

Individual values group into broader orientations that are intricately bound up with how people come to think of themselves, their engagements, and social worlds, serving as abstract guiding forces within their lives (Schwartz, 2012). Alongside their ideologies and moral beliefs, values give rise to an organizing foundation for interconnected affect and cognition clusters, including purported downstream motivations, expectancies, beliefs, and behaviours (Eccles & Wigfield, 2002). Citing the long-standing theoretical base on social structure and individual agency (Archer, 2003; Sayer, 2011), socio-cultural systems, with their respective structures, institutions, and relationship dictates, among other phenomena, are built upon and built up by variable social and psychological value preferences or overall orientations made available to, internalized, and negotiated by the individual embedded in preformed and patterned, though fluctuating social milieus (see Berger & Luckmann, 1966; Bourdieu, 1985, 1989; Durkheim & Simpson, 1949; Giddens, 1984; Longest et al., 2013; Parsons, 1951, 1954/1964; Parsons & Shils, 1955).

Among these general value orientations, three key solutions to the demands of human life must be found within every culture and society², namely: (1) how the individual relates to the group (autonomy vs. embeddedness values), (2) how social relationships are structured (hierarchy and power vs. egalitarian, universalism, and benevolence values), and finally, (3) how the social world relates to the ecological or natural realm (mastery or dominion over vs. harmony with nature). Moreover, these core values form four distinct value clusters or orientations: (1) openness to change comprised of hedonism, stimulation, self-direction; (2) self-transcendence comprised of universalism and benevolence; (3) self-enhancement comprised of achievement, power, and hedonism; and (4) conservation arising from conformity, tradition, and security values (depicted in Figure 2.1 (Rohan, 2000 based on Schwartz, 1992)).

² See Schwartz (e.g., 1992, 1994a, 1994b) and colleagues' corpus on cultural and personal values which forms the foundations of this thesis

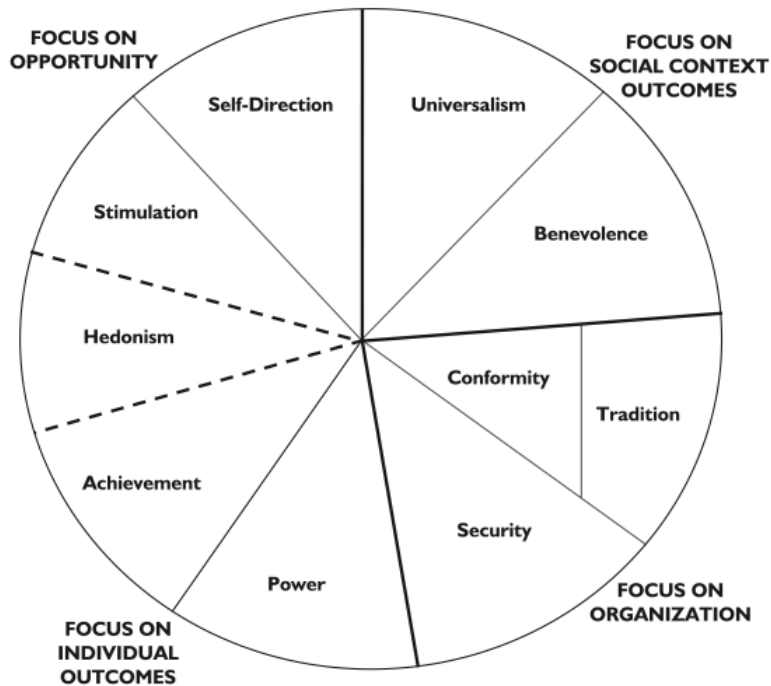


Figure 2.1 Circumplex of Schwartz's Basic Human Values in two-dimensional space (as depicted by Rohan, 2000)

It is in this way that values are fundamentally of socio-political primacy: they structure and organize power distribution and equality in relationships, situating the individual in their surrounding ecological context (Bronfenbrenner, 1986). Through groups of individuals' interlinking values and actions, social equalities or hierarchies are both enhanced or attenuated through shifting socio-cultural dynamics (e.g., Coleman, 1986; Sidanius & Pratto, 2001). As an illustration, Figure 2.2 outlines such interactive, recursive multi-level processes in racial inequity (World Trust, 2012).

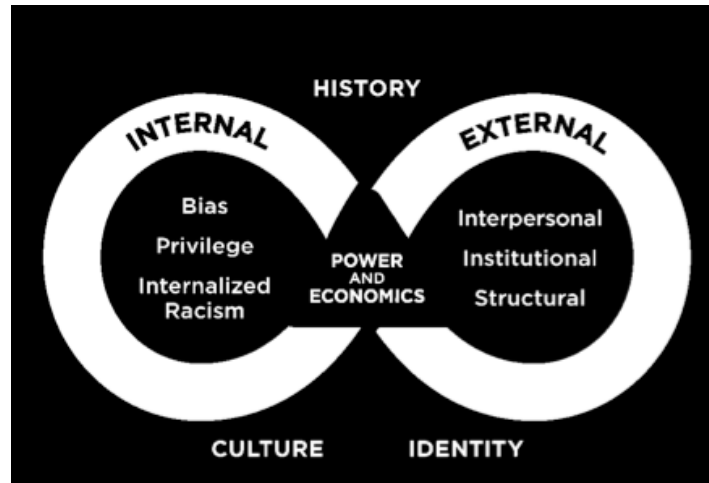


Figure 2.2 Model of the system of racial inequity (World Trust, 2012)

Schematics highlighted in the current thesis regarding value orientations include the already mentioned framework of Schwartz’s Basic Human Values, Inglehart (e.g., 1977; 2000) and Welzel’s Materialist to Post-Materialist Values Shift theory (e.g., 2005) based on the World Values Survey, and Hofstede’s Cultural Values perspective (e.g., 2001). While recent study suggests significant overlap of the various constructs involved (e.g., Hofstede’s individualism values, Schwartz’s achievement values, and Inglehart and Welzel’s self-expression and secular post-materialist values), conceptual differences do exist particularly in terms of their underlying theoretical basis (i.e., Schwartz’s solutions to problems of social life) or relative lack thereof (i.e., Hofstede’s data-driven dimensional constructs). Nonetheless, each of the theories lends specific import to the present work’s three constitutive articles. Namely, extensive patterning of socio-cultural value orientations in relation to these perspectives informs their presentations across the distinct samples and analyses. Their broad contributions will be delineated within the article discussions and are summarized in Table 2.1.

Table 2.1

Cultural Value Theories Relevant to Articles 1-3

Cultural Value Theory	Values	Relevance for Articles (1-3)
Schwartz's Basic Human Values (1992, 1994a)	a) Self-Enhancement b) Conservation vs. c) Transcendent d) Self-Direction, Openness to Change	1). All relevant in gender role socialization and egalitarian vs. traditional gender ideology 2). All relevant in social values change and human development 3). All relevant in democratic vs. authoritarian education and achievement motivations
Inglehart & Welzel's Material-Post-Material Values Shift (e.g., 2005)	a) Traditional b) Survival vs. c) Secular d) Self-expression	1). All relevant in gender role socialization and egalitarian versus traditional gender ideology 2). All relevant in social values change and human development 3). All relevant in democratic versus authoritarian education and achievement motivations
Hofstede's Cultural Dimensions (2001); (assigned country value on scale from 0 to 100)	a) Power Distance (Unequal Power Distribution) b) Masculinity-Femininity (Quantity vs. Quality) c) Uncertainty Avoidance (Ambiguity Tolerance) d) Individualism-Collectivism (Group Integration)	1). a) Power Distance; b) Masculinity-Femininity 2). d) Individualism-Collectivism 3). Germany: a) 35; b) 66; c) 65; d) 67 Kenya: a) 64; b) 41; c) 52; d) 27 Spain: a) 57; b) 42; c) 86; d) 51

2.3 Adolescent Value Orientations: Defining the Terms, Situating their Import

Adolescence holds greater sway over socio-cultural learning, including values and related socio-political attitudinal orientation formation than perhaps any period of life (Blakemore & Mills, 2014; Vollebergh, Iedema, & Raaijmakers, 2001). It is during these teenage years that individuals undergo marked, extensive, complex physiological and accompanying psychosocial developmental change second only to that of infancy (Ernst, Pine, & Hardin, 2006; Steinberg, 2008, 2014; WHO, 2014). Commonly, adolescence is viewed as the period in the life course between childhood and young adulthood, spanning from the tenth to nineteenth years of life in the most liberal definitions (WHO, 2014). For generalizability purposes, this thesis focuses in on the more standard formalized conception of ages twelve to seventeen.

Although adolescence can be increasingly seen as a protracted stage in life with entry into adulthood pushed back due to correspondent socio-cultural change in multiple cultures partly attributable to globalization forces, and is highly variable in its expression (Arnett, 2010; Brown & Larson, 2002), a number of physiological imperatives clearly demarcate this phase (Weisfeld, 1979). Biologically-grounded maturational influences of adolescence in tandem with its culturally-bounded assumptions propel developmental processes, exercising influence on both the content of cultural learning and its pathways (Keller & Greenfield, 2000).

Over the course of the adolescent years, universal tasks involve the development of value orientations, theorized as “a joint product of the individual’s needs, traits, temperament, socialization, and personal experiences” (Bardi & Goodwin, 2011, p. 3), and is considered to be one of the most critical aspects reciprocally implicated in the development of self (e.g., Brewer & Roccas, 2001; Côté & Schwartz, 2002; Stephen, Fraser, & Marcia, 1992) in addition to social identity complexity (Adams & Marshall, 1996; Roccas & Brewer, 2002). It is across this stretch of life that socialization and other pivotal developmental processes like peer pressure and social influence (Dishion & Tipsord, 2011; Harris, 1995) are particularly active and impactful (e.g., Schönpflug, 2001), as young people develop the values,

attitudes, beliefs, and ideological orientations that guide their behaviour within specific environments and assimilate these into their concepts of self and other (e.g., Bardi & Schwartz, 1996; Barni et al., 2011; Knafo & Schwartz, 2004, 2012; Kroger & Marcia, 2011; Marcia, 1980). Nonetheless, we know surprisingly little with respect to the ways value development occurs due to the majority of values research being carried out starting from young adulthood (Bardi & Goodwin, 2011).

To this point, various researchers conjecture that the nature of adolescent values formation and socialization has not only to do with universal features of adolescence itself but so too the adaption to socio-culturally specific challenges frequently encountered at this life stage (e.g., Bardi, Lee, Towfigh, & Soutar, 2009; Schwartz, 2005; Schwarz et al., 2012; Tamis-LeMonda, et al., 2008). Adolescence presents manifold transitional circumstances to the developing individual with accordant cognitive, social, and biological adjustment and change (Steinberg, 2008). In the face of increasing globalization and widespread demographic shifts in education and socialization opportunities and experiences (Trommsdorff & Mayer, 2012), the number of potential transitional paths and interlinked tasks of development further adds to the mix of adaptation tasks presently confronting adolescents (Park, Twenge, & Greenfield, 2014; Pfoertner et al., 2014).

Among these challenges, adolescence is thought to require the carving out of one's own path and identity in the form of socio-emotional maturation and identity-formation individuation processes (Erikson, 1968; Oyserman, 2001; Stryker, 1968), negotiating relatedness versus autonomy (Kroger, 2004, 2007) or, in context-sensitive accounts, blending the two together (Kagitcibasi, 1996, 2005; Rothbaum & Trommsdorff, 2007). Additional undertakings in adolescence include commencing and cultivating relationships, wherein one learns how to be a social partner (Reis, Collins, & Berscheid, 2000), and acquiring culturally-grounded knowledge (Greenfield et al., 2003).

The paths by which a young person acculturates to the dominant society and into their specific milieus takes place in interrelated spheres of their daily life

(Greenfield, 2009). Such bidirectional processes of socio-cultural learning, transmission, and adaptation, entailing adolescents' socialization into their communities, enculturation within their families, and adjustment to additional contexts of development, among others, are by nature socio-ecologically specific (Greenfield, 1997, 2004). For instance, one of the predominant frameworks toward understanding cultural variations in values, beliefs, and practices around autonomy/relatedness or competition/co-operation dimensions (Johnson & Johnson, 1989) incorporates the collectivism-individualism distinction (e.g., Hofstede, 2001; Triandis, 1993, 1995). Beyond the individualism-collectivism paradigm, values impact socio-cultural power distribution (vertical-horizontal) and equality expectations (Oyserman, 2006; Triandis & Gelfand, 1998). These dimensions amid others are thought to broadly reflect and influence the course and content of values socialization in adolescence (e.g., Kagitcibasi, 2013; Kagitcibasi & Ataca, 2005; Rudy & Grusec, 2001; Schwartz, 1994b).

Moreover, as anthropologist Marshall Sahlins (2008) writes, while hierarchy and aggression may represent human universals so too do egalitarian and harmonious relations. These over-arching social patterns are ultimately chiefly shaped through socio-cultural expectations. Nature and culture are mutually co-constitutive and co-existent through individuals' social activity (e.g., symbolic interactionism; (Stryker, 1968, 1980)) particularly at the sensitive period of adolescence (Blakemore & Mills, 2014). With that considered, a major task of research to-date has been to illuminate the similarities and discrepancies or variances between universal and culturally-specific social developmental processes (Hwang, 2015) in adolescence and beyond, in terms of their form and content (Schönpflüg, 2001).

2.3 Culture and Value Development

A few words are in order as to what is specifically meant by culture and involved processes of socio-cultural development. Culture is learned and socially shared by individuals. Everyday life hinges on aspects of culture including socially constructed

systems of beliefs, ways of life, social roles, norms, and responsibilities (Heine, 2011; Hofstede, 2001; Sahlins, 1976). These life ways, worldviews, and values are passed on or are amended, intentionally or unintentionally via cultural transmission processes between generations (Lancy, 2012; Roccas & Sagiv, 2010; Van Ijzendoorn & Sagi, 1999), thereby shaping how entire cultures are maintained or altered, and balanced, in turn (Richerson & Boyd, 2005).

Adolescence in particular represents a sensitive period for socio-cultural learning on the whole (Smetana, 2010) and can furthermore be evidenced in neurobiological change (Blakemore & Mills, 2014). More specifically, adolescents acquire cultural knowledge of social groupings and hierarchy (Aboud, 2005; Duckitt, 2001; Fishbein, 2002; O'Bryan, Fishbein, & Ritchley, 2004; Sidanius & Pratto, 2001) and develop over-arching value orientations (Eisenberg, et al., 2014; Eisenberg, Miller, Shell, McNalley, & Shea, 1991; Roest et al., 2010). On the one hand, the relative susceptibility for cultural transmission of value orientations in adolescence appears to vary with age and value set (e.g., Rohan & Zanna, 1996; Schönplflug, 2001) while other accounts cite domain generality and age similarity (e.g., Vollebergh et al., 2001). Regardless, transmission of value orientations from socializing influences and agents to adolescents underpins cultural maintenance and change (Perez-Felkner, 2013; Ranieri & Barni, 2012; Tomasello, Kruger, & Ratner, 1993; Wight, 2008), and has been considered symbolic of 'successful' socialization (Barni et al., 2011).

Adolescents interact with such socialization agents in various contexts, adopting cultural values and forming related attitudes that exert strong influence in their lives (Schwartz, 1992). The transmission and development of value orientations takes place through two primary processes: socialization and enculturation. Socialization, as defined by Grusec (2002), encompasses "the way in which individuals are assisted in acquisition of skills necessary to function in their social group" (p. 143). Conversely, enculturation, a term of cultural anthropological origin,

involves the developing or enfolded of people into members of a social community and culture with respective identities, language, rituals, and values (Berry, 2007).

2.3.1 Values, Attitudes, Cognitions, and Behaviours

An added intertwined aspect in the development of adolescents' belief systems (i.e., values and their interconnected attitudes, cognitions) includes attitudinal orientations involving evaluations of specific entities or opinions with the element of affectivity (Metzger, Oosterhoff, Palmer, & Ferris, 2014; Rohan, 2000; Rokeach, 1973).

Adolescents' attitudes are founded on the handful of enduring values and value orientations that they come to hold (Hill, Burrow, & Sumner, 2013). These value orientations and the attitudinal-cognitive-behavioural clusters that they give rise to are of great import for the developing individuals' social relations, functioning, and adaptation within their socio-cultural environments (e.g., Hills, 2002; Moshman, 2011; Vuolo, Staff, & Mortimer, 2012). Value orientations stimulate adolescents in terms of how they orient themselves and make sense of their worlds, and thus are seen as crucial underpinning constructs for adolescents' lifelong trajectories, well-being, and, importantly, both adolescents' values and attitudes have strong behavioural implications (e.g., Barber & Eccles, 1992; Rew & Wong, 2006). These values and attitudes are influenced to a great extent through complex explicit and often implicit processes (e.g., gendered stereotypes (Martin, Wood & Little, 1990; Nosek et al., 2009) and wider demographic trends (Park, et al., 2014).

All this is not to say that individual agency is lost within such a focus on cultural transmission of values. Rather, it is here where adolescents engage in what is often found to be a conflictual or dialectical process of negotiation (Kuczynski, 2003), whereby they *actively* take on or reject certain values in accordance with their developmental profiles, albeit with considerable individual-, group-level, and environmental attribute constraints and influences (Bandura, 1982, 2002; Barni et al., 2014; Parsons, 1951; Trommsdorff & Chen, 2012). It is in this way, for example, that significant generational, cohort, and intra-individual values system and orientational

shifts can occur (Bandura, 2000; Boehnke, 2001; Cipriani, Giuliano, & Jeanne, 2013; Necker & Voskort, 2014; Jennings, Stoker, & Bowers, 2009; Necker & Voskort, 2014).

With respect to such socio-cultural development and change, adolescents' contestation of social hierarchy versus equality and egalitarian relationships through autonomy-relatedness negotiation present across cultures (Greenfield, et al., 2003; Kagitcibasi, 2013) is directly relevant for the present research. These tensions increasingly come to the fore in adolescents' interpersonal relationships and their encounters with social institutions and structures (e.g., Bandura, 1969, 1973, 1999b; Bank, Burraton, & Snyder, 2004; Bourdieu & Passeron, 1972). To this end, adolescence arguably serves as a particularly prolific period for inquiry into equality-related values and social factors (Sidanius & Pratto, 2001; Rohan & Zanna, 1996).

2.4 Theoretical and Empirical Gaps

Past research oversight can be understood within the frames of former depictions of value orientation transmission and formation. These schematics tended to view the developing individual as a largely passive subject who either adopts parents', educators' or other elders' values in 'successful' transmission (see Kuczynski & Parkin, 2007 for a criticism of the passive copying process model). What is more, such schemas have been criticized for their etic approach to studying socio-cultural variation broadly (e.g., Geertz, 1973; 1984; Danziger, 2006), and for their limiting ethnocentricity specifically (Henrich et al., 2010; Lancy, 2010). As we will see in the following sections, active reconstructions of the processes of value orientation development counter an initial top-down unidirectional deterministic perspective.

Conversely, alternative frameworks consider the adolescent's selective agency in acceptance of certain values in culture and value transmission. Grusec and Goodnow (1994) proposed the view that adoption of certain values consists of a two-step process whereby the child must firstly perceive the value endorsed (e.g., perception of a parent's value), and secondly choose to accept the value. At either

point, transmission of the value may ‘succeed’ or ‘fail’ dependent upon accurate perception as well as rejection on the part of the adolescent. Earlier literature has supported this general model, though the relationships, contexts, and value sets were typically constrained to investigations of parent-child congruence in religious and political orientations, for instance, or selected values from Schwartz’s model (Acock & Bengtson, 1978; Cashmore & Goodnow, 1985; Knafo & Schwartz, 2003, 2009).

Nevertheless, stemming from the advent of this more agentic perspective of adolescent value development comes the standpoint that the process is fundamentally bidirectional in nature (Corsaro & Fingerson, 2003; Sameroff, 2009). Furthermore, developing individuals shape and select their environments (Scarr & McCartney, 1983) and their environments shape them in turn, as behavioural genetics suggests (Pike, 2012) and the DSP model propounds. Such is this turnaround from Bowlby’s (1969) emphasis on the mother-as-shaper-of-child relationship (Edwards et al., 2006), that the majority of socialization research now adopts the transactional nature and mutuality of interpersonal relationships in socialization in their formulations (Maccoby, 2007). That being said, empirical investigation still lags behind this theoretical turn.

Although the dynamics of adolescent relationships in value development and expression have been rarely approached from longitudinal, multi-contextual study, some evidence has been gathered both supporting and refuting the claim of complex non-linear bilateral influence. Vollebergh and colleagues (2001), for instance, found weak evidence suggesting reciprocal influence in socioeconomic and socio-political attitudinal orientations. They also found support for Inglehart’s (1977) notion that the formation of cultural orientations occurs primarily in late adolescence via internalization processes. Conversely, adolescents’ parents did not exhibit differential susceptibility to their children’s value orientations across the same time period, and though reciprocal influence was close to negligible, this could be more reflective of the relative stability of parents’ values in contrast to adolescents’ (see the supposed crystallization of socio-political attitudes and values in adulthood (e.g., Bardi &

Schwartz, 1996). Likewise, adolescents' value representations have been observed to become increasingly complex and variegated, especially among immigrant adolescents and within the familial context (Daniel et al., 2012).

Additional recent inquiries into socio-political attitudinal orientations accentuate the potential for domain-specificity of such value transmission effects. Jennings and co-authors (2009) analysed parent-child pairs from two cohorts labelled the 'Protest Generation' and 'Generation X'. These longitudinal findings supported the notion that parental influence was strong and continued past adolescence possibly indicating lagged effects. Unfortunately, no systematic analyses of the panel data queried children's weighted impact though both support for social learning theory (highly politicized context and consistency of social cues (Bandura, 1969, 1986)) and status inheritance (socio-demographic characteristics (e.g., Bengston, Biblarz, & Roberts, 2002; Dalton, 1982)) was obtained. The collective results seemed to indicate strong intrafamilial politicization wherein more politically engaged and attitudinally stable parents engendered political activity in their children though not necessarily similar value development. Similarly, Headey, Muffels, and Wagner (2012) found evidence of time-lagged effects of a so-called happiness dividend whereby parents were discovered to transmit their own happiness levels, associated values, and behaviours to their children. These findings signpost the need to study specific domains of adolescent values development in multiple relational contexts over time.

Following a person-centred social learning model of value and attitudinal orientation development, one interpretation of this body of findings sees adolescents picking up on social cues from socialization agents (e.g., parents, siblings) inside the familial context. Social cue aspects including consistency, frequency, duration, rate, saliency, and complexity (Bandura, 1969, 1977) are presumed to play separate, interactive contributory roles. The individual characteristics of the adolescent combined with qualities of the relationship (e.g., attachment (Buist, Dekovic, Meeus, & van Aken, 2002; Knafo, 2003); conflict (Greer, Campione-Barr, Debrown, & Maupin, 2014); competition (Kretschmer & Pike, 2010a) then direct the selective

uptake of such values and orientations whilst interacting with various structural variables in the boundaries of inter-locking environments. For instance, in an examination of 205 adolescent sibling dyads, Kretschmer and Pike (2010a) discovered that siblings' value concordance was more pronounced when high levels of competition marked the relationship. Such sibling pairs tended to hold higher extrinsic values of power, achievement, and materialism, and lower intrinsic values of benevolence and universalism, though overall, siblings possessed different intrinsic-extrinsic value profiles.

Further backing for the importance of embracing a multi-faceted depiction of social development, including adolescent's personal set of qualities as well as those of their relational partners (Albert & Trommsdorff, 2014), incorporates findings of the differential models for adolescent and adult religious values, attitudes, and behaviours. Eaves and co-researchers (2008) discovered evidence for relatively small effects for adult (mothers') religious behaviour (comprising approximately 10 percent of exhibited variability) in contrast to the strong influence of the familial social system in adolescent siblings' socialization (over 50 percent of the variability). In a behavioural genetic analysis of twin siblings, socio-environmental influences and genetic influences alike were found to account for the variability in religious involvement, spirituality, and conservative ideologies (Bradshaw & Ellison, 2008). Again, although these various studies do well in advancing knowledge of adolescent value orientation development considering specific influences in specific settings, the findings are dispersed and more often than not, the parent-child relationship, reduced to parental characteristics and adolescents' concordance, takes precedence.

Another body of empirical findings sourced from the General Social Survey (2014) draws attention to the continued preponderance of social value inequalities, as evidenced in the racially prejudiced attitudes of Millennials' (those born after 1980), largely on par with Generation Xers and Baby Boomers. Likewise, O'Bryan, Fishbein, and Ritchey (2004) found indication of the differential intergenerational transmission of prejudice, intolerance, and sex-based stereotyping from mothers and

fathers to their adolescent children. Moreover, mothers' but not fathers' implicit racial attitudes have been found to significantly predict the racial attitudes of their children from ages as young as three to six-years-old (Castelli, Zogmaister, & Tomelleri, 2009). As suggested by a review of the literature on value orientation socialization and development, complex factors across multiple domains contribute to socio-cultural phenomena like that of political orientation and social ideologies. Nevertheless, substantial efforts to bridge the disparate findings are necessitated, wherein cross-contextual socio-cultural study acknowledges the transactional nature of values orientation development across adolescence. So as to add to this body of work, the next section proposes a theoretical approach in accordance with a culture-inclusive lifespan view of development (Albert & Trommsdorf, 2014) to tackling the existing research gaps.

Chapter 3: Developmental Frameworks for Understanding Values in Adolescence

This chapter highlights proposed socio-ecological models of development which provide the conceptual backdrop for the present work. First, Bronfenbrenner's (bio-) ecological framework of human development (2005) and the Developmental Systems Perspective will be delineated as to their applications to the topic of adolescent value orientation development and the three articles specifically. Next, socio-ecological and developmental systems perspectives are elucidated followed by an explication of informative theories of transactional social development; social capital, status, and demographics; and social learning with a concluding summary. In succession, the final section puts forth a contextualized methodological approach to studying adolescent value development in which dynamic ecological views of culture and development are applied within the current research.

3.1 Socio-Ecological and Developmental Systems Perspectives

The development of value orientations and related clusters of attitudes, cognitions, and behaviours takes place through a variety of complex, interlinking processes in context (Barni & Ranieri, 2010; Parke & Buriel, 1998). In order to illuminate adolescent value orientation development and expression, it is necessary to outline the various theories, their approaches, and conceptualizations. This corpus can be broadly classed under socio-ecological theories of culture and development (Rothbaum & Trommsdorff, 2007), and include person-centred dynamic theories of socialization and development on the whole as in Developmental Systems Perspectives (DSP) of adolescence (Kunnen, 2012). Bronfenbrenner's (1979, 1986) pioneering, now decades old, ecological theory of human development continues to encapsulate these major tenets of context-sensitive approaches and remains remarkably relevant. All the same, correspondent culture- and context-salient research has not followed suit, and as Trommsdorff (2012b) highlights in her comprehensive appeal for increased context-

based study on adolescent value development, only a handful of publications attending to cultural contexts of adolescent development have been released (e.g., Brown, Larson, & Saraswathi, 2002; see Jensen, 2012).

Ecological theories of development construe the adolescent's socialization, cultural transmission, and value development as a dynamic reciprocal process between adolescents themselves and the surrounding socio-ecological environment within which they are embedded (e.g., Kuczynski & Knafo, 2014). The developing individual plays an *active* role in their development through nonlinear, dialectical, nuanced processes inside of complex interconnected systems involving bilateral interactions with socializing influences and agents (e.g., parents, peers, siblings, community members) (e.g., Kuczynski, 2003; Kuczynski, Marshall, & Schell, 1997). The concept of 'goodness-of-fit' between the individual and their various overlapping contexts of development draws attention to the qualities and characteristics for optimal person-centred development (e.g., Bronfenbrenner & Crouter, 1983; Christens & Peterson, 2012; Roeser, Eccles, & Sameroff, 2000; Eccles & Roeser, 2009, 2011).

Adolescence in particular is viewed as a prime period for the construction of multiple belief systems comprised of individual as well as clustered values, attitudes, cognitions, and behaviours across ecological niches (Jensen, Arnett, & McKenzie, 2011; Smetana, 2010). During this stretch, the developing individual is exposed to multiple socializing forces with potentially competing values (Daniel et al., 2012). "A young person, for example, may experience traditional Muslim, Hindu, or Christian values at home, secular values at school, and materialistic values in the media" (Larson, et al., 2012, p. 165). In fact, Rohan (2000) reinforces that the need for differentiation between personal values and social value priorities in that individuals' values likely differ between those values they perceive others and social systems to possess. This reconciliation between personal and social value priorities constitutes a life-long process (Allport, 1955).

Such ecological construction of personal value priorities is of utmost centrality to the developing individual: value priorities act as “fundamental coordinators of human behaviour” (Rohan, 2000, p. 273), and “all attitudinal and behavioural decisions ultimately should be traceable” (p. 270) to these underlying value sets. This demarcation further serves as a way in which to conceptualize how social change impacts upon individual-level value change or development (Rokeach, 1973), engendering more nuanced and holistic comprehension beyond out-dated trait-based approaches to values.

Central to contextualized and adaptive adolescent development, values and related attitudinal orientations and behaviours they give rise to assist in comprising meaningful conceptualizations of the self and one’s world; they are “intimately bound up with a person’s sense of self” (Feather, 1992, p. 112). Such joined systems of meaning are forged in various contexts, including relationships and socializing institutions (e.g., school) (Miller, 1984), according to symbolic views of culture (Geertz, 1973). These contexts exert both direct and indirect influence on one another as well as the developing young person (Cavell, Hymel, Malcolm, & Seay, 2007). Such are these interactions that render study of adolescent value development all the more intricately entangled. By way of example, an adolescent may self-socialize through selection of media which impose a set of materialistic, competitive values (Arnett, 2004a; Larson et al., 2012; Larson, Wilson, & Rickman, 2009), while the parental subsystem directly promotes mastery goal orientations through task valuation (Duriez, Soenens, & Vansteenkiste, 2007), yet indirectly bolsters competition through their preferential treatment of a sibling, further spurring intrafamilial individuation (as in Adler’s theory of personality development (Ansbacher & Ansbacher, 1956)). In following, we see why it is all the more critical to examine value development cross-contextually during the course of adolescence. Recent investigations have attempted to highlight both the concentric realms of ecological influence and lived experiences not typically targeted by traditional research approaches (e.g., Youth & Society (YeS) at Örebro University; Amnå et al., 2009).

As adolescents lay claim to their identity, normative systems like cultural values in conjunction with symbolic practices, discourses, and interactions constituting everyday life exert strong influence, and are thought to affect the adolescents' development of "self- and world-views, goals, behaviour, attitudes, and overall social adjustment" (Trommsdorff, 2012b). Primary socialization occurs through interactions, symbolic or otherwise (Stryker, 1980), inside contexts like that of the family, school, and neighbourhood (Bukowski & Lisboa, 2007), and is comprised of both formal (e.g., rules, codes of conduct) and informal symbolic interactions and messages (e.g., the 'hidden curriculum' wherein values tied to certain socio-cultural contexts are entrenched in educational structures and their arrangements (Roeser, Urdan, & Stephens, 2009; Eccles & Roeser, 2009, 2011; Rosenbaum, 1976)). These socio-cultural structures, whilst possessing form and stability, are at the same time fundamentally dynamic in nature and open to change (Erez & Gati, 2004; Hitlin & Elder, 2007).

3.2 Transactional Theories in Development

Dynamic transactional relational theories of development (e.g., Sameroff, 1994, 2009) and social relational theory (Kuczynski & Parkin, 2007, 2009) highlight the reciprocal nature of relationships between the individual and their varied socio-environments. The characteristics of each individual in the relationship as well as the qualities of the relationship itself can be thought to influence development within not only the immediate environment but also the context of the relationship itself (Hartup & Laursen, 1991; Reis, et al., 2000). In this tradition, both continuity and change over time are to be expected and examined particularly in adolescents as they negotiate authority positions which tend toward more egalitarian relations (Grotevant & Cooper, 1986), though this varies with each relational dyad and culture (Trommsdorff, 2012a).

Importantly, socio-ecological approaches enable the separate examination of sub-systems in different contexts (e.g., the sibling dyad), while concomitant analyses

of the family systems as a whole assist in depicting how the multiple relationships impact on one another, considered together and apart (Parke et al., 2001). At the same time as this body of work continues to grow, the majority of research has primarily investigated the parent-child relationship as it pertains to value transmission and development from a parent-centered frame, focusing upon parental characteristics (e.g., Acock & Bengtson, 1980; Knafo & Schwartz, 2003, 2004, 2009, 2012; Rohan & Zanna, 1996; Whitbeck & Gecas, 1988). In the educational realm, this similar top-down study is mirrored in the educator to pupil mode of cultural learning or transmission contrary to culturally variable 'passive models' (Leonardo, 2004; Rogoff, 1981, 2003; Rogoff, Correa-Chavez, & Navichoc-Cotuc, 2005).

3.3 Theories of Social Status, Capital, and Demographics

This previous group of theories on intergenerational transmission of values and cultural learning conceptualize development primarily from the standpoint of the authority figure to recipient, typically embodied in the parent-child relationship (Acock & Bengtson, 1980; Moen, Erickson, & Dempster-McClain, 1997; Rubin & Chung, 2006). However, additional factors of shared social status are thought to yield robust influence on adolescent social and value development (Beck & Jennings, 1975; Glass, Bengtson, & Dunham, 1986). Roughly grouped under models of shared social standing, these perspectives cite contextual determinants such as the ecology of the family (Bronfenbrenner, 1986) as exerting influence on value development through the provision of access to social, cultural, and economic capital (Bronfenbrenner, 1974, 1986; Bronfenbrenner & Crouter 1983; Hadjar, Baier, & Boehnke, 2008; Hagan, Boehnke, & Merkens, 2004; Hagan, Hefler, Claßen, Boehnke, & Merkens, 1998; Hitlin, 2006). Indeed, extant research attests to the prominence of status similarity in that the attitudinal profiles of parents and their offspring were more similar than those who occupied different socio-structural roles (Glass, et al., 1986; Suitor, 1987; Wight, 2008).

Lending from Bandura’s socio-cognitive theory of development (1977, 1989) and Rokeach’s value theory (1973), shared background and social standing are thought to not only aid transmission of values from one individual to the another (e.g., from parent to adolescent), but further encourage the adoption and formation of similar value profiles based upon those values available and experiences engendered in similar socio-ecological settings (e.g., macro-level influences of culture, socioeconomic status, educational background, ethnicity, gender). As Cavell and authors (2007) further posit, “children invest time and energy in contexts that offer greater and more reliable payoffs than other contexts. ... socialization is... largely a reflection of the values and behaviours rewarded by the contexts in which children and adolescents are actively engaged” (p. 47). To summarize, Figure 3.1 outlines Coleman’s (1986, 1990) ‘boat’ model which diagrammatically represents such macro- and micro-level interplay and its tangible social outcomes. The example model below displays a multi-level illustration of gender inequities in academic attainment.

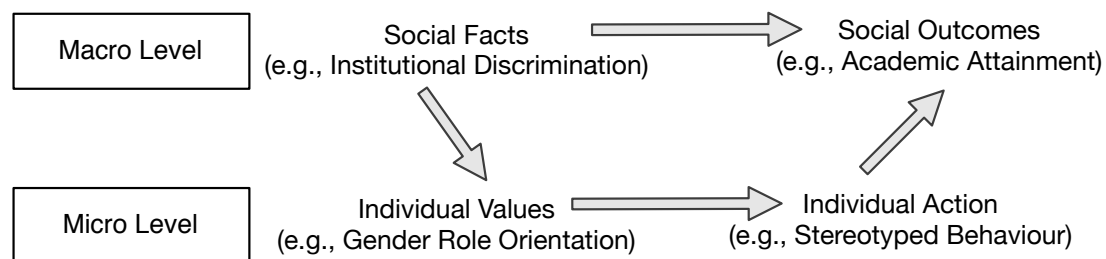


Figure 3.1 Coleman’s (1986, 1990) Boat depicting interdependent multi-level influences

3.4 Social Learning and Development

Social learning of values is aided by not only by status similarity but, moreover, the quality of the relationship, whereby warm connections with similarly perceived, relatively higher standing others are believed to facilitate socio-cultural learning and

modelling (Bandura, 1969, 1977, 1986, 1989). Earlier research seems to converge in citing both transmission influences and cultural learning alongside contemporaneous social factors such as socioeconomic status and educational background in explaining adolescent value development (e.g., Glass et al., 1986; Moen et al., 1997, Vollebergh, et al., 2001). Both are valid and complementary to a comprehensive depiction of value development, in tandem with a lifespan perspective (e.g., Elder, 1994), though the current work focuses upon adolescent value development and expression.

While others argue that effortful ‘instruction’ in cultural transmission is over-represented (e.g., Lancy, 2010), the interactions between the developing adolescent and central socialization agents (e.g., parents (Kuczynski, et al., 1997), siblings (Milevsky, 2011; McHale, Updegraff, & Whiteman, 2012)) remain crucial social learning and socializing relational contexts. As an example, various scholars have cited the sibling relationship as a key context for adolescent development (Yeh & Lempers, 2004). The bond between brothers and sisters has both hierarchical and reciprocal qualities, varied meanings (Edwards et al., 2006), and is often conflictual or at least in flux, and thus positioned to advance socio-emotional development (e.g., Cox, 2010; Dunn, 2011; Kramer, 2010; Sisler & Ittel, 2014). As adolescents attempt to navigate what has been described as the dialectical contrast concerning individual desires and social rubrics (Triandis, 1995), socio-culture conditions shape agentic and relational development (Trommsdorff, 2012a), especially through the sibling bond.

Moreover, prior privileging of the parent-child generally and mother-infant bond specifically, relegates the significance of the sibling and other vital extended kin and non-kin relationships to secondary or entirely non-acknowledged roles; the research has followed in line with these biases (Parke et al., 2001). In fact, across diverse cultures, siblings have proven central socializing forces, for instance, in caregiving and teaching exchanges (Rabain-Jamin, Maynard, & Greenfield, 2003). Additional examination of how different relationships in different contexts overlap and influence one another, as in concurrent study of dyads within the family system (Minuchin, 1974, 2002), are likewise in want of investigation (Maccoby, 2007). This

thesis thus draws extensively on analysis of the sibling relationship as a prime context for adolescent socialization with respect to the role of siblings in socialization and values development.

3.5 Theoretical Summary and Research Applications

Taken together, the dynamic theories spurred by and complementary to systems perspectives and Bronfenbrenner's ecological model represent a counter to former traditional models of cultural transmission and value development derived from predominantly Western notions of normative child-rearing (Kagitcibasi, 2005; Supple, Ghazarin, Peterson, & Bush, 2009). Constituents of such typically individualistic perspectives, for instance, reduce value and cultural transmission processes to purposeful child-teaching practices (for further reading on this issue see: Greenfield, Quiroz, & Raeff, 2000; Greenfield, Trumbull, Keller, Rothstein-Fisch, Suzuki, Quiroz, & Maynard, 2006; Lancy, 2010). Conversely, the socio-ecological theories outlined above bring with them sets of heuristic tools and methodologies that aid in countering such tendencies, thereby encouraging more comprehensive depictions of value orientation development (MacKenzie & Sameroff, 2003b).

In thinking of Bronfenbrenner's domains of *person*, *process*, *time*, and *context* considering value development, dynamic systems, social learning, and socio-cultural capital theories each inform the current dissertation's constituent articles in distinct ways. Systems-based perspectives are additionally helpful in that they conceptualize the *context* within which and in *transaction* between *person-related* factors such as social capital accrued through gender, age, or culture. These variables then influence the *process* of values development and change over *time*, including socio-cultural learning, enculturation, and socialization.

The first article's focus on the familial system and subsystems within their wider socio-economic macro-cultural environment is explained in reference to adolescents' social learning of gender role socialization alongside micro-macro-level interactions between the family's socio-economic capital and parental workplace

environment. Here, *person-related* characteristics of the adolescent (gender), *process* factors in terms of their parents' own gender ideologies and practices (gender role orientation and gender-specific parenting practices), *time* characteristics (cross-lagged longitudinal interactions), and *contextual, social capital, and demographic* influences (family system, socio-economic status, workplace autonomy) all contribute to a fuller systems-based depiction of adolescents' gender role orientation development.

In the second article's examination of adolescent siblings across socio-cultural contexts, *person-related* characteristics of adolescent siblings (gender, age, own values), *process* factors in terms of their socio-cultural contexts' predominant values, ideologies, and practices (kinship roles, caregiving, economic and educational transitions), *time* characteristics (historical and lifespan approaches), and *contextual, social capital, and demographic* influences (family systems, socio-economic status, socio-cultural value shifts) combine to inform a systems-based depiction of how socio-cultural values change impacts siblings' value orientation development in adolescence.

Finally, the third article is informed by *person-related* characteristics of the adolescent (gender, nationality, motivational goal orientation), *process* factors regarding educational practices (democratic decision-making and disciplinary practices), and *contextual, social capital, and demographic* influences (school climate, cultural grouping). These elements aid in an ecological depiction of adolescents' motivational goal orientations and their interrelations with their educational climate.

The import of the aforementioned viewpoints of situated socio-ecological theories of development is both theoretical and empirical. Underlying principles of dynamic development as occurring through adolescents' agentic interactions with relational partners within concentric realms of contextual influence help to frame reliable and valid theory and organize empirical investigation (Sameroff, 1994). In following, developmental systems perspective is put forth as an apposite framework for guiding the contextualized study of adolescent value orientations.

3.6 Contextualized Methodology: Applying Dynamic Systems and Ecological Views of Culture and Development

In this methodological section, an overview of developmental systems science, encompassing developmental systems perspectives (DSP) and socio-ecological systems theories, will be presented and contextualized as to their applications in the current investigation of adolescent value development. As adolescent research largely lacks an organizing framework (Adams & Berzonsky, 2008; Jensen, 2012), adopting DSP aids in forwarding developmental knowledge, encouraging situated application in order to benefit young people and those who they interact with.

Developmental systems theory or DSP, based upon general systems theory (GST) (Von Bertalanffy, 1950; Von Bertalanffy, et al., 1951), represents a meta-theoretical framework and draws upon sociological, psychological, anthropological, behavioural genetics study, in addition to biological and educational sciences, to name but some of the contributing sub-disciplines (Gottlieb, 2002; Granic, et al., 2003; Scheithauer, et al., 2009). It has been purported to hold great value for systematic cross-contextual research in developmental science broadly (Ford & Lerner, 1992; Lerner & Castellino, 2002; Lerner, 2006; Lerner, Rothbaum, Boulos, & Castellino, 2002), and socialization research specifically (e.g., Parke & Buriel, 1998). As mentioned prior, Bronfenbrenner's ecological theory of human development (1986, 1992) along with its diachronic and synchronic analyses can be considered as one theory housed under the general systems approach. To reiterate, Figure 1.1 illustrates Bronfenbrenner's (1986) ecological scaffolding in human development as applied to adolescent value development.

DSP tenets have been adopted as a valuable investigative instrument for making sense of and organizing empirical data in adolescent research. In the words of Granic, and authors (2003), DSP provides “the conceptual toolkit necessary for considering the complexity surrounding....adolescent development” (p. 63). Such features include notions of adolescent development as arising from dynamic representations of the juxtaposition of self-organizing interdependent systems (Witherington, 2007). An advantage of DSP resides in the absence of normative stage-theories of development; instead, unique individual developmental trajectories are to be expected (Lavalli, Pantoja, Hsu, Messinger, & Fogel, 2005). DSPs envision and depict embedded individual development through dynamic reciprocal interactions and processes with surrounding, concentric systems at varying levels of influence (see Figure 3.2).

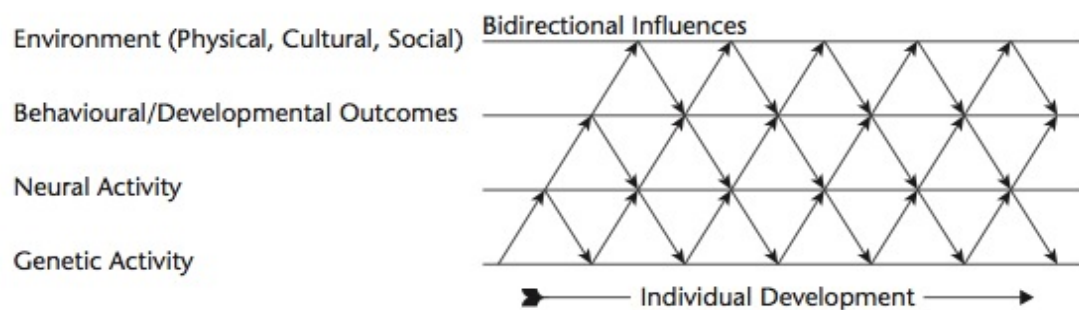


Figure 3.2 Developmental systems perspective of development: Reciprocal interaction between and within multiple levels of influence (based on Gottlieb, 1992/2002 p. 186; modified by Scheithauer, Niebank, & Ittel, 2009)

In accordance with Bronfenbrenner’s (e.g., Bronfenbrenner, 1979, 1986, 1989, 1992, 2005) and Greenfield’s (2009) related socio-ecological theories of development, multiple domains like that of time, person, process, and context network

to bring about intricate dynamics, association configurations, and effects in adolescence. In other words, the person engages in developmental processes over time in their respective socio-environmental contexts, and thus wields reciprocal influence on their social development and social world, in turn. Explicitly stated, adolescents are shaped by and themselves shape the contexts in which they interact (Sameroff & MacKenzie, 2003b). However, dependent upon the particular school of thought, the relative malleability of the social structures into which one is born is highly contested, though most theorists concede that substantial barriers exist to social change, with others drawing out a universal tendency of human societies toward a ‘balancing hierarchy’ (Sidanius & Pratto, 2001). Moreover, it is a near-truism to state that, in addition, environmental settings affect and are affected by one another in turn (Albert & Trommsdorff, 2014). Nonetheless, to take such statements to task is more difficult.

As the number of overlapping environments in which an adolescence matures increases with age (Lewin, 1939; Maughan, 2011), DSPs help to conceptualize these various contexts as they interact with one another. For instance, multi-level modelling is critical for examination of the development of gender roles and other value and attitudinal orientations. Merely adopting a within-family approach is inadequate as socialization of gender and related egalitarian values stems from incredibly diverse contexts (e.g., Davis & Greenstein, 2009; Davis & Wills, 2010; Wight, 2008). In this way, other complementary perspectives which attempt to model interactions between levels assist in disentangling or at least elucidating implicated interdependent multi-level processes (see Figure 3.2).

With respect to socialization, Berger and Luckmann (1966) delineate the dialectical relationship between an individual’s agency and social structure. The

multiple levels (micro- and macro) are not seen to juxtapose one another (Barnes, 2001). Rather the authors highlight that individuals are brought into structured societies with accordant values and cultural norms already firmly established through the ‘externalization’ of human activity. To extrapolate to adolescence, a young person becomes a member of their society in part through the construction, identification, and endowment of an identity and personhood with its attendant values, attitudes, behaviours, and cognitions (Knafo & Schwartz, 2004) in interaction with their biological and cultural propensities (Barkow, et al., 1992). The processes by which this occurs are far from clear, yet theorists contend that individuals differentially ‘internalize’ culturally available values and norms; accept and perform roles in reference to cultural schemas; and then participate in further maintenance or attenuation of social structures or systems, with consideration of individual-level characteristics (Berger & Luckmann, 1966; Duckitt, 2001). This ecological depiction of the interactional processes of adaptive socio-cultural construction and development assists in conceptualizing adolescent value formation and equality-tied values in particular.

Furthermore, instead of expecting uni-directional effects between these levels, ecological theory, along with dialectical social relational theory predict mutual synergistic systems of influence across all levels (Derkman, Engels, Kuntsche, van der Vorst, & Scholte, 2011; Greenfield, 2013; Kuczynski & Parkin, 2009). Bearing in mind the macro-micro level interaction, gender disparity, parental workplace and labour division practices can exert influence on adolescents’ values and behaviours both directly and indirectly (e.g., Manago, Greenfield, Kim, & Ward, 2014). Moreover, socioeconomic circumstance and other forms of resources holds great consequence for individual adolescent adjustment, well-being, and other diverse

outcomes as it impacts multiple domains, like that of community resources, cultural norms, and intrafamilial interactions (e.g., Doane, Schumm, & Hobfoll, 2012). These perspectives elucidate effects apart from the over-sampled contexts of the classroom and family in isolation (Bukowski & Lisboa, 2007; Kerr et al., 2007).

Additionally, relationships such as that between siblings and the parental subsystem can be examined as to their qualities and changing dynamics, as they each impart unique influence in tandem (Minuchin, 2002; Parke, 1998). For instance, Derkman and colleagues (2011), found support for reciprocal associations between parental support and siblings' relationships throughout adolescence while Edwards and authors (2006) uncovered the immense buffering influence of siblings with conflictual parental relations through qualitative reports.

As the form adolescence and the experience of youth assume is remarkably distinctive and diverse (Brown, Larson, & Saraswathi, 2002), varying within and between different settings and cultures, DSP engenders the examination of such diversity (Cook, 2001; Jensen, 2012). In reference to Mitchell's (2003, 2004) integrated pluralism approach delineated in the thesis's opening, an apposite triangulation of data and methods, whereby more than one type of data (statistical and descriptive) and their accompanying methodologies (qualitative and quantitative) are used in the research process, offers a more comprehensive depiction of development in context. Both research programmes, inform one another whilst providing vital distinct material; specifically, a descriptive qualitative report of international trends (Article 2) compliments quantitative data that describe and compare subgroups of individuals over time (Article 1) and across cultures (Article 3), but would risk external validity in isolation. The highly complicated processes of value development

and expression in adolescence can be partly captured in this design (Bernardi, 2011).

In applying such an approach to adolescent development, which holds pronounced significance for subsequent developmental trajectories (Conger & Petersen, 1984; Heaven, 1994), it is important to note the relative strengths and weaknesses of DSP. The DSP framework can assist in holistic conceptualization of development in context yet what it gains here it loses in its complexity of deployment (e.g., Schermerhorn & Cummings, 2008). Nonetheless, researchers have taken note of the divide between applied study and meta-theorizing on properties of the environment–individual interaction (Granic, et al., 2003; Sameroff, 2009). The current work maintains that deployment of DSP and ecological models assists in elucidating adolescent values study on the whole.

Together, the results of a multiple-methods investigation open up individual and ecological levels of analysis, potentially inaccessible by strict quantitative measures, such as cultural themes and general trends (Boyd, Castro, Kellison, & Kopak, 2010). Thus, the present research conscripts a socio-ecological/DSP framework for reviewing adolescent value development across diverse contexts. It is essential to reflect upon macro-contextual forces that impact micro-level relationships and processes and to grasp the interconnections between development, family, and cultural contexts. By privileging the diversity of adolescences in swiftly shifting societies (Greenfield, 2015), related changes in social formation can be enlightened through examining associations between adolescents' value orientations across contexts (e.g., Manago et al., 2014).

This synthesis of the data leads to analysis of various groupings of results, adding contextualizing aspects to former cross-sectional quantitative tests of

adolescent value development theory (Bardi & Goodwin, 2011; Tashakkori & Teddlie, 2009). To these ends, the current dissertation makes use of different methods across multiple contexts in order to cross-pollinate developmental research on adolescent value orientation development. The forthcoming chapters present the research and its aims, and synthesize the three contributions' findings.

Chapter 4. Research Aims and Research Questions

4.1 Current Work

Based upon the previously depicted theoretical perspectives and empirical findings, the current research aims to contribute to the state of knowledge on value orientation development in adolescence considering socio-cultural factors in adolescence. Despite the centrality of personal, social, and cultural value priorities on an individual's lifelong development and adolescent socio-cultural development in particular (Knafo & Schwartz, 2004; Parke & Buriel, 1998; Rohan, 2000; Smetana, 2010), review of the extant corpus revealed a dearth of cross-contextual study in this regard. What is more, in the face of increasingly complex and often conflictual value milieus (Wan, Dach-Gruschow, No, & Hong, 2011) with widespread socio-cultural change (Greenfield, 2014), the need to systematically assess how individuals develop their value priorities in their stratified socio-cultural worlds (Sidanius & Pratto, 2001) is of great consequence for adolescents and indeed, all members of diverse cultural environments (Deaux, 2006; No, Wan, Chao, Rosner, & Hong, 2011; Schwartz, 2010). By conceptualizing value orientation development as an aggregation of cumulative synergistic influences across multiple levels and contexts (Bronfenbrenner, 1986), illumination of not only individual development is enabled but so too inextricably linked socio-cultural stability and change (Greenfield, 2014).

In this thesis, I additionally address values orientations related to social equality, namely, anti-egalitarian values (traditional gender roles, hierarchy, power/control, materialism, extrinsic values) versus egalitarian values (egalitarian gender roles, universalism, benevolence, democratic, prosocial, and intrinsic values) during adolescence in light of socio-cultural influences (macro-level variables of

parental workplace, socioeconomic status, socio-cultural change, social, gendered, educational, and familial structures). The analyses situate adolescents inside of and interacting with their ecological contexts, in contrast to former reductionist models of socio-cultural development.

I consider cultural, social, and personal values relating to social structure as they are best suited for understanding and conceiving individual development alongside social and cultural influences, as regarded by Rohan (2000) and Schwartz (1992, 1994a). Moreover, they form the foundation of critical intrapsychic self and other intergroup identities (Hitlin, 2004) [e.g., social identity theory: (Tajfel, 1982); identity theory: (Stryker, 1980); cultural self-concept: (Markus & Kitayama, 1991; Wan et al., 2011)] along with accordant attitudes, beliefs, and behaviours (Bruner, 1966; Hitlin & Pinkton, 2013; Martin et al., 1986; Rokeach, 1968), and so hold considerable meaning, impacting on functioning within and across individuals, groups, and cultures (Roccas & Sagiv, 2010). In summary, the study of adolescents' values offers up prime points for inquiring into the intersections of socio-cultural and individual development (Greenfield, 2009; Kroger, Martinussen, & Marcia, 2010; Smetana, Campione-Barr, & Metzger, 2006).

To fulfil these aims, the present research examines value priorities of diverse groups of adolescents as manifested in disparate yet interlinking developmental contexts of (1) the intrafamilial system, (2) the cultural and international context with a focus on familial and sibling subsystems and, finally, (3) the school context. The studies, their key variables of interest, and methodological and structural analyses are presented in Table 4.1 (p. 61). Toward such ends, a methodology considered as suitable to address the current work's aims enlists the combined over-arching

theoretical approaches of DSP and ecological socio-cultural models of human development (Georgas, Van de Vivjer, & Berry, 2004).

As such, the research at hand does not attempt to adopt a singular unifying theory or seek to solely provide replicates of results from prior work. Instead, it sources socio-ecological perspectives on the whole, including but not limited to: social learning and socio-cognitive development theory (Bandura, 2002); self-determination theory (Ryan & Deci, 2000b); social status theories (e.g., Parsons, 1954/1964); social dominance theory (Sidanius & Pratto, 2001); and eco-social change and human development theory (Greenfield, 2009). It further draws explicit attention to areas and avenues of research currently under addressed. How it realizes the preceding aims is delineated in following.

4.2 Developmental Setting: Family Context

Perhaps the most central setting for a child's preliminary and ensuing socialization and social development (Schwartz, 2010), the family represents a primary unit of society and is a social system unto itself (Bronfenbrenner, 1979, 1986; Bugental & Grusec, 2006; Eichelsheim, Dekovic, Buist, & Cook, 2009). It holds eminent weight in value acquisition, shaping adolescent's value orientations and ideology formation among other essential developmental tasks (Sears & Levy, 2003). Children pick-up on the behaviours, attitudes, and values of their family members from infancy (Heine, 2011). Their exchanges with these central individuals in their environment mould developmental trajectories and behavioural and attitudinal constellations, setting the stage for later development, though the balance between change and stability in individual development and social relationships constitutes a perennial force throughout the life course (Elder, 1994).

Structural characteristics and social constraints such as economic resources and socio-cultural capital (Bourdieu, 1986; Coleman, 1988; Savage et al., 2013) further shape the contours of these relationships (Hagan et al., 2004; Sulloway, 1996, 2002, 2007). Parents, for instance, generally invest great amounts of time, energy, and resources into their developing children as well as other key family members such as siblings or close kin (Downey, 2001). Moreover, the relative social and concrete investment in young people from multiple systems varies in accordance with socio-cultural factors of “stratification, differentiation, and inequality” (Macmillan, 2011, p. 35). Socioeconomic differences can account for differences in adolescents’ stress in part due to a delimiting of psychological resources of themselves and those in their homes and communities (e.g., Finkelstein, Kubzansky, Capitman, & Goodman, 2007). Moreover, certain cultural and family values and expectations are communicated and negotiated explicitly and implicitly, directly and indirectly through dynamic interactions across family subsystems and the wider environment (Minuchin, 2002). As an example, familism values provide a buffering effect against deviant peer influence in adolescents of Mexican-origin, low-income families (Germán, Gonzales, & Dumka, 2009).

Importantly, to obtain a more complete understanding of the family unit’s impact on an adolescent (Goodnow, 2011), this research examines both structural characteristics (e.g., gender, socioeconomic status) in addition to processual features (e.g., gender role socialization over time). In this way, a multi-faceted view of adolescent value development and expression is fostered through looking into synchronic aspects (i.e., motivational goal orientation measured at one time point, Article 3), diachronic aspects (i.e., social value change over time, Article 2), and dual diachronic and synchronic study (i.e., gender role orientation socialization, Article 1).

Article 1. Intrafamilial Context of Gender Role Socialization, “Gender specific macro- and micro-level processes in transmission of gender role orientation in adolescence: The role of fathers”

The first contribution examines adolescent brothers and sisters within the context of their family system, including both their parents in the investigation of intrafamilial socialization of Gender Role Orientation (GRO) development. The main aims were to model separate parental influences as well as the dual influence of gender role attitudes and behavioural parameters. To these ends, a cross-lagged multi-level ecological model is depicted, consisting of micro-level variables of gender-specific parenting representing a behavioural parameter and GRO representing an attitudinal parameter in combination with macro-level variables (workplace autonomy and socioeconomic status). Importantly, same-gender versus opposite-gender parental influences were modelled, thus providing insight into gender-based transmission processes within one family.

The examination of within-family development of egalitarian versus traditional gender orientation among adolescents took place as part of the larger GERO Project; Geschlechterrollen Entwicklung im Jugendalter [Gender Role Development in Adolescence] which was undertaken on behalf of the Freie Universität [Free University] in Berlin, Germany under the leadership of Principle Investigators, Angela Ittel, PhD and Klaus Boehnke, PhD.

Article 2. Macro-level, International Context, “Cross-cultural and international study on siblings in adolescence”

The dynamics of social change and adolescent development are appraised in the second contribution in view of specific cultures, their values, and correspondent shifts in individuals’ values and orientations (e.g., Greenfield, 2009). The main aims were to

depict the sibling relationship in adolescence as a context of value orientation development, and in terms of how it is influenced by socio-cultural values and demographic change. Macro-systems study cross-examines the broad scale ontogenesis of a society and individual, as both are mutually reinforcing, dynamic, and ultimately bound together (Nsamenang, 2006). Thus, synthesizing research is presented on the interplay between cultural value change and human development during the period of adolescence. Cultural trajectories through the universal tasks of adolescent development (Greenfield et al., 2003), including: (1) cultural knowledge acquisition, (2) autonomy-relatedness negotiation, and (3) enduring social relationship formation, are expounded. In continuance of emphasizing non-typical relationship contexts, siblings are again considered with respect to the influence of macro-cultural value shifts and their impact upon individuals and their relationships (McGuire & Shanahan, 2010). This study thereby brings an under-researched relationship with its important reciprocal and socialization influences as a central adolescent context of development into ecological focus.

This contribution stemmed from a review of the state of sibling study from an international and cross-cultural perspective informed in part from a survey of international sibling projects undertaken by a selection of international researchers. The close under-investigated relationship between brothers and sisters was situated and analysed through the adoption of various socio-ecological frameworks.

4.3 Developmental Setting: Educational Context

Article 3. School Context Across Three Distinct Cultures, “Goal orientations and school climate: Modelling cultural and gender variations in Kenyan, Spanish, and German adolescents”

As many theorists attest, the school context provides another corner stone for adolescent psychosocial development (e.g., Roeser, et al., 2000; Wigfield, Eccles, Roeser, Schiefele, & Davis-Kean, 2006). Within the walls of educational institutions, adolescents formulate their sense of self and group identity, and accompanying motivational drives take shape and are influenced by their beliefs, values, and goals (Eccles & Wigfield, 2002). As values form the core of personal identity (e.g., Hitlin, 2011; Hitlin & Piliavin, 2004), adolescents’ task of carving out an identity is an ultimately social process, as they compare and contrast, assimilate or reject certain value sets which dictate their motivational orientations, attitudes, beliefs, expectancies, and goals. With the prevalence and importance of peer influence, particularly in Western formalized educational settings, school serves as a primary socializing context and ‘playground’ for the exploration of various value sets and ideological development through reciprocal and hierarchical social relationships (Cohen, 2006; Cohen, McCabe, Michelli, & Pickeral, 2009).

Again, the fundamental role of culture must be taken into consideration in reliable and valid investigation of individual adolescents’ value development set in the school context (Greenfield & Quiroz, 2013; Trumbull & Rothstein-Fisch &, 2011). As Wigfield and colleagues emphasize (2004), this is due to the manner in which culture impacts personal identity, values, and other motivational drivers, and behavioural schemas and norms (Markus & Kitayama, 1991); the expression of

universal individual psychological needs (e.g., Deci & Ryan, 2002); and school engagement (Roeser, Peck, & Nasir, 2006), gendered variances included (e.g., Cleary, 1996).

With that considered, the third article aimed to depict patterns between autonomy-supportive versus controlling school climates' relations to motivational goal orientations (mastery, performance, and social) thought to stem from underlying socio-cultural influences, structures, and values. It did so by constructing a model to examine these interrelations and analysed the data in consideration of both culture and gender grouping. The article underscores educational settings as a context of development for adolescent values, motivations, and goal orientations (Roeser et al., 2009). Specifically, it presents a cross-cultural and gender-based analysis of German, Spanish, and Kenyan adolescents' goal orientations (mastery, performance, and social motivations) relative to school climate dimensions (democratic input into decision-making and harsh disciplinary) set in the school/classroom context.

This cross-cultural study sampled student participants from Spain, Kenya, and Germany and was carried out under the leadership of Principle Investigators, Angela Ittel, PhD (Germany), Prof. Dr. Itziar Alonso-Arbiol, PhD (Basque Country, Spain), and Amina Abubakar, PhD (Kenya).

4.4 Summary

The above outlined studies comprise a body of work which predicts *synergistic*, *transactional* development of personal value orientations alongside social value knowledge in adolescence among unique cross-situational contexts (Greenfield, 2013). The findings are further believed to fall in alignment with developmental

systems-oriented frameworks and their person-centred approach. The thesis aims to provide a dynamic depiction of individual adolescent development in socio-cultural context, sourced from socio-ecological theoretical and empirical contributions. The following sections proceed to: (1) outline the three articles' findings and the studies from which they are drawn; (2) synthesise and interpret their findings as a whole as per the current state of the field; (3) inform future lines of inquiry; and, finally, (4) draw out the current work's import for developmental and educational theory and praxis.

Table 4.1

Summary of the Three Contributions

Context of Analysis, Value-related Orientation, Equality-related Influences	Research Aims	Methodology and Structural Analysis
Article 1. Within-family cross-lagged study of traditional versus egalitarian gender role orientation (GRO) socialization in adolescence considering macro-level variables (parental workplace autonomy, socioeconomic status).	Determine adolescents' intrafamilial GRO development considering parenting behaviours and macro-level factors over time.	Structural equation modelling of cross-and same-gender dyadic cross-lagged associations of GRO (attitudinal parameter) and gender-specific parenting (GSP) (behavioural parameter) and macro-level variables.
Article 2. International and cultural study of siblings and families in adolescence considering core value orientations (e.g., individualism-collectivism, independence-interdependence, Gemeinschaft vs. Gesellschaft (Greenfield, 2009)), human development, and social change.	Determine how socio-cultural change in value orientations influences the adolescent sibling relationship and families within and across ecologies.	Socio-historical, cultural review of theoretical literature, empirical findings, and research project registry on social values change and human development and their bearing on the adolescent sibling relationship.
Article 3. Cross-cultural study of adolescents' goal orientations (mastery, performance, social) and perceived school climate (democratic input into decision-making versus harsh authoritarian dimensions).	Determine patterns of relationships between students' motivational orientations and perceived autonomy vs. control in school considering culture and gender influences.	Multiple-indicator multiple-group analyses of the patterns of associations between goal orientation and school climate through 1) cultural models and 2) cultural models factoring in gender.

EMPIRICAL SECTION

Chapter 5: Article 1. An Intrafamilial Systems Developmental Context

The following study was published as:

Hess, M., Ittel, A., & Sisler, A. (2014). Gender-specific macro- and micro-level processes in the transmission of gender role orientation in adolescence: The role of fathers. *European Journal of Developmental Psychology*, 11(2), 211-226. doi: 10.1080/17405629.2013.879055

This is an Accepted Manuscript of an article published by Taylor & Francis in *European Journal of Developmental Psychology* on 24/01/2014, available online: <http://www.tandfonline.com/10.1080/17405629.2013.879055>.

Abstract

Family represents a primary environment for the development and transmission of gender role orientation (GRO) in adolescence. Nonetheless, longitudinal approaches delineating the separate influences of fathers and mothers, including all possible same- and cross-sex parent–child dyads within one family are lacking. This article elucidates the process of adolescent gender role socialization in 244 German families (father, mother, son and daughter) utilizing a longitudinal design (two measurement points over 5 years). Direct transmission paths of GRO and gender-specific parenting (GSP) as a mediator were analysed focusing on fathers' contributions. In addition, the impact of parental workplace autonomy and socio-economic status on intrafamilial socialization of GRO was examined. Results indicate that fathers and mothers play at least an equally important role in the transmission of gender role beliefs. A mediating effect of GSP was only evident when considering father – child dyads. Based on

social cognitive and developmental systems approaches, the findings are discussed considering adolescents embedded within the family context.

5.1 Current State of the Research

Understanding how an individual's gender role orientation (GRO) is formed within a family aids in shedding light on future social adjustment and development (Davis & Greenstein, 2009). In this study, we target GRO which reflects the level of agreement with cultural expectations concerning gender-related behaviour and the distribution of labour between the sexes (Galambos, 2004). Despite the growing influence by peers, teachers and the media (Martin, et al., 1990), the family continues to be an important environment in the formation and transmission of GRO during adolescence (Carlson & Knoester, 2011).

Nevertheless, longitudinal studies illuminating the gender-specific influence of mothers and fathers on their adolescent offspring in a within-family design, thus appraising the family as a whole unit, are lacking. This article puts forth a differentiated model of GRO development by considering potential influencing factors based on two ecological levels of family socialization. As most studies have focused on maternal contributions, this study aims to elucidate paternal influence in the process of GRO formation (Davis & Wills, 2010).

5.2 Gender Role Transmission Within Families

Parents' attitudes and behaviours concerning gender are precursors in children's gender development (Ruble, Martin, & Berenbaum, 2006), and GRO of parents and their offspring are often linked (e.g., Tenenbaum & Leaper, 2002). Relating a developmental systems approach highlighting the socio-environmental context and emphasizing the transactional nature of the person-environment interrelation to the transmission of GRO (Lerner, et al., 2002) implies that adolescents' bring in their

individual-level attributes to the transmission process and react differentially to parental behaviour (Scheithauer et al., 2009). In addition, from a social cognitive and learning perspective, parental influence may be exerted through modelling processes (Bussey & Bandura, 1999) and direct parenting practices (McHale, Crouter, & Whiteman, 2003). In the present study, modeling processes are reflected by similarities in GRO between parents and their offspring (attitudinal parameter) and parenting practices through adolescents' gender-specific parenting (GSP) experiences (behavioural parameter).

A traditional GRO reflects a gendered orientation towards the distribution of labour, whereby women do housework and provide childcare and men are responsible for providing economic resources. This labour distribution is considered more favourable for men since social reputation is tied to occupational status. Indeed, male privilege and dominance intrinsic to patriarchal systems continue to be reflected in more traditional gender role attitudes by males than by females (Burt & Scott, 2002; Zuo & Tang, 2000). On a societal level, these beliefs are challenged by gender mainstreaming and equality efforts in professional settings, and further reflected in mothers' labour force participation and the growing amount of time fathers devote to childcare (Bianchi & Milkie, 2010).

From a developmental systems perspective, it is tenable that daughters—seen as active agents of their development—will be especially prone to challenging traditional GRO and therefore hold the lowest level of traditional GRO, and sons will exhibit the most traditional GRO in an attempt to maintain their status advantage (Sidanius & Pratto, 2001). In accordance with gender intensification theory, which holds that the tendency to adhere to traditional gender roles intensifies in adolescence (Priess, Lindberg, & Hyde, 2009), we postulate that boys' traditional GRO will be more exaggerated than girls (e.g., Jackson & Tein, 1998).

Referring to assumptions proposed by the social cognitive theory of gender development (Bussey & Bandura, 1999) and the sex role model (Acock & Bengtson,

1978), we hypothesize that parental GRO is reflected in parents' behaviour observed by their children. In addition, when both parents are present, children tend to use the same-sex parent as the focal model (Bussey & Bandura, 1999). Therefore, we speculate that same-sex intergenerational similarities in GRO are greater than cross-sex similarities.

Parents' differential treatment of boys and girls when rewarding behaviour assists in shaping children's gendered behaviour and attitudes (Mischel & Liebert, 1966). This gender-specific parenting (GSP) is believed to reflect parents' underpinning GRO. While egalitarian mothers tend to have less traditional gender-role stereotyped offspring (Myers & Booth, 2002), the relative impact of parental modeling, practices, and gendered ideology is difficult to disentangle (Davis & Wills, 2010). Studies on GSP have found that parents more often foster independence in boys, whereas girls are raised to be dependent (Leaper & Friedman, 2007). Previous literature equivocates, however, on the degree to which gender differences operate in other parent-child interactions considering the whole family system (e.g., Lytton & Romney, 1991). Disparities were cited in the reinforcement of gender-typed activities but were absent in other realms. Moreover, fathers were instrumental in gender socialization with sons in particular, although, again, between-family findings could not account for interactive value transmission (Lytton & Romney, 1991).

One conceptual and methodological shortcoming in addressing intrafamilial transmission of GRO regards the confounding of between and within effects. Only the comparison of fathers, mothers and offspring of different sexes simultaneously within one family allows for reliable gender-specific intrafamilial analyses (McHale, et al., 2003). In order to illuminate gender-specific processes in transmission and possible sex variances in GRO similarities, we incorporated different micro- (parenting style and GRO congruence) and macro-level (parental workplace) factors into our within family analysis.

5.2.1 Micro-Level Factors in GRO Transmission

Ecological theory (Bronfenbrenner, 1979) privileges multiple interacting systems regarding influences on the nested individuals' attitudes and behaviour. Within the most proximal micro-system, an individual's daily life setting (e.g., home), roles, relationships and daily activities are deemed to be critical elements in gender development (Stevenson, 1991). A number of studies detected significant correlations in the mother–daughter relationship concerning measures of attitudes regarding the role of females in society, GRO and over-arching gender role beliefs (e.g., Ex & Janssens, 1998). These findings were interpreted such that same sex homogeneity was particularly salient in the transmission of GRO between parents and children as predicted by social learning theory (Bussey & Bandura, 1999).

A more complex picture emerges when appraising the few studies which included parent–child dyads other than mother–daughter pairs. Thornton, Alwin, and Camburn (1983) found similar associations of GRO between mothers and children of both sexes over time. Other cross-sectional studies have found significant correlations in all possible dyads even detecting a stronger father–child than mother–child GRO link (Kulik, 2002; O'Bryan et al., 2004). Burt and Scott (2002) further concluded that same-sex associations of GRO are generally not stronger than cross-sex associations. A meta-analysis conducted by Fishbein (2002) highlighted the significant role of mothers and the important—albeit often neglected—contribution of fathers in inter-generational transmission.

Targeting a unique sample through the use of an apposite whole family design, the present research addressed two questions at the micro-level concerning the role of GRO and GSP. First, we investigated whether sons and daughters experience differential parenting within a family system and, additionally, if GSP mediates the direct relation between parent and offspring GRO concordance rates considering select macro-level variables.

5.2.2 Macro-Level Factors in GRO Transmission

Macro-level factors reflect processes that stem from extra-familial contexts, such as workplace conditions and social economic status (Bianchi & Milkie, 2010). With regard to power-control theory developed by Hagan, Simpson, and Gillis (1987), we hypothesize that working conditions, namely the degree of parental workplace autonomy (WPA), rather than occupation itself contribute to the interfamilial transmission of GRO. In families where fathers hold autonomous and dominant positions at the workplace, traditional gender roles and GSP will be maintained, whereas in families where mothers experience autonomous workplace conditions traditional GRO will likely be challenged (Cleveland, Stockdale, Murphy, & Gutek, 2000).

Earlier studies offer evidence that higher levels of parental education and income correspond to more egalitarian attitudes regarding gender role attitudes (e.g., Kulik, 2002). We therefore expected that high familial socio-economic status (SES) [combining educational level and family income, Mueller and Parcel (1981)] corresponds with low overall adherence to traditional GRO.

It is worth bearing in mind that the directionality of socio-contextual factors and the individual-level factor of gender ideology is as of yet inconclusive. Those individuals with egalitarian GRO may be more likely to occupy positions in egalitarian environments which may then interact in a mutually supportive process. Evidence pointing in this direction was provided by Sidanius and Pratto (2001) with the related construct of social dominance orientation. We do not speculate at length regarding the directionality of GRO and occupational choice gleaned from longitudinal analyses as it is outside the scope of this report, although we do acknowledge its future importance.

Figure 5.1 provides a graphical summary of the hypotheses of the present study. On the macro-level, it is expected that high SES is associated with more egalitarian parental GRO. It is assumed that fathers' high WPA corresponds with

more traditional GRO particularly when mothers' WPA is low. Mothers' high WPA is believed to correspond with more egalitarian GRO independent of fathers' degree of WPA. On the micro-level, GSP is expected to mediate the relation between parental and offspring GRO. Moreover, parental GRO is proposed to be transmitted to adolescent children in a direct manner, with same-sex transmission paths expected to be stronger than cross-sex paths.

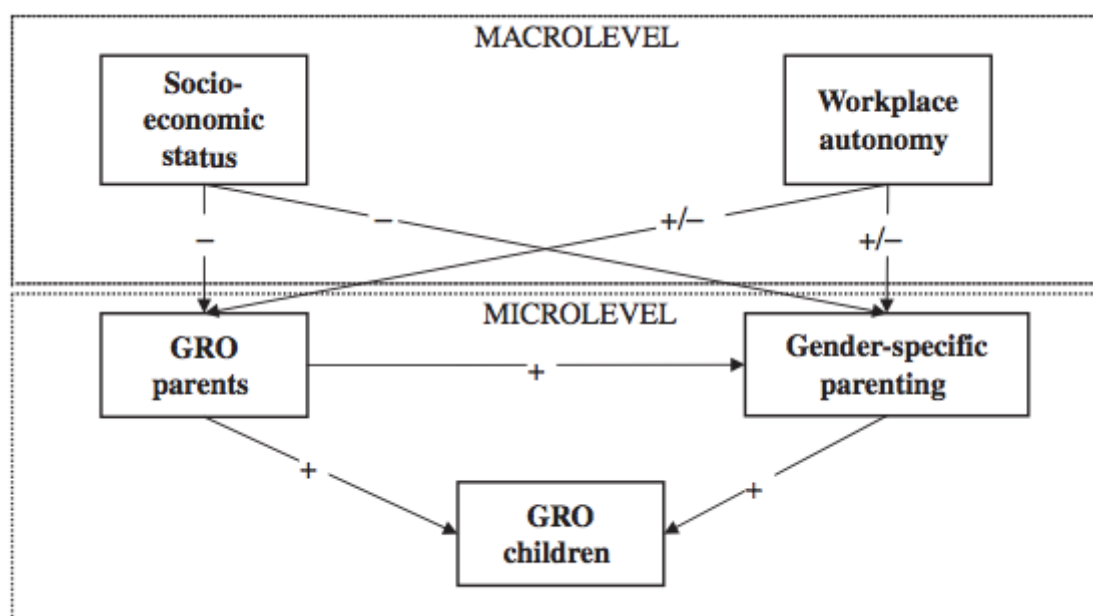


Figure 5.1 Research model describing potential influences on the parent-child transmission of traditional GRO

Notes: A plus sign indicates an enhancing influence and a minus sign indicates a diminishing effect. The combined plus and minus signs divided by a slash reflect gender-specific assumptions concerning the influence of workplace authority (minus signs hold for mothers and plus signs hold for fathers). GRO indicates traditional gender role orientation.

5.3 Methodology

5.3.1 Sample

Data stem from a longitudinal questionnaire study conducted in Berlin, Germany with two measurement points (1999, 2004). Only families consisting of a father, a mother³ and an adolescent son and daughter qualified to participate in order to examine distinct dyadic gender combinations. At the first measurement point, 504 complete family tetrads were included. Five years later, 244 families were recruited (48.4%). The high dropout rate is likely due to the long time span between measurements (5 years), low direct participant contact due to the postal survey design, and only families who provided full data for all four members were considered for the final sample. We therefore consider dropout as missing at random (Rubin, 1976). Data were only available for the longitudinal sample, so comparison between those who remained in the sample and those who dropped out after time 1 was not possible.

The present sample had a mean age of 14.12 years [standard deviation (*SD*) = 2.40] for sons and 14.37 years (*SD* = 2.14) for daughters at the first measurement point. Age of parents was not measured in the survey, and 12 children (4.5%) lived with at least one stepparent. As the number of stepparents was rather low in our sample, no further analyses including this variable were conducted. SES was rather homogenous. Parents were generally highly educated with an average of 11.4 years of education for mothers and 11.52 years for fathers, and few parents completed less than 10 years of school (2.6% of mothers and 5.8% of fathers). Most fathers (92.0%) and mothers (77.9%) were employed, and 69.3% of the families had no additional children other than the son and the daughter who participated in the study. The remaining families had three to five children with three children for 21.9% of families, four children for 4.2% and five children for 3.1% of families.

³ Participation criteria required the father and mother to be living with the participating adolescents but did not have to be their biological parent.

5.3.2 Procedure

Data were gathered from 58 schools in Berlin, Germany. A preliminary screening was conducted to select grade 7–10 adolescents who fulfilled the participatory requirements (i.e., living with both parents and with one opposite-sex adolescent sibling in the same household). Following active parental consent for participation in the study of the selected adolescents, trained researchers administered the standardised questionnaire to the children. Parents and siblings were asked to send their questionnaire in a pre-stamped envelope. For the secondary data collection, families were once again contacted through the participating adolescent at school or—when participants had left the school—via mail. A lottery for minor incentives was held among the participants.

5.3.3 Measures

Dependent / Moderator Variables.

Traditional GRO. We used four items from a German version of a scale (Krampen, 1983) concerning traditional gender-typed expectations of labour participation and power division. All four family members indicated the extent to which they agreed with statements, such as “Girls should learn women’s jobs” on a scale from 1 (“*strong disagreement*”) to 5 (“*strong agreement*”). High mean scores on this scale designate strong agreement with traditional gender roles. Parents’ GRO at the first time point and children’s GRO at the second time point were included in the analysis. Cronbach’s α for this scale indicated sufficient internal consistency (α mothers = .67; α fathers = .74; α sons = .81; α daughters = .61).

Independent Micro-Level Variables.

GSP. At the second time point, a 4-item subscale measuring GSP was included (Hoffman & Kloska, 1995). Items were modified such that children answered questions about their mother’s and father’s parenting separately. Sample

items include “For my mother/father it is/was more important to raise a son to be strong and independent than to raise a daughter that way” and “My mother/father saw nothing wrong with giving a boy a doll to play with.” Agreement with the statements was measured on a five-point Likert scale ranging from 1 (“*strong disagreement*”) to 5 (“*strong agreement*”).

Due to high correlations of ratings provided by one adolescent ($r_{\text{son}} = .91$ and $r_{\text{daughter}} = .85$, respectively), ratings were summarized into one index of parental GSP per adolescent. Despite Cronbach’s alphas ranging from .56 to .69, these scales were included due to the study’s broad operationalization of GSP; GSP represents a heterogeneous construct which often goes along with relatively low reliability ratings (Streiner, 2003).

Independent Macro-Level Variables.

WPA. Both parents’ WPA was assessed through six questions based on a scale devised by Hagan, Boehnke, and Merkens (2004). Sample items included, “Do you give advice to other co-workers?” or “Do you carry out instructions from other co-workers?” in a dichotomous answer format (1 = “*no*”; 2 = “*yes*”). After necessary re-coding, a mean sum score was then calculated with high scores indicating high levels of WPA. For the present paper, parental ratings of time 1 are included in the analysis.

SES. Familial SES was measured at time 1 by averaging standardized mothers’ and fathers’ ratings of educational level (in years) and family income per month (in Euros).

Table 5.1

Study Descriptives

	Male participants		Female participants		
Variable	M	SD	M	SD	t, d
Micro-level					
GRO-C (1-5)	2.08	0.88	1.40	0.49	11.87***, .95
GRO-P (1-5)	1.70	0.75	1.47	0.57	4.58***, .35
GSP (1-5)	1.74	0.30	1.51	0.58	4.80***, .50
Macro-level					
WPA (0-1)	0.51	0.30	0.38	0.26	5.41***, .46
SES (1-7)	4.59	1.27	4.59	1.27	-

Notes: SES = socio-economic status; GSP = gender-specific parenting; GRO = traditional gender role orientation; WPA = workplace autonomy; C = child; P = parent; *d* = Cohen's *d* effect size. *** $p < .001$.

5.4 Results

Table 5.1 provides an overview of relevant descriptive statistics. Male participants (sons and fathers) display higher traditional GRO than their female counterparts. In addition, sons perceive more gender-specific child rearing by their parents than daughters. Fathers indicated higher WPA than mothers.

Bivariate correlations between all study variables were conducted (Table 5.2) and missing data were replaced with maximum-likelihood estimations. GROs of all family members were positively correlated. In addition, no significant differences concerning the bivariate correlations between the generations or between the sexes were found (applying Fisher's z -values).

In examination of the relation between GROs of parents and the ratings of GSP as experienced by adolescents, results illustrate that only fathers' GRO was associated with GSP practices for both sons and daughters ($r_{\text{son}} = .32, p < .001$ and $r_{\text{daughter}} = .38, p < .001$). For mothers, no significant correlation was detected ($r_{\text{son}} = .13, ns$ and $r_{\text{daughter}} = .13, ns$). We attend to this unexpected finding in the discussion section. Additional variables not depicted in Table 5.2, such as adolescents' age and total number of siblings in the family did not correlate significantly with intrafamilial GRO or parenting practices, therefore they were not considered in further analyses. No significant relationships between the WPA of mothers and fathers or the micro-level variables were identified. The link between SES, representing another macro-level factor, and the micro-level factors of GRO and GSP confirmed initial expectations. Members of families with a high SES showed more egalitarian GRO and less GSP than members of families with lower SES status.

To test the associations between macro-level and micro-level factors in the transmission of GRO within families on a multivariate level, we conducted several structural equation models (SEM) using AMOS 5 software. Before running the overall structural models, we separately tested the goodness-of-fit for the measurement models of GRO and GSP. These analyses revealed sufficient fitting indices for all measurement models with root mean square error of approximation (RMSEA) values between .00 and .08 and comparative fit indices (CFI) between 1.00 and .97 (Bentler, 1990).

Table 5.2

Bivariate Correlations of the Study Variables (Correlations of the Measurement Models, Maximum-Likelihood Estimation, N = 244)

	01.	02.	03.	04.	05.	06.	07.	08.
<i>Microlevel</i>								
01. GRO-S (2)	–							
02. GRO-D (2)	.41***	–						
03. GRO-F (1)	.54***	.36***	–					
04. GRO-M (1)	.34***	.44***	.41***	–				
05. GSP-S (2)	.75***	.04 ns	.32***	.13 ns	–			
06. GSP-D (2)	.26**	.41***	.38***	.13 ns	.38***	–		
<i>Macrolevel</i>								
07. WPA-F (1)	.06 ns	–.04 ns	.05 ns	.16 ⁺	.10 ns	.00 ns	–	
08. WPA-M (1)	.00 ns	–.01 ns	.03 ns	.02 ns	–.05 ns	.00 ns	.21**	–
09. SES (1)	–.25**	–.21*	–.16*	–.27**	–.44***	–.26**	.23**	.23**

Notes: GRO, traditional gender role orientation; GSP, gender-specific parenting; SES, socio-economic status; WPA, workplace autonomy; M, mother; F, father; S, son; D, daughter; time point in parentheses; *ns*, not significant. ⁺ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

In the initial SEM, similarity between parental GRO at time 1 and their children's GRO at time 2 was examined. As seen in Figure 5.2, results revealed a strong same-sex connection for father–son and mother–daughter dyads. Moreover, data revealed a significant relation between fathers' and daughters' GRO, whereas the other cross-sex path between mothers and sons was not significant. However, further comparison between a model of cross-sex paths which were constrained to be equal and a model with no restrictions revealed no significant difference ($X^2 [1] = .41, p = .52$). That is, although the significance levels between the cross-sex paths differed, they do not differ substantially.

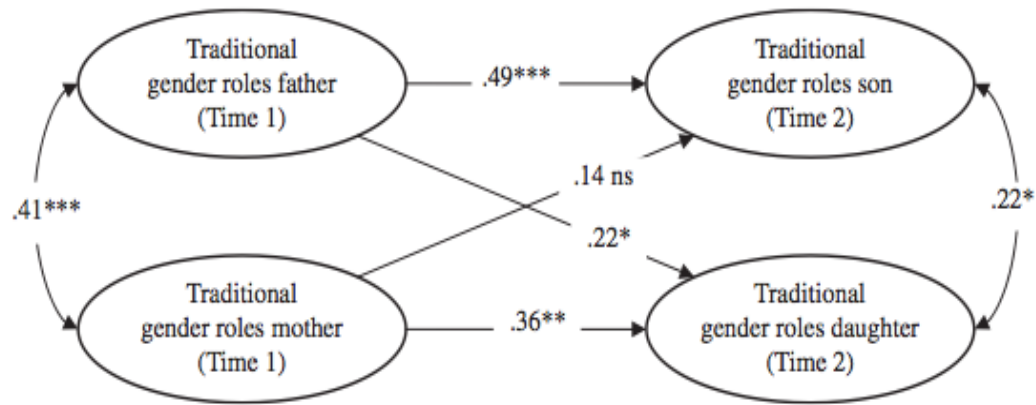


Figure 5.2 Parent – child transmission across a 4-year period ($X^2[98] = 119.77$; CFI = .98; RMSEA = .03; standardized coefficients, maximum-likelihood-estimation; *ns*, not significant, $*p < .05$; $**p < .01$, $***p < .001$).

To test the mediating role of GSP, we compared different nested models with a full model, i.e., initially a model with no parameter restrictions was constructed after which several parameters within this model were restricted based on theoretical assumptions. These restricted models are termed “nested” because they are all based on the unrestricted model. In a second step, we compared Chi-square, X^2 statistics of these nested models with the unrestricted model (e.g., Frazier, Tix, & Barron, 2004). The present study compared four models. In the full mediation model, none of the model parameters were restricted. In the no-mediation model, we set the paths between the GRO of parents and adolescents and the GSP variable to a value of zero, assuming that there was no effect. This was done for mothers and fathers separately and for both parents simultaneously. If there are no significant differences between the models or if the models that include the forced restrictions reveal a better fit than the unrestricted model, it can be assumed that there is no mediation effect of GSP (see Table 5.3).

Table 5.3

Results of Model Comparisons Testing For Mediation of the Parent-Child Link in GROs Through GSP

<i>Model</i>	$\chi^2(df)$	X^2/df	<i>CFI</i>	<i>RMSEA</i>	$\Delta\chi^2(df)$
Full mediation model	327.55(239)	1.37	.929	.039	
No mediation model	421.18(245)	1.72	.859	.054	93.623(6)***
Only mother mediation	350.29(241)	1.45	.913	.043	22.735(2)***
Only father mediation	327.56(241)	1.36	.931	.038	.001(2) ns

Notes: ns, not significant. *** $p < .001$.

Of the four models, the one with the best fit restricted both paths from mothers' GRO to the ratings of GSP to a value of zero, and the same paths for the father were left unrestricted ($X^2 [241] = 327.55$; $CFI = .931$; $RMSEA = .038$). The GRO of mothers did not influence the degree of GSP, whereas a strong link between fathers' GRO and their GSP was detected.

The final mediation model with standardized path coefficients is shown below (see Figure 5.3). The direct paths between paternal and adolescent GRO are reduced compared to the previous model without mediating variables (father-son from $\beta = .49$ to $\beta = .25$; father-daughter from $\beta = .22$ to $\beta = .09$). The father-son path remained significant, which might suggest a partial mediation effect of GSP on the transmission of GRO. Second, only paternal GRO had an influence on the rating of the GSP of boys and girls ($\beta_{\text{father/son}} = .36$; $\beta_{\text{father/daughter}} = .38$). Furthermore, the ratings of GSP were related to the GRO of adolescent boys and girls, yet this influence was stronger for boys than for girls ($\beta_{\text{son}} = .64$; $\beta_{\text{daughter}} = .33$). Additional Sobel-tests (Baron & Kenny, 1986) to check for significant mediation of GSP on GRO transmission in the different parent-child combinations (father/son, father/daughter, mother/son, mother/daughter) confirmed a mediation effect for both father-child dyads ($z_{\text{father/son}} = 2.70, p < .01$; $z_{\text{father/daughter}} = 2.48, p < .05$) but not for the mother-child dyads ($z_{\text{mother/son}} = 1.24, p = .21$; $z_{\text{mother/daughter}} = 1.40, p = .16$).

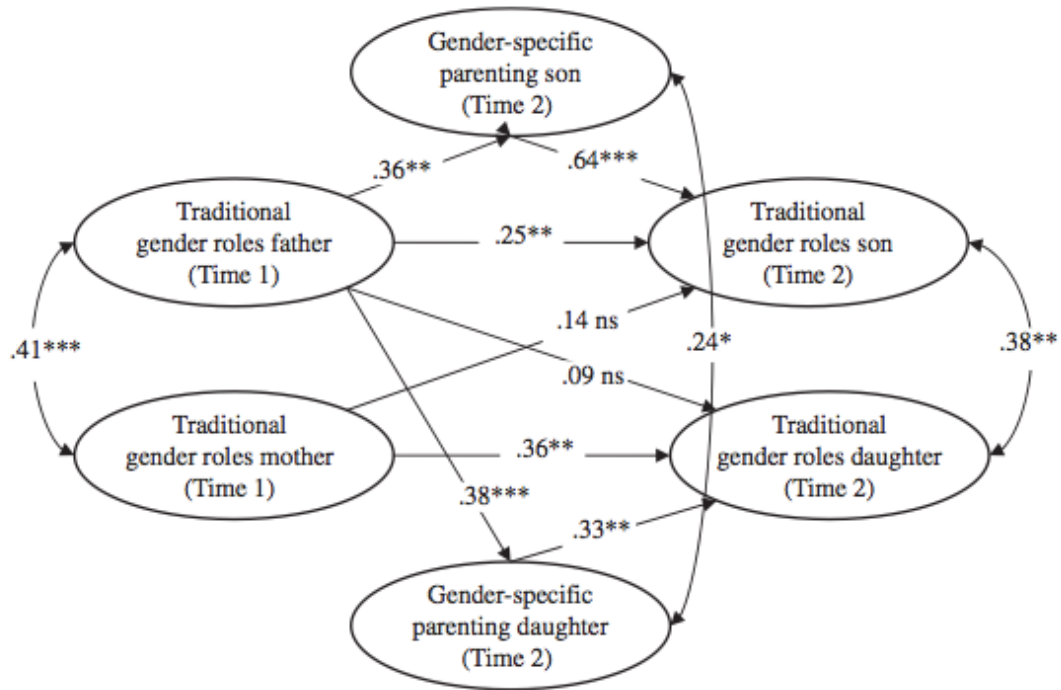


Figure 5.3 The mediating role of GSP in explaining parent – child transmission ($X^2[241] = 327.55$; CFI = .931; RMSEA = .038; standardized coefficients, maximum-likelihood-estimation; ns, not significant. * $p < .05$; ** $p < .01$, *** $p < .001$).

In a final step, the macro-level variables (i.e., WPA and SES) were incorporated into the model. There were no significant relationships between parental WPA and any of the micro-level variables from the bivariate analyses; WPA was only related to the SES of the families. In addition, due to the results of the preliminary SEM, the paths from mother GRO to the child ratings of GSP were eliminated (see Figure 5.4). Higher SES corresponded with lower traditional GRO and with lower levels of GSP.

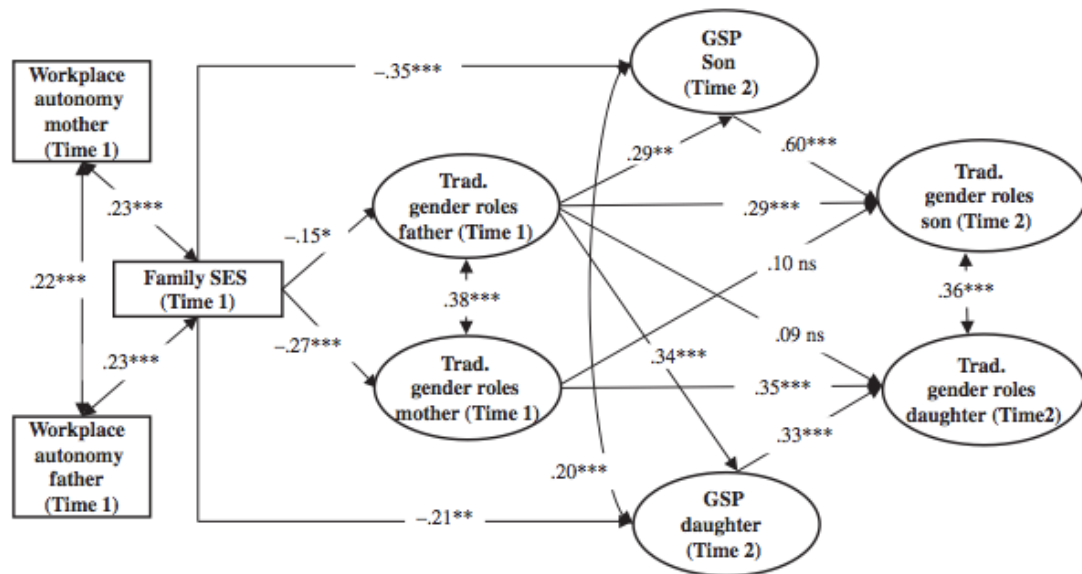


Figure 5.4 The role of macro-level factors (WPA and SES) on the micro-level processes of parent– child transmission of GRO ($X^2[309] = 411.9$, RMSEA = .04, CFI = .93; standardized coefficients, maximum-likelihood-estimation. ⁺ $p < .10$, * $p < .05$; ** $p < .01$, *** $p < .001$).

5.5 Discussion

Based on a within-family design, the first aim of the present study was to clarify gender differences in parent–child transmission of GRO. As expected from social cognitive theory, our results revealed that same-sex GRO similarities were stronger than cross-sex similarities. Nevertheless, adolescents and girls in particular seem to identify to some degree with their cross-sex parent’s gender role beliefs. This confirms previous findings emphasizing the role of fathers in the intrafamilial transmission of gender stereotypes (O’Bryan et al., 2004). Another viable explanation privileging the transactional nature of family systems contends that fathers with daughters become more egalitarian over time (Shafer & Malhotra, 2011). Moreover, egalitarian fathers may increasingly influence ideology construction through participation in child rearing, and especially value daughters. Additionally, we found that sons held more traditional GRO than any other family member, corroborating our

expectation drawing on gender intensification theory (Priess et al., 2009). That is, within the realm of changing societal norms concerning gendered distribution of labour, boys may hold onto traditional orientations in order to secure their status advantage, whereas daughters challenge traditional gender roles (Scott, Dex, & Joshi, 2008).

The second objective was to depict factors influencing the role of mothers and fathers simultaneously in the transference of gender roles. We found strong similarities in ratings of children concerning the degree of GSP of both parents, yet sons perceive parenting as more gender-specific than daughters. The data depicted a mediating effect of GSP on GRO transmission only in father–child dyads. In the father–son dyad, the direct paths between parental and adolescent GRO remained significant indicating an association of intergenerational GRO transmission over and above the influence of GSP; fathers directly and indirectly socialize their offspring according to their own GRO.

Our results further indicate that maternal GRO, in contrast to paternal GRO, is independent of adolescent ratings of GSP. We propose two mechanisms: first, we speculate that the degree to which the GRO (as a rating of normative aspects of gender roles in society) is internalized into the gendered concept of the self and functions as a guideline for behaviour may vary across gender. That is, fathers may feel more responsible than mothers in the express communication of their values (egalitarian or traditional) to their children (O’Bryan et al., 2004). Additional exploratory analysis of the present data revealed that ratings of GRO by fathers were more strongly related to their gender identity (Wilson & Liu, 2003) than ratings provided by mothers. However, these preliminary results require further examination.

A second explication for the missing link between mothers’ GRO and their GSP may hinge on mothers’ low GSP ratings. Fathers also rated fairly low but nonetheless reared their children in a more gender-specific manner than mothers. It should be noted that GSP standard deviations were equal for mothers and fathers,

eliminating inequality of variance as a potential confound. Mothers likely model an egalitarian GRO within the present sample through their employment such that GSP is not as salient in GRO transmission. In addition, longitudinal studies have found that mothers who contribute to the total family income become more egalitarian (Zuo & Tang, 2000).

SEM analyses revealed that sons are more susceptible to the incorporation of GSP practices into their gender role beliefs than daughters. When viewed from the varied privileges and power distributions that gender-specific socialization instils in sons and daughters, the traditional gendered power division and accompanying GRO benefits males and may then be more readily assimilated by boys. Thus, sons might agree with GSP and fit these parenting experiences into their individual set of roles, norms, and values. In sum, the results of our micro-level analyses highlight the role of the father in the intrafamilial transmission of gender roles in adolescence and point to the critical need to consider male family members in questions of gender-specific socialization.

Concerning the influence of macro-level factors in the transmission of gender-roles within families, WPA was not associated with the degree of adherence to traditional GRO. This result may be due in part to the fact that there was relatively little variance in WPA and SES. Nevertheless we found that higher SES corresponded with more egalitarian GRO. It would be valuable to separate the different aspects of SES in further study to assess which component (education or income) has a stronger influence on GRO.

The present research bears some limitations. Ratings of GSP were assessed only at the last measurement point, so the analysis of the influence of GSP on adolescent GRO remained cross-sectional. To address the issue of social desirability inherent in using attitudinal measures, forthcoming studies should include behaviour-oriented measures, e.g., gender-specific day-to-day activities (McHale, Crouter, & Tucker, 1999). Notably, our sample is fairly homogenous, and thus the majority of the

variables possessed relatively low levels of variance. On the micro-level, family structure factors such as step-parent status, family climate or parent–child relationship quality should be considered as should differentiated aspects of workplace structure and work–life balance beyond WPA (e.g., time spent with children and at work, separation of parental income or profession gender-typed characteristics).

That notwithstanding, this research offers insights into the processes of GRO transmission beyond the mere similarity in attitudes between parents and children. The results stress the importance of considering the critical role of fathers and gender-specific transmission processes in studies on gender socialization in adolescence. Future inquiry would do well to explore additional variables and their interrelationships to advance understanding of the ideological connections between parents and their daughters and sons in interconnected family systems.

Chapter 6: Article 2. Cultural and International Research on Siblings in Adolescence

The following article was published as a chapter in the book:

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6.1 Cultural and International Research on Siblings in Adolescence

This chapter provides a brief outline of cultural views of development during adolescence, cultural and developmental systems theory approaches, and the foregoing's application to the close relationship between siblings. Throughout, the contribution interweaves significant cultural values orientation issues – both timely and enduring – that stress the importance of culturally-specific understanding. Empirical and theoretical work on adolescent sibling relationships gleaned from a socio-cultural, ecological perspective serves to illuminate future directions and further international research.

6.2 Cultural Beings and Sensitive Periods in Cultural Acquisition

Children are innate social creatures, hard-wired to acquire, create, and channel culture (Greenfield, 1997; Trevarthen, 1980). Cultural acquisition and the attainment of other developmentally important faculties occur most readily during so-called sensitive periods, in which the maturing individual is particularly adept at gaining cultural knowledge and skill sets. The inter-related, mutually supportive meanings of culture, on the one hand, and language, a core component of being socialized into a culture,

on the other, both transpire during these sensitive periods. Sensitive periods include the early stage acquisition of language and culture (Cheung, Chudek, & Heine, 2011; Johnson & Newport, 1989; Kuhl, 2010). Language can be thought to be the communication component of culture and is paramount in ontogenetic processes in childhood and adolescence (e.g. Tomasello, et al., 1993). As Rita Mae Brown says, “Language is the road map of a culture. It tells you where its people come from and where they are going”.

Research suggests that, like learning a language, sensitive periods for cultural acquisition roughly map onto one of the most important developmental openings: adolescence (Blakemore & Mills, 2014). Sensitive periods are windows of opportunity and times of prolific development. The sensitive stage preceding adolescence and its resolution holds disproportional weight and implications for later processes, and cultural differences appear to increase with age (e.g. Miller, 1984). At the extreme, those who do not acquire language abilities before or around the onset of puberty may never be able to fully develop this critical capacity, as in cases of extreme neglect and isolation (Grimshaw, Adelstein, Bryden, & MacKinnon, 1998; Newton, 2002), although there has been documented evidence to the contrary (see the case of Genie and her development from young adolescence onwards (e.g., Fromkin, Krashen, Curtiss, Rigler, & Rigler, 1974)).

Conversely, multi-cultural people exposed to different cultural worldviews in their formative years and third culture kids (TCKs) who spend a portion of pre-adulthood in more than one culture may be able to navigate multiple cultural worlds, switching and blending cultural schemas often with relative ease (e.g. Jensen, 2003; Heine & Hamamura, 2007; Tsai, Ying, & Lee, 2000; Wong & Hong, 2005). Multi-cultural individuals can illustrate ‘adolescence as cultural gate holder’ whereby exposure to another language or culture, before the end of adolescence, for instance, may enable individuals with integrated cultural identities to more readily traverse between cultural contexts (e.g. Berry, 1997; Jensen, 2003; Leung, Maddux, Galinsky,

& Chiu, 2008; Maddux & Galinsky, 2009). With respect to sibling and other family relationships, positive familial bonds further promote socio-cultural adaptation via bolstered self-efficacy (Ittel & Sisler, 2012).

On a more general level, added support for the case of adolescence's crucial role in cultural development includes evidence that individuals who learn a second language after puberty often maintain an accent from their mother tongue, and those who learn a second culture might likewise maintain a holdover of certain cultural aspects (e.g. Cheung et al., 2011; McCauley & Henrich, 2006; Minoura, 1992; Tsai et al., 2000). Different biologically-based maturational stage factors in adolescence drive these and other developmental processes. For instance, neurological correlates in maturing social cognition's mentalizing networks provide evidence for adolescents' navigation of complex social environments (Blakemore & Mills, 2014). In this way, neurobiological and socio-environmental interactions exert influence on both the course and content of cultural learning in adolescence such as cultural norms surrounding emotions and their expressions (Keller & Greenfield, 2000).

Given that adolescence is viewed as a prime period not only for cultural acquisition but also socio-emotional growth (Erikson, 1968), identity formation (Kroger, 2004, 2007; Marcia, 1966, 1980; Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993), and socio-political and ideology development (Duckitt, 2001; Merelman, 1972; Prewitt & Dawson, 1969) among other phenomena, it is important to understand the key role siblings play as prime socialization agents in both universal and culturally-specific socialization processes (e.g., Grusec & Hastings, 2007).

In referring back to social learning theory and Adlerian principles, those individuals held to be similar, of higher status, and who exhibit warmth within a relationship (e.g. parents, older siblings) are more likely to serve as models in the socialization process (Bandura, 1977; Whiteman, et al., 2011). Consequently, if mature individuals' (e.g. parents, older siblings, teachers, community elders) socio-culturally constructed behaviour represents a 'more established' end of culturally

specific developmental pathways, their exchanges and mutual interactions assist in socializing an adolescent into a given culture or cultures (Greenfield, 1994; Keller & Greenfield, 2000; Rogoff, 2003). By nature of the family composition and time spent with its members, the familial system and reciprocal sibling relationship can be considered a primary socialization influence for adolescents though cultural factors shape and magnify specific socialization processes' length and expression (e.g., Maynard, 2004; Nuckolls, 1993).

Although notions that socialization agents, mainly adults, particularly parents, and increasingly siblings actively transmit cultural knowledge including values and behaviours to children via instruction generally dominate the study of enculturation, background search turns up scant ethnographic evidence (Lancy, 2010). For instance, Bruner (1966) and Rogoff's (1981) scanning of reel upon reel of native's firsthand observation and filmed footage of the Maya, !Kung, and Netsilik, respectively, turned up a near-complete lack of 'instructed learning.' Lancy (2010, in press) builds a strong case for children's active role in cultural learning. Children are dynamic culture learners in and through play, interactions with peers, casual exchanges in the family setting such as those with similar-age siblings, and the practice of familial chores (Lancy, in press). From this perspective, cultural acquisition emerges less through purposeful instruction on the part of elders and more so from the characteristics, actions, and motivations of children themselves in their day-to-day environments (Goody, 2006). Social relational theory, a dialectical depiction of bidirectional processes in (parent-child) socialization, similarly sees children as active agents in acculturation and co-constructors of their internal cultural working models (e.g. Kuczynski & Parkin, 2007, 2009). Indeed, 'processes of contradiction, including conflict . . . are inherent within parent-child relationships' that are 'culturally embedded social relationships' and, importantly, 'set the stage for qualitative change' (Kuczynski, Navara, & Boiger, 2011, p. 174).

Unlike social relational theory, former models of top-down 'instructed

learning' and socialization further subordinate the role of children, younger siblings, and the sibling relationship in cultural acquisition (Edwards, et al., 2006; Kruger & Tomasello, 1996). This fits with the relative lack of attention paid to siblings across cultures and their involvement in different aspects of culture and its acquisition. More active constructions of children and adolescents' cultural agency are beneficial not only for framing enculturation through siblings but also guiding culture-specific knowledge of sibling relationships. To unpack the meaning of siblings within multiple contexts, we must understand universal and culturally detailed notions of adolescence and cultural influences in development. We therefore now turn to an exposition of contemporary cultural conceptions of the teenage years.

6.3 Adolescence and its Cultural Conceptions

Adolescence as a distinct period in the life course positioned between childhood and adulthood has existed for centuries in numerous societies (Schlegel & Barry, 1991). It appears the concept of adolescence is an existential universal, and thus, not a cultural invention, although both intra- and inter-cultural differences proliferate (Heine, 2011; Weisfeld, 1979). Modern conceptions of this period of transition – with its drawn-out preparation for adult life and institutional separation from it – map onto the rise of industrialism and the twentieth-century *Zeitgeist* (Arnett, 2004a). Ethnographic accounts of adolescence from 175 pre-industrialized societies stressed that while most societies perceive adolescence as demarcating the stage between childhood and adulthood through specific physiological changes, accompanying role requirements, activities, practices, and individual processes, the features housed within these expectations are temporally (Schoon & Silbereisen, 2009) and culturally variable (Arnett, 2010; Schlegel & Barry, 1991). For instance, the tendency for different cultures to associate adolescence with expectations for occasional violent behaviour was highly variable even in comparing similarly structured agrarian and subsistence-oriented societies (boys 13% and girls 3%, respectively). A further example includes

the difference in perceptions of developmental course and values for Greek- and Anglo-Australians, with Greek- Australians considering initiative and independent behaviours, personal maturity, and interpersonal sensitivity to be appropriate at a later age, but Anglo-Australians viewing the opposite pattern for respect, self-control, and unsupervised activities (Rosenthal & Bornholt, 1988). These findings indicate that expectations around individual development express cultural values in part.

6.3.1 Western Takes on Youth

Prevailing cultural conceptualizations of adolescence in the West, on the other hand, emphasize the perceived tumultuousness of this period of youth (Arnett, 1999). The ‘storm and stress’ view of adolescence depicts young individuals as a whirlwind of chaos that poses a risk to themselves and others (Arnett, 2004a, 2004b). Under Western interpretations, challenge and conflict are integral components of ‘growing up’ and ‘becoming an adult’ (Skoe & von der Lippe, 1998). Moreover, this trend towards increasing problematic behaviour and difficulty that riddles some youths’ experiences appears to be on the rise, at least in comparison to the first half of the century (Rutter & Smith, 1995), with greater likelihood of substance abuse, criminal activity, and parental divorce among the trying issues facing the adolescent. Most family and developmental research continues to adhere to the problem-based model, with few depictions of resilient adolescents and prosocial relations available – not to mention the sensationalistic media accounts of ‘troubled’ youth (Adorjan, 2010; Edwards et al., 2006; Welch, Price, & Yankey, 2002).

For young people who have greater role flexibility and opportunities than ever before, the aforementioned factors add to the uncertainty and complexities of growing up global. The dual impact of globalization and the ‘second demographic transition’ which incorporates declines in mortality and fertility in Western countries since the eighteenth century (Lesthaeghe, 2010) has vast repercussions for family formations and individual development. More and more, researchers take up matters related to

mass migration, the meeting of different cultures, and impacts on family members of different migration status (e.g. first generation versus second generation) in their study of acculturative influences, themselves necessary to address these demographic changes. For instance, Alonso-Arbiol, Abubakar, and Van de Vijver (2014) found both differences and commonalities in adolescent well-being considering parenting practices across migration and cultural backgrounds.

Some researchers have attributed these rapidly shifting influences and subsequent pressures on young people to the confluence of rising modernity, individualism, and related values in Western nations and their consequent spread across the world (Arnett, 1999, 2010; Dasen, 2000; Trommsdorff, 1995); and volatile markets and uncertainties in educational and vocational trajectories deepen the issue (Mills & Blossfeld, 2013). Furthermore, Hagan and colleagues contend that youth is itself a process of capitalization, with socialization into urbane, industrial market-based societies tied to the acquisition and accumulation of social, cultural, and economic forms of capital (Hagan et al., 2004). Through interactions with central socialization agents, including parents, teachers, and older siblings, adolescents gradually acquire various types of capital, while becoming more and more rooted into particular cultural contexts (Parsons & Bales, 1955).

Over and above the accumulation of various resources, mass-level societal shifts to market-based economic ideology arguably produce tangible change in values, orientations, and social relationships (Hadjar, 2004; Hadjar et al., 2008). Indeed, an extensive theoretical base expounding the social and cultural mechanisms of market-oriented societies and their maintenance preponderates in both classical and modern literature. Simmel (1900/1978), Weber (1920/1958), and MacPherson (1962) assent that modern industrial societies are organized around dictates of success in terms of “superior performance relative to others” and that this high level of competition is fundamentally linked to the logic of neo-liberal free-market capitalism (Hadjar, 2004). Competitive free-market value systems emphasize ‘rational’ relations *vis-à-vis*

cost-benefit operations, de-emotionalization, competition, maximization of wealth, self-interest, and self-love, thought to derive in large part from Calvinist ideology and the Protestant work ethic (see Lenski, 1961; McClelland, 1961; Tawney, 1926/1962). MacPherson (1962) labeled these mechanisms ‘possessive individualism’, wherein societies marked by inequality, competition, and isolation lead to the centrality of an individual’s striving for wealth and/or status that then impacts upon and permeates their social relationships. For adolescents, conflict and competition with siblings and peers over grades, toys, or other such status objects can be considered a natural component of being socialized into societies with such values and relational orientations (Hadjar, 2004; Hadjar et al., 2008).

The trend towards increasing modernization and individualization across the globe has implications for social bonds between family members. Market-minded societies are linked to the loosening of close familial and social ties in exchange for more negotiated forms of social interaction (e.g. fleeting exchanges in trade-based societies; Greenfield, 2009). As ecologies swing towards large-scale societal (Gesellschaft) values during the process of industrialization (Tönnies, 1887/1957 in Greenfield, 2009), family relationships as chief social capital resources are negatively impacted. In turn, families and their societal structuration influence the developing individual’s accrual of culturally specific knowledge, obligations, expectancies, responsibilities, norms, and consents in myriad and variable ways (Hagan et al., 2004).

In illustration, Rice (2001) linked mass industrialization and urbanization processes in post–Second World War Japan to a number of consequences for the family, echoing an overall transfer towards transitory social exchanges with strangers versus lifelong social relations with interdependent kin (Greenfield, 2009). We elaborate on the observed impact of cultural shifts regarding the sibling relationship in a forthcoming section on Greenfield’s theory of social change and human development.

Formalized education processes and their greater duration are additionally tied to socio-cultural and developmental change, as members of a society are prepared for integration into an increasingly diversified workforce (Arnett, 2004b). The resulting prolonged nature of adolescence and its postponed recognition of adult status, aggregated with decreased regard for tradition and family loyalties, often leads to adolescent anxiety and tension (Fleming, 1948). Within many modern educational systems, adolescents are tightly grouped around age, thereby increasingly serving as mutual socialization agents, for better or worse (Larson, et al., 2012). Concomitantly, parents and elders are frequently seen as authorities who must be resisted as youths grapple with the increased pressure to engage in the process of individuation, testing the precarious borders between parental authority and adolescent autonomy (Arnett, 1999). From this stance, the disturbances of Sturm and Drang (storm and stress) experienced in adolescence are logical by-products in the wider symptomatology of coming to age in contemporary individualistic post-industrialization contexts.

It would seem that the increased diversification of the workforce and the accompanying educational demands contribute to this lengthened social infancy and economic dependency (Arnett, 2004a). As Fleming (1948) notes, the form that the adolescent phase assumes is variable between and within cultures, although pressures towards greater diversity in education, work, and life as a whole in modern(-izing) industrialized and industrializing nations have recently come to bear on adolescent girls and boys more than ever before (Vuolo et al., 2012). Moreover, different developmental environments exhibit considerable variation in the amount of autonomy granted and claimed by adolescents; schools may demand more or less freedom and compliance than the family context, making boundary negotiation a persistent challenge for youth. Youths from a migrant background may understandably find these potentially disparate requirements particularly troublesome as host society and family expectations often conflict (e.g. Buriel & De Ment, 1997; Juang & Cookston, 2009; Liebkind & Kosonen, 1998). Jeffrey Jensen Arnett (2002) further contends that most individuals now possess both a local identity and a

bicultural identity associated to ‘the global culture’, adding to potential confusion particularly among non-Western world youth.

At the same time, many young people, whether migrant, multi-cultural, Majority world, or Western, are proving to be adept at combining certain aspects of their diverse contextual backgrounds into their identity, weaving together different values and orientations with resilient and adaptive effects (e.g., Jensen et al., 2011; Kagitcibasi, 2005, 2007, 2011, 2013; Park et al., 2014). Still, it may be that in certain contexts including the progressively complex cultural mix stemming from globalization processes (Jensen, 2003, 2012), this ever-negotiable acquiescence serves as a major contributor to the conflict and stress manifest in youths’ relationships (e.g. sibling quarrels) and personal lives (e.g., value negotiation in identity formation).

6.3.2 An Alternative Account of Adolescence

While depictions of troubled youth and related rivalry and conflict among siblings are rife in popular media and research in the West, its universality of presentation has been contested (Arnett, 1999; Larson et al., 2009). Margaret Mead (e.g. 1942, 1943) famously put forth an alternate cultural frame for this developmental phase. Mead contended that girls and boys of the Arapesh tribe do not present such individual-focused notions, and adolescence is consummated – often through a ceremony – by admission to the privileges of adult life. However, Mead’s approach and findings have been questioned by the likes of Freeman (1983) who holds that Mead’s ethnographic approach was marred by false reports from informants.

Yet, others argue that this pattern of earlier substantial inclusion and demands to make meaningful contributions to the social fabric of a community are typical for more subsistence-based societies with their reduced focus on leadership, competition, dominance, and private property, and therefore tend to equate adolescence less with instances of sibling rivalry and conflict and more with caregiving and cooperation

(Maynard, 2004; Mead & Wolfenstein, 1955; Nuckolls, 1993; Weisner, 1993; Zukow, 1989). Nsamenang (1999) explains how Eurocentric views of child development that accentuate individualism and cognitive competence might discount “cultures like the African that place primacy on interdependence and value cognition as a means to social development” (p. 160). Fundamental cultural differences in societal values, arrangements, and roles permeate daily family life and relationships and so impact development and socialization. As we shall see, adolescence holds factors both different and alike across cultures and so sways sibling relationships in a variable and variegated manner.

6.4 Adolescence, Changing Cultures, and Family Relationships

The experience and expectations of adolescence varies according to culture and have varied over time. Adolescents’ accounts and personal histories impact their personal development, and culture shapes their expectancies and attitudes towards their own and others’ maturation. Yet although puberty and its accompanying physiological changes are the underlying *universal* drivers of adolescent biological change (Bastiana Archibald, Graber, & Brooks-Gunn, 2003), past explanations from a Western interpretive lens for adolescent turmoil resided solely in hormonal shifts (Hall, 1916, cited in Heine, 2011). As previously mentioned, youth is associated with trouble in the majority of Western states, although only a small minority of youth are actually engaged in severe conflict (Fox, 1978). More precisely, violence on the part of young males is tied to adolescence, and the highest proportion of violent crime is related to being young and male (e.g. Boden, Fergusson, & Horwood, 2010; Caspi et al., 2002; McAndrew, 2009), although culture certainly occupies a crucial role here.

Some have attributed this inclination towards heightened conflict as a function of the rise of individualism, although other factors are likely at play. The phenomenon of violence among adolescents is recognized as a critical social problem in Latin

America, for example, and social conditions, namely, poverty, neighbourhood environment, and family dysfunction all contribute to the growth of youth violence (Welti, 2004). Macro-economics further governs such patterns, as violence can be traceable to macro-cultural influences such as the international illegal drug market (Andreas & Wallman, 2009). In addition, difficulty obtaining gainful employment and the pressure to provide for the family makes engaging in crime a more and more viable alternative. In this way, public policies that support families and individual development are required to foster positive adaptation and combat negative socio-cultural influence on multiple levels (e.g. Carrillo, Ripoll- Núñez, & Schvaneveldt, 2012).

As discussed in research on sibling correlates, delinquent behaviour and substance use between siblings is very much a function of shared socio-environmental conditions and cultural expectations that help shape behaviour (e.g., Sisler & Ittel, 2014). Younger brothers may model their own substance use on that of older siblings (see Slomkowski's studies on siblings and delinquency (Slomkowski et al. 2001, 2005)), and in homes with an absentee parent or parental separation, the likelihood that both brothers hold permissive attitudes towards drug use increases (Brook & Brook, 1990; Green, 1979). However, aetiological factors may vary for different racial and ethnic groups. O'Donnell and Clayton (1979) found that family influences acted as buffers in white teenagers, while peer factors and early problem behaviour were more predictive for black teens. Likewise, stratified socio-economic circumstances exert great influence in intelligence quotients among identical twins as depicted by behavioural genetics research, for instance (e.g., Turkheimer, Harden, D'Onofrio, & Gottesman, 2009). Such ecological variation within and between ethnicities and nations awaits empirical scrutiny with regard to culture, development, and biology (Jensen, 2012). Moreover, homogeneous examination of ethnic groups and minorities can propel much-needed non-Eurocentric socio-culturally specific knowledge of the moderators and mediators at work in the sibling relationship and individual behaviour.

All this is not to say that certain sibling phenomena ‘belong’ to one culture or another, simply that they may be more culturally salient (Arnett, 1999). As an illustration, within the Mundugumor tribe, rejection of children is common, as is intense hostility and conflict for power between siblings, between parents and children, and between spouses (e.g. Hsu, Watrous, & Lord, 1961; Sargent, 1949). Important cultural discrepancies must be noted as must certain socio-environmental contexts that mould family relationship dynamics. The New Zealand National Task Force on Adolescent Morbidity states that what matters the most for adolescent well-being is the environmental context, including socio-economic disadvantage, inequality and individual-, group-, and institutional-level discrimination, and therefore prescribes culturally specific and relevant wide-spanning measures (Gluckman & Hayne, 2011). Avenues for future research include the intersections between socio-economic disadvantages in various ethnic groups and how researchers can effectively target solutions toward resiliency in a culturally engaged way. We now move to analysing the macro-system of the broader political, economic, and socio-cultural context through the previously mentioned ecological systems view, which will allow us to examine particular cultural forces at play in sibling and family dynamics (Bronfenbrenner, 1986).

6.4.1 Sibling Relationships and Cultural Forces

What does culture and its requirements mean for siblings as they move through adolescence? Within the US, where most investigation has occurred, a lack of legal ties or prescribed sibling roles “may mean that within-society subcultures and contexts are critical in shaping the sibling experience and its influence on child development” (McGuire & Shanahan, 2010). A few scattered investigations have explored important intra-cultural variation in terms of ethnicity or family structure and how they impact the sibling relationship. Those readers interested in ethnic minority sibling study within the US context will find McGuire and Shanahan’s

(2010) lucid yet comprehensive review of diverse family contexts and sibling experiences informative. The authors draw out the need to incorporate sibling research on Asian and other ethnic minority groups like Native Americans to add to our collective knowledge base of sibling experiences, acculturation, and family obligation.

Study on Mexican American families suggests that cultural factors are at work in regard to differential treatment effects, with more negative implications in individualistic contexts in contrast to collectivistic cultures (McHale, Updegraff, Shanahan, Crouter, & Killoren, 2005). Differential treatment by parents in individualistic contexts may have more of a negative outcome than in collectivistic cultures, which typically delineate family roles and expectations explicitly based upon gender and age (Nuckolls, 1993; Vespa, 2009; Weisner, 1993). Justification for alternate treatment might be established through these guiding norms and requirements, such that siblings perceive such treatment as fair. Moreover, the sibling relationship may then be less likely to be coloured by conflict. One's sense of family obligations, which reflect familism values, may additionally contribute to improved sibling relations among Mexican American adolescents, for example, and other communally oriented cultural groups (McHale et al., 2005; Nsamenang, 1999; Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005).

Whether one looks at an ethnic minority group like African American families or a separate culture entirely like South America's Arawak in Guyana, it is important to trace out areas of convergence and divergence in comparison to other ethnic and cultural groups (Nsamenang, 2008). Cultural variability and similarity considers that wider socio-cultural factors may be more or less predominant based on the economic and social conditions experienced within a particular locale. McHale and colleagues' work provides an example of convergent findings: African American families and European American families with low to mid-range socio-economic status backgrounds both displayed analogous categories of sibling relationships regardless

of ethnicity ('high-negativity', 'high-warmth', 'emotionally distant'). Furthermore, high sibling negativity was coupled with children's depression and problem behaviour, and both groups' positive parent-child relationships were associated with sibling positivity (Kim, McHale, Crouter, & Osgood, 2007; McHale, Whiteman, Kim, & Crouter, 2007).

Specific divergent findings, however, include the concentration of family structure variables. African American and Mexican American sibling studies have both utilized two-parent and single-parent families, yet each group has thus far revealed their own distinct patterns and histories. For instance, immigration and multi-generation households are critical in Mexican American sibling study, as is spirituality and racial identity in African American research. In a similar vein, Navara (2006) found patterns of cultural cocooning among Jamaican immigrant families in Canada where activities like church functions, cultural association events, household chores, and engaging with siblings, other family members, and schoolmates of similar ancestry assisted in adolescents' enculturation. Further research suggests that African American sibling relationship quality varies in consideration of ethnic identity, discrimination experiences, and relationships (Brody, Stoneman, Smith, & Gibson, 1999; McHale et al., 2007).

To our knowledge, researchers have undertaken neither a systematic study of 'whiteness' and sibling relationships nor comparable comparative studies of various ethnic groups. It is important to include a variety of ethnic heritages, in addition to Caucasian and mixed-race individuals, in order to clearly demarcate crossovers and separations in ethnic identity and cultural issues in sibling and family study (Root, 1998; Song, 2010). Other distinct cultural findings highlight the caregiving responsibilities of older siblings and the hierarchical structure of sibling roles in non-Western societies, as well as cultural differences in sibling dynamics, including features previously mentioned like rivalry and competition (Maynard, 2004; Nuckolls, 1993; Weisner, 1993; Zukow, 1989). As familism values generally loom larger in

more collectivistic cultures, this fundamental cultural difference may contribute to the relative importance or, at least, the variable functions of siblings for youths in Asia and South America (e.g. Brown, Larson & Saraswathi, 2002). Also, in Western societies, peers are believed to take on a primary socializing role in adolescence (for a review, see Brechwald & Prinstein, 2011), although this appears to occupy a minor position in South Asian and Arabic adolescent development, which may further implicate greater sibling effects and influence (Brown & Larson, 2002). These illustrative macro-cultural distinctions bring us to one of the most important features of cross-culturally sensitive sibling research: the application of a systems view of development.

6.5 Developmental Systems Theory in Action

Fitting to a systems theory orientation, “personal values are not cultural values writ small” (Kitayama, 2002, p. 93), just as cultural values are not individual beliefs writ large. Certain extant cultural values, say, embeddedness, harmony, and hierarchy of particular preference in some collectivistic cultures (Schwartz, 1992), are not significant because they are held by all members of the given culture; rather, these cultural values are meaningful because they have wrought and moulded existing cultural systems. Social institutions, cultural narratives, lay theories, daily practices, and activities are all inculcated by way of these systems (see Kitayama & Markus, 1999).

It stands to reason that members of a cultural group or society may exhibit greater or lesser affinities and preference for any given set of values or accompanying norms and mores. All the same, there will be substantial variation within this group as no cultural group is entirely homogeneous. In following, the cultural expression of family arrangements and patterns may appear quite different across settings such as the father acting as governing head in an authoritarian Japanese household with

children's obedience expected above all else, and where the sibling relationship takes on a minor importance, in comparison to a traditional Muslim household tucked in the London boroughs and, let us suppose, a patriarchal nomadic clan located in the Mongolian Steppes, and yet may still possess a range of similarities. Systems theory helps us to access cultural universals as well as disentangle rich inter- and intra-cultural variations. This approach allows for the appreciation of individual experiences as shaped by larger macro-cultural forces (Scheithauer et al., 2009) and is expedient to cross-cultural developmental research involving families.

6.5.1 Social Change and Human Development

Patricia Greenfield's systemic theory of social change and human development offers one specific illustration of the systems science tradition in action. Greenfield's empirical and theoretical corpus (e.g., Greenfield, 1997, 2004, 2009, 2013) puts forth a framework of psychological change in relation to socio-cultural change and is of significant importance for sibling research. Her body of work and extensive collection of data expound individual-level developmental change as intrinsically tied to wider societal shifts in socio-demographic values and ecologies and underscores the need to adopt a systems view in culturally sensitive adolescent development research.

During adolescence, young individuals detect and are socialized into cultural values, roles, and beliefs that guide future attitudes, behaviours, and the transition into the adult realm (Manago, 2010). Here, Greenfield's theory is a useful conceptual tool for understanding development. Its relevance lies in its immediate applications to cross-cultural investigations of sibling relationships, as it can illuminate how sibling relationships and shifts in the meaning and experiences connected to adolescence and familial life are connected to particular kinds of ecological affordances. At the same time, this systemic view of development echoes the comprehensive perspective that considers adolescence as a sensitive period for socio-emotional and socio-cultural development and related adult role preparation.

As Greenfield and co-authors found in their longitudinal multi-generational examination of Mayan grandmothers, mothers, and daughters dating back over 40 years, familial structuring, expectations, and roles changed in accordance with the shift from *Gemeinschaft* (community/communal)-type arrangements to a *Gesellschaft* (society/individual) orientation (Greenfield, 2004; Greenfield, Maynard, & Childs, 2003, 2015; Maynard & Greenfield, 2008). Siblings were expected to continue to care for younger siblings, although the negotiation of these familial roles acted in accordance with movement towards greater economic activities of the society at large. Daughters in particular were seen as key socialization agents in transmitting cultural values and expectations to the rest of their siblings and became adept at interweaving and conjoining communitarian and *Gesellschaft* values (Maynard, 2013). Additionally, Tovote (2013) discovered that adolescents in low socio-economic status working Mayan migrant families combined traditional and non-traditional cultural practices as part of a greater trend to assure family and child well-being. These authors cite the ingenuity of the local communities and individual adolescents in entwining both traditional and novel cultural ways to increase familial and social harmony among members.

Other investigators have studied the influence of societal turns towards urbanization and industrialization, reflecting *Gemeinschaft* to *Gesellschaft* orientational transition and how it comes to bear on adolescence and family structures. We now give focus to research that runs parallel to Greenfield's (2009) over-arching framework. Rogoff, Correa-Chavez, and Navichoc-Cotuc (2005) documented the historical change of children's learning environments over a 23-year span in a Mayan sample and showed that broad macro-cultural changes signposting the shift from subsistence and agrarian economies (e.g., population increase, occupation diversification, and value of education) were linked to social relational changes. For instance, informal education at home decreased in tandem with formal schooling's mounting importance, and so children were less likely to learn from the family via experiential and observational learning and modeling. Family size was

reduced in accord with movement away from subsistence arrangements; siblings thus had fewer responsibilities tied to care for younger siblings with most of their time spent at school and with non-kin peers versus siblings. As sibling care represents a major factor in the development of altruistic in contrast to egoistic behaviour (Whiting & Whiting, 1973), it stands to reason that increasing expectations for sibling conflict and rivalry in individualistic milieus is related to decreased sibling interaction in a caring context.

Considering another example of how socio-demographic change might impact sibling relationships in adolescence, one can examine the transformation in post-Second World War Japan. As per Rice (2001), Japan experienced a rapid swing to the industrial and urban, and so too, there was a documented change in the family's social relationships: mothers' subsistence roles were reduced, family size and extended family importance drastically so, and sibling caregiving lessened while individual maternal attention rose. Importantly, accompanying transitions towards pedagogic importance and maternal involvement led to more child-centered socialization processes. This change echoes Western, Enlightenment, and *Gesellschaft*-focused traditions, where children are conceived as emotionally, culturally, and materially dependent on and shaped by their parents and nuclear family. Furthermore, Western psychological and psychoanalytic theories stress the parent-/mother-child bond as it purportedly constitutes the core formational relationship and so marginalizes the importance of sibling and other lateral relationships (Edwards et al., 2006).

Emerging adults – especially women – raised under this new paradigm found roles to be less prescriptive and binding, as is typical for more individualistic versus collectivistic societies (Hofstede, 2001; Triandis, 1993). At the same time, an increased focus towards personal achievement and success and a reduction of social responsibilities like sibling care and care for elders were also predicted (Suzuki, 2000). These cases demonstrate significant alterations in socio-cultural conditions and contexts and shed light on concepts of sibling rivalry, differential treatment, and

sibling differentiation processes, confirming prior culturally comparative research (Maynard, 2004; Weisner, 1993; Zukow, 1989). This line of inquiry awaits empiric validation in terms of precisely how implicated socio-cultural differences and changes impact sibling bonds.

Teasing apart different cultural values, especially when disparate cultures inter-mix traditional values with increased modernization and globalization (e.g. Inglehart, 2000; Inglehart & Baker, 2000; Kagitcibasi, 2005; Serpell, 1994), presents a challenge for future sibling research efforts. Nonetheless, the presented studies and their findings undertaken in diverse cultural settings appear to coalesce under a systemic approach in which human development is conceptualized as multi-leveled and nested. That is, Greenfield's framework of social change and human development and other systemic analyses offer us a way to probe the mechanisms at work in shaping sibling relationships; this deeper understanding, however conceptually complicated, can be achieved by tracking socio-demographic, cultural, learning environment, and socio-cognitive developmental influences and their impact on adolescence (Whiteman et al., 2011).

6.6 New Directions

The previous examples illustrate what we propose is crucial for future research: complex intimate relationships like the sibling bond must be examined in multiple *dynamic* contexts in order to grasp cultural universals as well as the specifics that guide its expression. Again, the developmental systems perspective is apt, albeit challenging to enlist for research of this nature. Few studies have taken on the challenge due to the perspective's relative newness and the difficulty of transitioning to systematic conceptualizations and surveys which have predominantly been mono-cultural and static.

This chapter set out to provide an overview of international and cross-cultural features related to adolescence and sibling study. However, one of the field's primary limitations is the restricted focus on siblings to North America and Western Europe, which mirrors most empirical investigations of developmental and family studies (Goodnow, 2011). Cross-cultural comparisons and the inclusion of siblings from under-represented groups, such as interethnic and multi-cultural families, are currently lacking yet crucial to further complete the portrait of sisters and brothers in adolescence. We suggest that advances in applied systems theory and within-family research designs gathered from cross-cultural samples are important starting points in building an environmentally grounded, culturally sensitive research base. From there, knowledge of sibling bonds in development can act as a valuable model for intimate relations across time and contexts. This vein of work is essential in light of increasing global mobility and our rapidly shifting environmental contexts.

Chapter 7: Article 3. A Cross-Cultural School-Based Context

The following article precedes a forthcoming submission with separate analyses drawn from a cross-cultural research project⁴.

Goal orientations and school climate: Modelling cultural and gender variations in Kenyan, Spanish, and German adolescents

Abstract

The majority of literature on students' academic motivation addresses the phenomenon from a mono-cultural standpoint and fails to address concomitant gender variations. The aims of the present research were two-fold: first, to investigate how school climate (controlling/authoritarian versus autonomy-supporting/democratic) relates to different types of goal orientations (mastery, performance, and social goal orientation) and second, how these associations vary by cultural context and when considering gender. The study utilized a questionnaire completed by a sample of adolescents ($N = 784$, 53.2% female) aged 13-18 years ($M = 15.30$, $SD = 1.21$) from Kenya ($N = 297$), Spain ($N = 187$), and Germany ($N = 300$). Following tests of measurement invariance, data were analysed through multiple indicator analyses for the entire sample and by cultural and gender grouping. Overall, results revealed significant associations between goal orientations and school climate with evidence of high similarity in patterns of interrelationships with limited cultural or gender variations. Findings primarily aligned with previous research suggesting the cross-contextually salient role of supportive socio-cultural environments in student motivation.

⁴ With thanks and recognition of the collaboration with Principal Investigators Angela Ittel, PhD, Itziar Alonso-Arbiol, PhD, and Amina Abubakar, PhD

7.1 Introduction: Educational Contexts of Development

School represents a central socializing force in young people's lives (Bourdieu & Passeron, 1972; Eccles & Roeser, 2011). It is especially between the walls of educational institutions (Roeser et al., 2009) that adolescents develop attitudes and perspectives like that of motivational goal orientation critical to their academic adjustment and success (Pintrich & Schunk, 1996). While we know that features of students' learning environments markedly influence a broad array of factors that are pertinent to educational processes and outcomes in profound and complex ways (Meece, Anderman, & Anderman, 2006), a shortage of unifying explanatory models hinders our comprehension of how this transpires across diverse sociocultural contexts (Greenfield et al., 2006; Trumbull & Rothstein-Fisch, 2011; Zusho & Clayton, 2011).

Moreover, few examinations have attempted to pinpoint factors characterizing a given school setting and their impact on adolescents' goals in dual consideration of socio-cultural influences and gender (Eccles & Wigfield, 2002; Wigfield, Tonks, & Eccles, 2004). This seems especially surprising as a thorough comprehension of the conditions under which educators can best promote diverse students' values toward and motivations for learning is paramount for students' academic adjustment, well-being, and, ultimately, later developmental outcomes (Chirkov & Ryan, 2001; Cohen, 2006). Accordingly, the current socio-culturally aligned contribution seeks to examine the fundamental associations between girls' and boys' goal orientations and their perceived school climates.

7.1.1 Academic Motivation

Students' orientations toward learning are undergirded by different values, motivations, and related goals (Covington, 2000). Goal orientations encapsulate the "underlying attitudes and goals that give rise to action" (Ryan & Deci, 2000a, p. 54). This 'why' behind students' actions impacts academic achievement trajectories, levels

of engagement, and other education-related outcomes (Wigfield et al., 2006). Among various types of motivations, researchers have identified three independent academic motivational orientations consisting of mastery or task-related, performance-striving or ego-related, and social goal orientations which drive student behaviour in distinct ways (Kaplan & Maehr, 2007). Mastery and performance orientations, used interchangeably with ‘learning and ego’ goal orientations (Ames, 1992), reflect students’ motivational orientations toward self-referenced standards for achievement and the belief that effort is tied to academic achievement, in the first case, and orienting oneself toward extrinsically-defined standards and external rewards in the latter. Additionally, the inclusion of social goal orientation and values, reflecting the emphasis on social acceptance, other-centered concern, and relatedness thought to be more characteristic of collectivistic, communitarian values in non-Western, Majority world cultures, has been seen to positively relate to academic achievement (e.g., Tao & Hong, 2014) alongside mastery orientation (McInerney, Marsh, & Yeung, 2003). However, the involved conditions that foster or hinder the development of these distinct types of motivational orientations and their associations remain unclear (Urduan & Schönfelder, 2006).

As learning, education, and culture are intimately linked (e.g., Hofstede, 2001; Kruger & Tomasello, 1996; Thomas & Brown, 2011), valid student-centered study of motivation requires both appreciation of contextual influences alongside individual-level characteristics (Lazarides & Ittel, 2012; Pintrich, 2003). Traditional accounts as to the predictors of mastery, performance, and social goal orientations typically reside in the individual as opposed to dynamic constructions of motivation that are shaped by the interaction between students and their socio-cultural contexts (Urduan & Schönfelder, 2006). More specifically, Zusho and Clayton (2011) explain, “self-

related processes could include expectancy constructs and motives, personal incentives could include both intrinsic and extrinsic values and goals, and perceived options highlights the interaction between the individual and the situation” (p. 255).

A number of theoretical perspectives on learning and motivation inform the interplay between culture, gender, and aspects of adolescents’ educational environments such as school climate (Volet, 1999). The values-expectancy perspective (e.g., Eccles et al., 1983; Eccles, 1994), social cognitive theory (e.g., Bandura, 1986, 1989, 1999a), and self-determination theory (Deci & Ryan, 1991, 2000, 2002) all emphasize the import of students’ individual values, perceptions, and experiences of their school environment and wider socio-cultural ecological settings which bear on their motivations, academic engagement, and well-being. Among these perceptions, students’ sense of their school climate plays a central role.

7.1.2 School Climate

School climate or the “quality of and character of school life” (Cohen et al., 2009, p. 182) is a key research area in the promotion of students’ motivation and adjustment. Research has shown that adolescences’ perceptions and experiences of the qualities of their schools’ climate (Roeser et al., 2000) greatly influence and predict not only their immediate but future academic adjustment, including their motivational goal orientations and achievement (Anderman & Maehr, 1994; Church, Elliot, & Gable, 2001; Eccles et al., 1993; Eccles et al., 1998; Fine, 1991; Greene, Miller, Crowson, Duke, & Akey, 2004; Haynes, Emmons, & Ben-Avie, 1997; Reddy, Rhodes, & Mulhall, 2003; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013; Wang & Eccles, 2012).

The multifaceted nature of school climate includes individuals' "experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (National School Climate Council, 2007). Although school climate is a highly variable factor that is not only based on individuals within the school community but is also rooted in prevailing socio-cultural structures and values (Bronfenbrenner & Condry, 1970; Eccles & Roeser, 2009), cross-national explorations of school climate and adolescent development are lacking (Jia et al., 2009). What is more, past research seldom examines contemporaneous gendered influences despite their centrality (e.g., Eccles, 2005; Eccles & Harold, 1991; Fan, 2011; Pajares & Valiante, 2001). Considering the many features included under the broad definition of school climate (Cohen et al., 2009), we focus in on two key aspects based on the work of Brand and colleagues (Brand, Felner, Shim, Seitsinger, & Dumas, 2003) and Waters, Cross, and Runions (2009) comprising of autonomy-supporting democratic versus controlling/harsh disciplinary authoritarian school climates. Crucially, these distinct dimensions of participation on the one hand, and control on the other, may either promote or dampen students' motivation and are believed to differential relate to socio-cultural factors.

7.1.3 Autonomy-Support and Control

A central feature of school climate involves the degree to which students are able to provide input and contribute to decision-making (Brand et al., 2003). Students' co-construction of their educational environment represents an autonomy-supporting dimension typified in democratic settings, and is held to foster positive learning outcomes (Hyman & Snook, 2000; Vieno, Perkins, Smith, & Santinello, 2005). In line

with literatures on parenting styles (Baumrind, 1989, 1991a, 1991b; Maccoby & Martin, 1983), the ability to contribute to decision-making (autonomy-supporting authoritative style), in conjunction with a warm disciplinary atmosphere (versus authoritarian or harsh disciplinary style) is viewed as beneficial for both individual-level well-being in school and academic adjustment as well as for wider educational communities' functioning (Bond et al., 2007; Thomson & Holdsworth, 2003; Zullig, Huebner, & Patton, 2011; Zullig, Koopman, Patton, & Ubbes, 2010). Scaffolding student participation in the active shaping of their schools proffers a chance for exercising autonomy, engendering feelings of equity, belonging, as well as competence (Cohen, 2006; Roeser et al., 2009). Supportive, caring teacher-student relationships - a central element of positive school climate - likewise contribute to positive motivations and academic outcomes (Wentzel, 1998, 2002), whereas harsh disciplinary measures and overall punitive school climates negatively impact student outcomes (Astor, Guerra, & Van Aker, 2010).

7.1.4 Cross-Cultural Study of Motivation and School Climate

Like most foregoing work on motivation and school climate, evidence derived from Western generally middle socio-economic status students prevails (King & McInerney, 2014; Yang, et al., 2013). However, recent empirical studies into motivational goal orientation have targeted previously under-researched cultural groups (e.g. Nelson, O'Mara, McInerney, & Dowson, 2006), informing both mono-cultural perspectives of academic motivation theory and illuminating its cross-cultural import. In the case of Nelson and colleagues' (2006) measure of academic

motivational goal orientation, confirmatory factor analyses demonstrated cross-cultural reliability in a sample of indigenous, majority world sample of students.

At first glance, research on the relationship between learning context and motivation seems to yield inconsistent findings (Rudy, Sheldon, Awong, & Tan, 2007). A mounting body of work attests to cultural variations in educational values, contexts, and motivation (e.g., Iyengar & Lepper, 1999; Markus & Kitayama, 1991; Stipek, 2001; Trumbull & Rothstein-Fisch, 2011), while other theoretical positions emphasize universal needs for autonomy, belonging, and competence in adolescent adjustment and achievement motivation as in self-determination theory (SDT) (Deci & Ryan, 1985, 1991). While culturally specific educational environments vary in their provision of support for these needs (Ryan & Deci, 2000a), cultural differences in motivation and school context associations in tandem with underlying commonalities are to be anticipated (Maehr, 1984; Maehr & Yamaguchi, 2001).

Upon deeper investigation, systematic studies and theories of learning contexts and student motivation suggest shared underlying structures demarcated by cross-cultural specificity, aligned with Greenfield and colleagues' (2003) cultural pathways through universal development approach (e.g., Chirkov, 2009; Chirkov & Ryan, 2001; Chirkov, Ryan, Kim, & Kaplan, 2003; Chirkov, Ryan, & Willness, 2005; Samdal, Nutbeam, Wold, & Kannas, 1998). Findings which signpost the influence of cultural dimensions among universal patterns on motivation and school setting include hierarchical (Hofstede, 2001) or vertical-horizontal relationships (Triandis & Gelfand, 1998); individualism versus collectivism or independence and interdependence (Kagitcibasi, 1997; Greenfield, 2009); agency and interpersonal distance in the autonomous-relational self (Kagitcibasi, 1996, 2005); and cultural

values (e.g., hierarchy, power, tradition versus benevolence, self-direction) (Schwartz, 1994a), though the mechanisms, interrelationships, and contingencies are not well understood (e.g., Henderlong & Lepper, 2002; Kaplan, Karabenick, & De Groot, 2009; McInerney & Liem, 2009; McInerney et al., 2003; Urdan, 2004, 2009; Urdan & Maehar, 1995). In order to best tailor instruction and interventional measures to individual learners' needs, socio-cultural awareness of the interrelationships between goal orientation and school climate is necessitated (Thomas, 2000).

7.1.5 Gender-Based Study of Motivation and School Climate

Boys and girls are differentially socialized (Leaper & Friedman, 2007; Tobin, Menon, Menon, Spatta, Hodges, & Perry, 2010), and this socialization is culturally specific (Halim, et al., 2015; Kashima et al., 1995). In accordance with Eccles' expectancy-value theory of achievement, gender influences students' motivations apropos individual and socio-cultural factors (Eccles et al., 1993; Fan, 2011). Moreover, stereotypes and expectancies regarding females' submissiveness and supposed dependency in relation to social constraints are to be found across time and place (Leaper & Friedman, 2007), while specific gender roles and stereotypes concerning agency and separateness are culturally determined and thought to influence males and females in different ways (e.g., Eccles, 2005; Kashima et al., 1995).

In terms of motivational goal orientation, Patrick, Ryan, and Pintrich (1999) found that among a sample of American middle school students, females were more mastery oriented whereas males were more performance oriented. In a Chinese sample, male students scored higher than females on various scales tapping adaptive learning, though, these findings were reversed in more democratic classrooms (Shi, et

al., 2001) and when enlisting a multi-dimensional assessment of student motivational patterns in a sample of Filipino boys and girls (King & Ganotice Jr., 2014). Gender and ethnicity-based differences in school climate perceptions have been furthermore variably documented (Fan, Williams, & Corkin, 2011; see Thapa et al., 2013 for a review). Potential variations in both goal orientation and school climate considering gender within and across cultures are then to be anticipated.

7.2 The Present Study

To further explore the role of autonomy-supporting democratic and, conversely, controlling harsh disciplinary educational contexts in motivational goal orientation across cultures, the present study hones in on mastery, performance, and social goal orientations. Prior cross-cultural research (e.g., Chirkov & Ryan, 2001; Chirkov et al., 2003; Chirkov et al., 2005; Maramba, Vermunt, & Boshuizen, 2012; Supple et al., 2009) guides the study's expectations that fulfilment of students' core psychological needs on the part of autonomy-supporting versus controlling school climates will be linked to motivational goal orientation domains with gender and cultural variations.

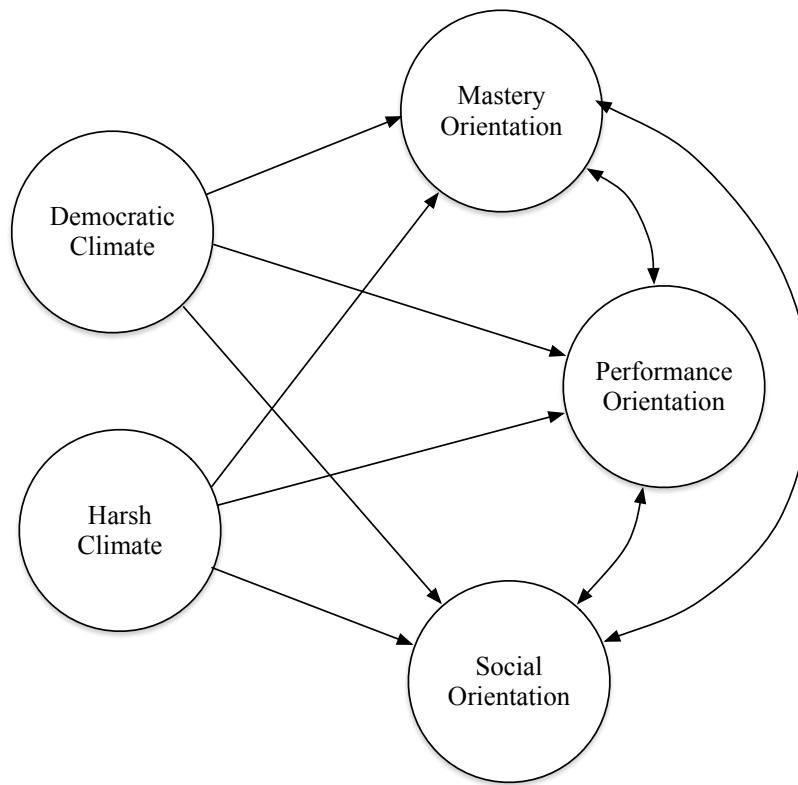


Figure 7.1. Conceptual model for interrelationships between school climate (democratic and harsh) and academic motivational goal orientation (mastery, performance, social goal orientation)

The study aims to throw light on the associations between school climate and students' goal orientations while simultaneously examining the socio-cultural influences of culture and gender. Figure 7.1 illustrates the conceptual model of these interrelationships.

Specifically, the research at hand explores the following questions:

1. How do democratic and harsh school climates as rated by students relate to aspects of academic motivation consisting of mastery, performance, and social goal orientations?
2. Additionally, what are the patterns of variances across cultural groups and gender in the above-depicted relationships?

7.3 Methods

The dataset for the present research was drawn from a large cross-cultural survey of 784 adolescents from Germany (300 students, 31.0% female), Kenya (297 students, 67.3% female), and Spain (187 students, 66.3% female) with an average age of 15.30 years ($SD = 1.21$). These countries were selected in part due to the diverse spread in cultural values and dimensions (e.g., Hofstede, 2001; Schwartz, 1992, 2004) (see Table 2.1, p. 22-3). Further sample characteristics are provided in Table 7.2.

Participation was voluntary and parental and/or school administration and National Research Council consent was obtained according to the regulations in the respective country. Trained research associates deployed the questionnaires during one school lesson of approximately 45 minutes.

7.3.1 Measures

Perceived school climate. Two aspects of school system climate were administered by way of separate scales. The first assessed students' perceptions of harsh disciplinary practices in school while the second measure tapped student perceptions students' input in decision-making (labelled as harsh and democratic climate for brevity's sake, respectively).

Harsh disciplinary practices / harsh climate. Students' perceptions of harsh disciplinary practices in their school setting were measured using a 10-item scale, with five of the items based on the sub-scale by Brand and colleagues (Brand et al., 2003) (e.g., “The rules in this school are too strict”). The scale was scored on a 5-point Likert response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*)

and registered an acceptable Cronbach's reliability alpha coefficient of .68, consistent with validation studies (Brand et al., 2003).

Input in decision-making process / democratic climate. Students responded to a 5-item scale tapping their perceptions of the extent to which there are opportunities for participating in key decision- and rule-making in their schools. The measure was derived from portions of Brand et al.'s (2003) subscale designed to assess opportunities for autonomy in the classroom. Sample items included “students help to decide some of the rules in this school.” The instrument was scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), and displayed an acceptable Cronbach's reliability alpha coefficient of .72.

Academic motivation orientation. The General Achievement Goal Orientation Scale (GAGOS; McInerney et al., 2003) asks for students' level of motivation in various academic situations, according to three motivational orientations of mastery, performance or social. Students indicate their agreement with certain statements along a 5-point Likert scale spanning from 1 (*strongly disagree*) to 5 (*strongly agree*). An example item for the mastery sub-measure includes “I am most motivated when I am improving,” “I am most motivated when I am praised” for the performance subscale, and “I am most motivated when I am helping others” for the social subscale. The three measures displayed strong internal consistency (Cronbach's alpha: mastery = .85, performance = .79, social = .80).

Additional variables. Students also provided information on basic socio-demographic variables of age, parental education, and gender.

7.3.2 Statistical Procedures

Prior to any cross-cultural comparison, it is recommended that the invariance of measures across cultural contexts be established. In line with this guideline and suggested methodological approach, a Principal Components Analysis (PCA) was carried out (described in Fischer and Fontaine (2011)), as base-level equivalences are critical in establishing the cross-cultural validity of the assessed constructs (Welkenhuysen-Gybels, Van de Vijver, & Cambre, 2007). The results for these tests of proportionality are reported in Table 7.1 and expressed via Tucker's phi applied congruence index (Tucker, 1951). All measures were found to be above the recommended critical level of 0.95 (Fischer & Fontaine, 2011) and thus assumed to be invariant among cultural groups, enabling further cross-cultural comparisons.

Table 7.1

Tucker's Phi Coefficient of Congruence per Country

	School Climate		Academic Motivation		
	Harsh	Democratic	Social Orientation	Performance Orientation	Mastery Orientation
Germany	.98	1.00	1.00	1.00	1.00
Kenya	.97	.97	1.00	.99	.99
Spain	.98	.96	1.00	.99	1.00

7.4 Results

Descriptives

Means, standard deviations, and correlations for the assessed variables are provided within Tables 7.2. Additional country-based descriptives, independent means testing for within-country gender differences, and effect sizes are reported in Table 7.3 (p.

212). Parental education did not vary for students by country with the highest level of education for mothers and fathers found to be completion of high school and some post-secondary education ($F(783) = .20, p = .81$). As parental education was unrelated to the key variables of interest, it was excluded from later analyses.

Table 7.2

Total Sample Characteristics, Means, Standard Deviations, and Correlations for Study Variables

Total Sample	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Age	15.30	1.21							
2 Gender			-.04						
3 Education	2.48	.67	-.08	.03					
4 Mastery	4.36	.61	.11	-.17**	.00				
5 Performance	3.66	.70	.07	.03	-.04	.40**			
6 Social	3.82	.74	.11	-.10**	.01	.41**	.34***		
7 Democratic	2.85	.79	-.08	-.04	.04	.03	.09**	.09**	
8 Harsh	3.21	.63	-.15	-.02	-.11**	-.13***	-.03	-.10*	-.25***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $N = 784$, 53.2% female. Gender: female coded as 0, male as 1. Education = parental education, mastery = mastery goal orientation, performance = performance goal orientation, social = social goal orientation, democratic = democratic school climate, harsh = harsh school climate.

Correlation analyses for the total sample as presented in Table 7.2 revealed strong significant positive interrelations between the three goal orientations. Harsh climate was significantly negatively associated with mastery goal orientation ($r = -.13, p < .001$) as well as social goals ($r = -.10, p = .01$). Gender was further significantly related to mastery ($r = -.17, p = .02$) and social orientation ($r = -.10, p = .01$) (female coded as 0, male as 1). Moreover, democratic climate was positively tied to performance and ($r = .09, p = .008$) and social goals, respectively ($r = .09, p =$

.009). The two environmental ratings of harsh and democratic school climate were significantly negatively associated with one another ($r = -.25, p < .001$).

Multiple Indicator Multiple Group Analyses

Following the assessment of cultural invariance of the measures, a multiple indicator multiple group analysis was carried out with country as the grouping variable in order to examine the extent to which the relationship between school climate and the different motivational dimensions are similar across cultural context. As the purpose was to assess the pattern of relationship between variables, structural weights model results are reported (Figure 7.2).

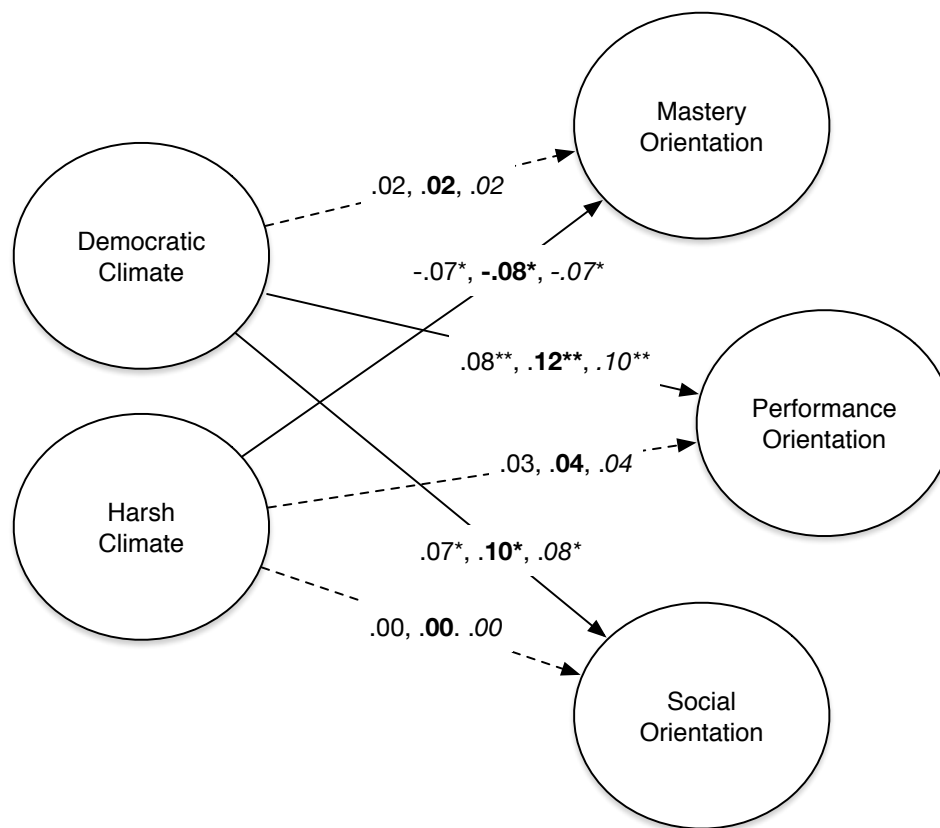


Figure 7.2 Country comparison model for all students depicting standardized regression weights (single-headed arrow paths) of school climate (democratic and harsh) and motivation orientation (mastery, performance, and social goal orientation) for Germany (regular font), Kenya (bold), and Spain (italics) students, respectively ($\chi^2 [33, N=784] = 19.23, p < .001, TLI = .953, CFI = .981, RMSEA = .028$). Significant paths are indicated with asterisk. * $p < .05$, ** $p < .01$, *** $p < .001$.

Results indicated that the model displayed a good fit to the data as per standard indices of model fit (Bentler, 1990), (χ^2 (33 N = 784) = 19.23, p < .001, χ^2/df = 1.60, TLI = .953 (recommended, > .90), CFI = .981 (recommended, >.90), and RMSEA = .028 (recommended, <.80). While the model had an overall good fit, several paths in all countries were insignificant and the percentage variance explained was small (Table 7.4).

Table 7.4

Percentage Variance Explained Per Cultural Group

Country	Social Goal Orientation	Performance Goal Orientation	Mastery Goal Orientation
Germany	3.6	1.2	1.9
Kenya	0.6	2.8	1.3
Spain	0.3	0.2	2.7

Subsequent analyses investigated the gender and culture interaction, again enlisting a multiple indicator multiple group procedure whereby six groups were evaluated (German males, German females, Kenyan males, Kenyan females, Spanish males, and Spanish females). As with the initial cultural grouping analysis, this model showed a perfect fit to the data with strong fit indices, (χ^2 (33, N = 784) = 19.23, p < .001, χ^2/df = 1.60, TLI = .953 (recommended, > .90), CFI = .981 (recommended, > .90), and RMSEA = .028 (recommended < .80). Results are modelled per country for males and females (Figure 7.3). Similar to the country-based multi-group model, the country model considering gender had a good fit, while several paths in all countries were insignificant and the percentage variance explained was small (Table 7.4).

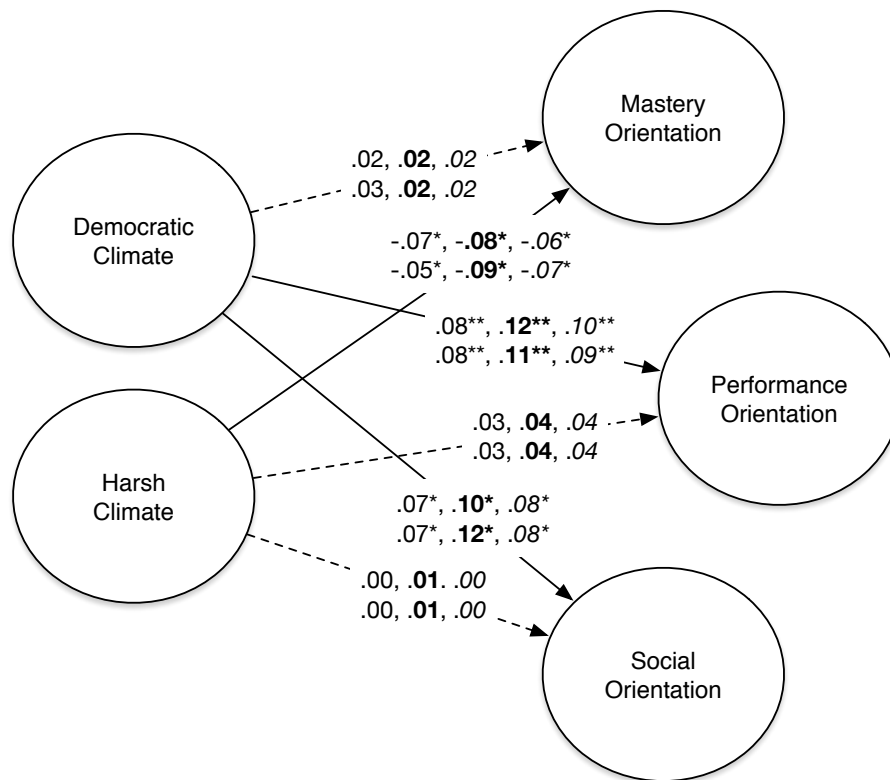


Figure 7.3 Country comparison model for male (top row) and female students (bottom row) depicting standardized regression weights (single-headed arrow paths) of school climate (democratic and harsh) and motivation orientation (mastery, performance, and social goal orientation) for Germany (regular font), Kenya (bold), and Spain (italics), respectively, (χ^2 [30, $N = 784$] = 42.81, $p < .061$, $\chi^2/df = 1.427$, TLI = .936, CFI = .968, and RMSEA = .023. Significant paths are indicated with asterisk. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7.5

Percentage Variance Explained Per Culture by Gender Group

Country - Gender	Social Goal Orientation	Performance Goal Orientation	Mastery Goal Orientation
Germany - Male	0.5	0.5	0.7
Germany - Female	0.4	0.5	0.4
Kenya - Male	0.9	1.2	0.7
Kenya - Female	1.3	1.2	0.9
Spain - Male	0.6	0.9	0.5
Spain - Female	0.6	0.8	0.5

7.5 Discussion

The current work examined students' perceptions of their input in decision-making and harsh disciplinary practices as measures of school climate in relation to their academic motivation orientation regarding mastery, performance, and social goal orientations, and considering culture and gender interactions. Overall, results indicated environmental affordances in the form of democratic versus harsh school climates differentially relate to students' academic motivational goal orientations as predicted by self-determination theory (SDT; Deci & Ryan, 2002) with great similarities in patterns of relationships and minimal variations emerging across cultures and gender. Students generally perceived their schools to be more harsh and controlling than democratic, echoing, albeit disconcertingly, foregoing research on educational context (Thapa et al., 2013). Democratic climate was positively linked to performance and social goals in general and, in contrast, harsh climates were significantly negatively associated with mastery goal orientations. These findings indicate the need to study distinct mechanisms of school climate dimensions (Cohen, 2006; Covington, 2000; Jones & Bouffard, 2012; McEvoy & Welker, 2000; Weissbourd, Bouffard, & Jones, 2013).

The overall pattern of culture- and gender-based commonalities and variances in student goal orientation and perceptions of school climate reinforces previous context-sensitive work (e.g., Lam et al., 2015; Marachi, Astor, & Benbenishty, 2007; Marambe et al., 2011). Findings of high levels of similarity between the variables and their interrelationships modelled across cultural and gender grouping support the established cultural pathways through universal development approach of Greenfield and authors (2003), expectancy-value theory (Eccles, et al., 1983), and social

cognitive theory (Bandura, 1986). In sum, the results ally with literature on the predominant cross-cultural and gender invariance of multi-dimensional motivational measures and profiles alongside general pattern correspondence with socio-culturally differential rating levels (e.g., Ali et al., 2014; Lam et al., 2015; Magson et al., 2014; Nelson et al., 2006; Yeung, McInerney, & Ali, 2014). These patterns can be elucidated through discussion on adaptive and contextualized socialization (Thomas, 2000) including development of values and related motivational orientations (Hofstede, 2001; Kitayama & Markus, 1999; Markus & Kitayama, 1991; Triandis, 1995).

Culturally specific study implies that while certain values are universally available across cultures (Schwartz, 1994a, 1994b), their relative importance varies in accordance with specific contexts and the fit between an individuals' orientation and their context (Greenfield & Quiroz, 2013). Differences in individualist versus collectivist cultures and prevailing norms surrounding the acceptance of vertical-horizontal structures (Triandis, 1995) may influence the associations between students' perceived school climate and motivations, in which individual-centered variables and values may be more important in the case of the former whereas norms and overall sociality may be more salient in the latter (Suh et al., 1998). In relatively individualistic cultures like Germany, students' sense of agency and individual performance were hypothesized to be more critical to their motivational patterns than in collectivistic and vertically-oriented Kenya and to a lesser extent, Spain, where behavioural control norms imposed through authority figures are viewed as less negative (Chao, 1994). However, the research did not find support for these predictions in the current sample as harsh climate was negatively associated overall to goal orientation and democratic climate was largely positively associated to

performance and social goal orientation with the greatest influence in Spanish and Kenyan contexts.

Moreover, the multiple group models of school climate associations to goal orientation were remarkable similar. Further, Kenyan, Spanish, and German students, and boys and girls rated mastery goals as most important, followed by social, and finally, performance goals. This body of findings follows the recent data drawn from 12 countries exploring student engagement and social support, whereby contextual factors' (i.e., Human Development Index, Hofstede's Individualism Index) relations to students' engagement were not seen to vary across countries (Lam et al., 2015). Additionally, studies comparing Navajo American and Anglo American students detected cultural invariance in higher order social and performance goals, though Navajo students were relatively lower in achievement and competition goals but higher in social goals (Ali et al., 2014). Likewise, students from Hong Kong indicated that social concern goals positively predicted embedded learning, effort, and engagement (King, McInerney, & Watkins, 2010).

Taken together, these patterns partially align with the current findings, whereby collectivistic or communitarian cultures tend to display greater *relative* emphasis on social norms, values, and contextual influences often embedded within achievement goals (Inyengar & Lepper, 1999), in comparison to performance-based individualistic or extrinsic motives, particularly among Kenyan and Spanish females students in our sample relative to males. However, these interrelationships are exceedingly complex and difficult to disentangle (e.g., Dittmar et al., 2014; Grouzet et al., 2005; Kasser & Ryan, 1996).

One area of interest included the opposing nature of school climate dimensions whereby the significant negative impact of harsh climate on mastery but negligible influence on social and performance orientation was reversed for democratic patterns of positive influence. In harsh punitive contexts, students may be oriented more externally to outside controls, and so away from intrinsic mastery goals (e.g., Ku, Dittmar, & Banarjee, 2014). Additional research suggests aggressive behaviour toward peers is linked to democratic environments, although the nature of this finding is not clear (Hyman & Perone, 1998; Hyman & Snook, 2000). Researchers have cited the overlap or confounding of student input and participation with disorderly classrooms and lack of structure by educators in terms of student perceptions. Future work should apportion out various aspects of school climate to differentiate authoritative yet supportive climates from more laissez-fair permissive neglectful or indulgent climates, in following with Rohan and Zanna's (1996) detailed parenting style typologies based on Baumrind's (1989) conceptualization (authoritarian, authoritative, permissive-indulgent, permissive-neglectful). Likewise, other evidence points to the benefits of contemporaneous structure and autonomy-providing educational environments for students (Jang, Reeve, & Deci, 2010). Studies that attend to additional qualities of different school climates or styles based on descriptive typologies and multiple aspects (e.g., Jones & Bouffard, 2012; Weissbourd et al., 2012) versus individual declaratives would be in a better position to examine the mechanisms at work in student perceptions and motivational outcomes both across and within cultures.

Concurrent examination of the variable influence of democratic versus harsh climates for each of the orientations in account of gender supports the need to consider particular sociocultural contexts. It appeared from prior study that girls and

boys would be differentially susceptible to harsh behavioural control, in accordance with increased male participation in past examinations of student victimization and school climate (Marachi et al., 2007), and, moreover, that these gender-based individual-level perceptual differences would be lowest within the more collectivistic countries (Chazal, Guimond, & Darnon, 2012). Complementary prior research by King and Ganotice Jr. (2014) indicated that among collectivistic students in the Philippines, males displayed less adaptive motivational profiles than females, mirroring a body of work drawn from individualistic settings. Conversely, Yeung, McInerney, and Ali (2014) found that among Asian and Anglo origin students in Australia, the relation of internal and external motivational factors were highly similar between gender and ethnic groupings. However, there was a lack of strong gender variances in consideration of country-level modelling of overall patterns including gender interactions. Thus, overall, the gender invariance hypothesis (Hyde, 2005) seemed to be supportive of boys' and girls' similarity in the studied patterns of relationships. This area awaits further systematic research across diverse groups to illuminate equivocal results of gender and cultural interactions.

Given a perceived positive school climate, that is, one that encourages democratic input and the absence of harsh controlling practices, heightened mastery and social goal orientation were predicted and confirmed in our findings, resounding with prior research and theory such as SDT and Personal Investment theory (Chirkov et al., 2003; Deci & Ryan, 2001; Wentzel, 2002). While authors question the universality and positive import of autonomy's benefits beyond individualistic cultural settings (e.g., Chao, 1994; Oishi & Diener, 2001), the present results largely support the universal significance of autonomy or agency in the academic setting, though future research is necessitated to clarify the content of such judgments across diverse

cultural contexts (Suh et al., 1997; Nelson et al., 2006). Further theoretical advance bolsters this finding by way of the Personal Investment Theory (King & McInerney, 2014) which adopts both etic and emic approaches to students' individual motivations in context. The findings at hand lend additional weight to this dually universal and specific approach to studying adolescents' motivations with respect to school climate characteristics.

7.6 Implications and Suggestions for Future Research

The current research bears some limitations. First, adolescent samples were drawn from convenience-sampled high schools and data were analysed on the individual-level. As such, results are non-generalizable to other age groups, cultures, and contexts, and classroom and school-level effects were not systematically addressed. Second, the data are gleaned from cross-sectional surveying, thus longitudinal investigations are required to illuminate potential causal mechanisms. Likewise, while subjective accounts of school climate are worthwhile lines of inquiry into students' goal orientations, multi-method data gathering approaches to corroborate self-reports of educational climate would assist in illuminating overlap or dissimilarity (Thapa et al., 2013). Finally, our model accounted for a small proportion of variance and therefore additional examination into variables proven to be coupled with goal orientation such as subjective well-being (to be presented in a forthcoming study) (e.g., Chirkov & Ryan, 2001; Ryan & Deci, 2000a, 2000b; Tuominen-Soini, Samela-Aro, & Niemivirta, 2008) and personal investment differences (King & McInerney, 2014) are required for clarifying processes involved in student motivation and perceived school climate.

Taken together, the study's results illuminate the positive associations between democratic supportive versus harsh controlling environments and student motivation, underscoring the importance of school climate-based interventions in fostering academic adjustment across culture and gender. However, praxis should be tailored specifically to diverse students' needs, whereby a contextualized ecological approach can assist in accounting for the diversity of relationships among students' motivations and perceptions of their learning environments.

DISCUSSION AND CONCLUDING SECTION

The discussion delineated in the following and final section is based upon the preceding three interconnected studies, their immediate findings, and significance to future work in the field. It aims to synthesize the dissertation's observations, elucidating similarities and discrepancies by way of analysis of extant theory and empirical research sourced from associated subdisciplines. They are primarily developmental, psychological, and sociological in nature, though also take up relevant broad issues comprising, but not limited to, socio-political, educational, and cultural studies. This interdisciplinary approach is undertaken for the overall advancement of value orientation inquiry in adolescence. Additionally, the integrative dialogue guides a commentary on wider theoretical and empirical applications and implications, and their weight for developmental policy and praxis in particular. Following this, specific recommendations for both theory and practice close the thesis so as to stimulate further comprehensive ecological research efforts on values in adolescence in the context of socio-cultural development and change.

Chapter 8: Discussion of the Findings

This synthesizing chapter presents a case (Boyer, 1990) for integrated ecological (Bronfenbrenner, 1974, 1977, 1986) and systems-derived developmental study (Scheithauer et al., 2009) of adolescents' value orientations and associated equality-related socio-cultural influences, as manifest across key contexts of development (East, 2009; Grusec, 2011; Reis, et al., 2000; Sameroff, 1994). Toward these ends, developmental perspectives that inform value orientations and interrelated constellations of attitudes, behaviours, and motivations (Hitlin & Piliavin, 2004; Longest et al., 2013) are addressed with reference to: (1) individual and social micro-level relationships, (2) environmental socio-cultural, macro-level influences, and (3) their interactional dynamics. Pulling these insights together, the thesis concludes that socio-cultural contexts provide the vessel inside of which adolescents develop their value orientations through transactions with psychological needs-supportive features of these environments and key socialization agents (Vollebergh et al., 2001). Next, the focus shifts to current limitations, shedding light on areas in want of additional research and briefly details viewpoints and topics concerning future study and its application. In so doing, the central thesis organizes around and argues for increased cross-contextual, multi-faceted ecological approaches summarized as 'integrative pluralism' (Mitchell, 2004) in work on adolescent value orientation development.

Table 8.1

Value-Related Variables, Socio-Cultural Influences, Outcomes, and Conclusions in Value Orientation Study in Adolescence

Article Number: Context	
a) Value-related variable(s)	Outcomes and Conclusions
b) Socio-cultural influence(s)	
Article 1: Family System	Family is a key context of gender socialization. High correlation among family members.
a) (Anti-) Egalitarian gender role orientation (GRO), Gender-specific parenting (GSP)	Egalitarian gender ideology highest among females and increased SES. Significant influence of fathers' GRO and GSP.
b) Work place autonomy (WPA), Socio-economic status (SES)	Workplace non-related to micro-level factors though positively tied to SES.
Article 2: Socio-Cultural System, Family System, Sibling Subsystem	Changing ecologies alter social value orientations that manifest in the family system, sibling subsystem, and interacting contexts.
a) Individualism-collectivism, Gemeinschaft - Gesellschaft (Greenfield) values	Adolescents adapt to and interact with their environments in undertaking key developmental tasks of: (1) relationship growth, (2) socio-cultural learning, (3) balancing agency-relatedness in identity formation.
b) International, socio-cultural contexts, Institutions (education, workplace, family)	
Article 3: School Context	Adolescents' goal orientations strongly interrelated; bolstered by democratic climate, negatively impacted by harsh control. High similarity in patterns of relationships considering culture and gender indicates environmental affordances support core psychological needs.
a) Goal orientation (mastery, performance, social)	
b) Democratic vs. harsh school climate	

Table 8.2
Summaries of the Three Studies

Developmental Context, Question	Subject / Constructs	Participants / Sample	Study Design / Analyses	Research Aims / Hypotheses	Findings	Interpretive Frameworks
<p>Study 1: Within-family value concordance and transmission of traditional versus egalitarian gender roles considering micro- and macro-level influences:</p> <p>-How do adolescents develop gender role value orientations in their families?</p>	<p>Multi-level ecological examination of intrafamilial socialization of Gender Role Orientation (GRO) (level of agreement with cultural expectations concerning gender-related behaviour and the distribution of labour between the sexes) alongside Gender-Specific Parenting (GSP) practices</p>	<p>244 German families (father, mother, adolescent son and daughter) analysing same-gender and cross-sex dyads</p>	<p>Cross-lagged approach (two measurement points over 5 years) modelling separate parental influence including all possible same- and cross-sex parent-child dyads within one family</p> <p>Analysed direct transmission paths of GRO and GSP as a mediator plus parental workplace autonomy (WPA) and socio-economic status (SES) impact on intrafamilial GRO socialization</p>	<p>1. To examine whether GRO socialization differs in daughters and sons as per prior research claims (e.g., females more relationally-oriented and dependent vs. males more agentic and independent)</p> <p>i) To test whether same-sex similarity increases concordance</p> <p>2. To assess the dual influence of micro-level parenting behavioural parameter (GSP) and attitudinal parameter (GRO) considering macro-level factors in intrafamilial GRO socialization</p> <p>-Same- sex micro-, macro-influence through direct practices and modelling predicted</p>	<p>-Results indicated males held higher traditional gender role ideologies; sons displayed highest levels of traditional GRO and daughters displayed highest levels of egalitarian GRO</p> <p>-Fathers and mothers play at least an equally important role in the transmission of gender role beliefs with gender-specific attitudinal influences</p> <p>-Mediating effect of GSP was only evident when considering father – child dyads</p>	<p>-Highlight importance of examining adolescents embedded in family context</p> <p>-<i>Social learning, cognitive development theory; DSP</i> approach to socio-environmental influence over time</p> <p>-<i>Transactional nature</i> of person-environment relationship differentiation</p> <p>-Evidence against “top-down” passive reception; supports active construction</p> <p>-Development and transmission occur in concentric, interacting environments, (e.g., in a family in a given community; micro- and macro-level interactions)</p>

Developmental Context, Question	Subject / Constructs	Participants / Sample	Study Design / Analyses	Research Questions / Hypotheses	Findings	Interpretive Frameworks
Study 2: Cultural and international study of socio-cultural development and value orientation change in the context of siblings' key reciprocal relationship -How do socio-cultural value orientations impact adolescent siblings?	Cross-cultural views of adolescent development and their relevance for the relationship between siblings; cultural values orientations (e.g., Gemeinschaft vs. Gesellschaft) (Greenfield) and their meaning for development	Siblings in adolescence from different cultures and nations	-Surveyed socio-demographic research and international projects on siblings in adolescence -Application of developmental systems and ecological view of development across contexts in adolescence -Adopts a socio-cultural focus on siblings and their families to situate and contextualize the appraisal	1. To examine adolescent socialization on a cultural and international level through systems-based developmental models, narrowing in on implicated socio-cultural values and processes 2. To elucidate the impact of socio-cultural influences in terms of a critical relationship with reciprocal and hierarchical elements found between siblings in adolescence	-The review highlights culturally specific understanding of human development in light of socio-cultural change in values orientations -Findings centered on cultural acquisition and sensitive periods; multicultural individuals; socialization agents' influence; globalization and how adolescents respond; youth as a capitalization process, whereby youth are socialized into socio-culturally-stratified value orientations -Siblings reflect patterned interrelationships in socio-cultural values	-Cultural and developmental systems approaches were applied -Conflict and contradiction sets the stage for qualitative change, especially those aspects which change most rapidly (e.g., modernizing, globalizing influences (Manago et al., 2014)) -Cultural and social change exerts influence at the cultural, group (e.g. gendered), and individual-level, and can be observed in multiple contexts (e.g., changing (hierarchical to egalitarian) relationship between adolescent siblings)

Developmental Context, Question	Subject / Constructs	Participants / Sample	Study Design / Analyses	Research Questions / Hypotheses	Findings	Interpretive Frameworks
<p>Study 3: School context across three distinct cultures (Germany, Spain, Kenya) considering autonomy-supporting vs. controlling school climates' influence on students' motivational goal orientations (mastery, performance, social)</p> <p>-How do adolescents' goal orientations relate to school climate across cultures, considering gender?</p>	<p>Students' goal orientations of:</p> <ol style="list-style-type: none"> 1. Mastery, 2. Performance, and 3. Social academic achievement motivations in relation to school climate dimensions of: <ol style="list-style-type: none"> 1. Democratic input in decision-making, 2. Harsh disciplinary climate/control across three cultures 	<p>A total sample of 784 adolescents (53.2% female), aged 13-18 years ($M = 15.30$, $SD = 1.21$) from Kenya ($N = 297$), Spain ($N = 197$), Germany ($N = 300$)</p>	<p>Following tests of measurement invariance (Tucker's phi index), data were analysed through multiple indicator multiple group analyses to evaluate group-level variances in observed patterns of relationships considering the role of:</p> <ol style="list-style-type: none"> 1. Culture and 2. Interaction of culture and gender 	<ol style="list-style-type: none"> 1. To investigate how school climate (controlling / authoritarian vs. autonomy-supporting/democratic) relates to different types of goal orientations (mastery, performance, social goal orientation) -Predicted to vary according to cultural values (Hofstede) 2. To determine how these associations vary by cultural context and considering gender 	<p>-Results revealed significant associations between goal orientations and school climate across cultural and gender grouping</p> <p>-Findings aligned with previous research suggesting the role of autonomy-supporting, non-controlling socio-environmental factors in student motivation</p> <p>-A socio-cultural approach depicts the commonality of relationships among students' motivations and perceptions of their learning environments as per <i>Self-Determination Theory</i> (Deci & Ryan, 1999)</p>	<p>-Overall, students perceived their schools to be more harsh and controlling than democratic</p> <p>-Democratic climate was positively linked to performance and social goals in general (SDT), and harsh controlling climates were negatively associated mastery goal orientations, indicating distinct mechanisms of school climate dimensions</p> <p>-Speaks to the need to encourage democratic input as well as decreasing punitive measures across socio-cultural contexts</p>

8.1 Goals, Motivations, and Research Contributions

This dissertation sought to cast light on adolescence - with its consummate processes of reciprocal individual and social development, and cultural meaning-making (Greenfield, 2004; Smetana, 2010; Smetana et al., 2006) – as it represents a critical crossroads for values change and adaptation (Guan et al., 2014; Trommsdorff, 2012; Trommsdorff & Chen, 2012). Specifically, the three core research aims encompassed: (1) examining value orientations with regard to socio-cultural influences in adolescence among key developmental contexts, (2) surveying diverse groups of adolescents (i.e., brothers, sisters; females, males; German, Kenyan, Spanish; adolescents across time around the globe) as embedded within their socio-cultural contexts, including school, familial system, and sub-system relationships, and (3) enlisting accordant ecological methods and synthesis of the findings (Elder, 1994; Ford & Lerner, 1992; Parke & Buriel, 1998).

In keeping with such aims, diverse adolescents' value orientations were assessed across multiple contexts with an subsidiary focus on values and constructs relating to equality in social relations (Boer & Fischer, 2013; Schwartz, 2009). The three contributions' results and outcomes are summarized in Tables 8.1 and 8.2 found on pages 125 and 126-8 Overall patterns amid the findings attest to the centrality of intrafamilial and school-based contexts for supporting adaptive and prosocial values socialization and development in light of shifting socio-cultural influences and their bearing on core psychological needs fulfilment (Deci & Ryan, 2000) and processes in adolescence (e.g., Greenfield et al., 2003).

8.2 Basic Value Orientations and Socio-Cultural Adaptation

As stated at the outset, prior empirical and theoretical work has established primary value orientations, distinguishing specific human ecologies, societies and cultures based upon how social organization and survival issues are handled (Schwartz, 1992, 2006; Schwartz et al., 2012). These orientations are broadly grouped around: (1) how

cooperation is elicited among individuals, indicating the requisites of coordinated social action, (2) how relationships between the social and natural world, and humans are organized, indicating the needs of biological beings, and (3) how individuals and groups organize relationships based on survival and welfare needs of the group (Fischer, 2014). Socio-cultural institutions and structures (Pratto et al., 2006), and associated influences of gender and arbitrary-set stratification (Fischer et al., 2012; Foels & Pappas, 2004; Sidanius & Pratto, 2001) are closely tied to universal yet personally, socially, and culturally variable preferences for value orientations and their offshoots. Principal among these orientations include the preference for benevolence, cooperation, universalism, and reciprocity as opposed to power, competition, hierarchy, and conformity generally depicted as egalitarian versus anti-egalitarian orientations (see Schwartz's contra-valenced, quasi-circumplex of values, Schwartz, 1992 (Figure 2.1); Sidanius & Pratto, 2001).

In the present research, values of central focus were those which mapped onto Schwartz's (1992), Hofstede's (2001), and Inglehart and Welzel's (2005) previously described human socio-cultural values frameworks (Table 2.1, p. 22-3). Namely, the current cross-contextual work explored values and related orientations covering traditional and hierarchical relations versus egalitarian gender roles, behaviours, and autonomy (Article 1); broad-level affiliative universalism and benevolence in familial and sibling relations versus values implicated in modernization, post-modernization, and globalization such as achievement, individualism, and hierarchy (summarized by Gemeinschaft versus Gesellschaft value orientations) (Greenfield, 2009) (Article 2); and performance, mastery, and social goal orientations in relation to autonomy-support versus hierarchical control and power (Article 3). Again, the studies and their results are presented in Table 8.1 and 8.2.

In the main, adolescents were seen to hold to overall patterns available in their environments while varying in the relative amounts they upheld these values. Of particular note, they also challenged traditional notions and former findings surrounding hierarchical values in some contexts. Overarching themes emphasized

the variegated presentation of values of the adolescents surveyed. Youth's value orientations were interpreted to be largely a result of embedded adaptive, transactional construction processes, wherein their development occurred in relation to the relative support of basic psychological needs (e.g., Deci & Ryan, 2002) on the part of socialization agents and features of the environment. These patterns fall into accord with active depictions of values acquisition and cultural learning across different domains and relationships (Grusec & Davidov, 2007, 2010; Rogoff, 2003).

The findings at hand harmonize with dynamic ecological and transactional models of acquisition (e.g., Bronfenbrenner, 1986; Grusec & Goodnow, 1994; Kuczynski, 2003; Sameroff, 2009). Such models contend that adolescents: (1) *accurately* detect predominant values in their socio-cultural contexts, and (2) either *accept* or *reject* these values based partly upon their own characteristics in terms of extant social structures and contexts' demands (i.e., gender grouping, socio-economic status (Articles 1, 2, 3), cultural background (Articles 2, 3), and time period or *Zeitgeist* (Articles 1, 2, 3)). Such grounds for the contextuality of adaptive socialization of values follows closely in alignment with complementary meta-frameworks on dynamic multi-level models of culture (Erez & Gati, 2004), socio-political and gender ideology across changing human ecologies (Hammack, 2011, 2014; Inglehart, 1977, 2000; Manago et al., 2014; Jennings et al., 2009), and social equality (see Jost et al., 2009). The collated results will be elucidated in following.

8.3 Interpreting and Situating the Research

8.3.1 Values Contextualized: Individual and Socio-Cultural Interactions

In matching with the upsurge in the study of values (see Hitlin & Pinkton, 2013; Vaisey & Lizardo, 2010), the thesis examined adolescents' value orientations and socio-cultural influences in three complementary contributions. As alluded to by Longest and authors (2013), these value orientations are thought to be "patterned by one's social location along a variety of stratified dimensions" (p. 1499), including

socio-demographic characteristics, cultural, and environmental features (Boer & Fischer, 2013). Moreover, the study of values necessarily informs comprehensive investigations of individuals' underlying beliefs, attitudes, motivations, and behaviours, as they are interwoven with their adaptive responding and constructions of identity (Baumeister & Muraven, 1996), relationality, and socio-cultural knowledge (Greenfield, et al., 2003), of which values are thought to constitute the core of self, other, and world understanding (Rohan, 2000).

8.3.2 Constructions of Self and Social Understanding

As young people develop, interacting with, adapting to, and imparting influence in turn on wider socio-ecological forces and contexts (Bandura, 1969, 2002; Cote, 1996), so too do their personal, social, and cultural values systems (Baumeister & Muraven, 1996; Coleman, 1988; Feather, 1980; Greenfield, 2013). The chapter of adolescence in a life's history constitutes a particularly ripe time for inquiry into the socio-culturally-tied dynamics of values and allied socio-political attitudinal acquisition as well as development of self and identity capital (Altemeyer, 2006; Cote & Schwartz, 2002; Rohan, 2000; Rohan & Zanna, 1996; Sears & Levy, 2003). Specifically, individualization processes exhibited across cultures in adolescence and beyond represent agency in identity formation (Marcia, 1966), wherein values play a crucial role in identity capital accrual and socio-cultural role selection (Côté & Schwartz, 2002). Cultural learning, such as value detection and social relationship formation accompany these individuation processes at the forefront of developmental tasks in adolescence (Greenfield et al., 2003).

In addition to adolescents' identity formation and other individual developmental processes (e.g., Stephen et al., 1992), values are closely coupled with their socialization, contributing to personal, political, and social security in specific

ecologies (e.g., Damon, 1983; Grotevant & Cooper, 1986; Prewitt & Dawson, 1969; Schlegel & Barry, 1991). As socialization involves “the tendencies that establish and maintain relations between individuals that ensure and maintain relations between individuals and that ensure the integration and respect of individuals as participants within a society that regulates behaviours according to societal codes” (Adams & Marshall, 1996, p. 430 in reference to Damon, 1983), social relationship requirements may seem to impede individual differentiation and needs’ fulfilment (individuation) or the exercising of agency and autonomy.

However, as has recently been drawn out, and maintained in the current research findings, this notion is thought to represent a false dichotomy (e.g., Kagitcibasi, 2013). Rather, across contexts, individuals require both perceptions of their unique individual worth as well a global sense of meaning and connection within their social environments (Adams & Marshall, 1996). These dual elements can likewise be seen to correspond to the basic psychological needs of agency or autonomy and belonging alongside a sense of competence or meaningful contribution expounded in Ryan and Deci’s (e.g., 2000b, 2002, 2003) Self-Determination Theory (SDT). Still, in accord with values theories, the relative weighting or preference for certain values varies by the individual in consideration of their socio-cultural context (e.g., Fischer, 2009; Hills, 2002; Kagitcibasi & Ataca, 2005; Kasser, Ryan, Zax, & Sameroff, 1995; Schwartz, 2009, 2012). These relations will be elucidated in the ensuing sections.

Other fruitful extensions of the link between adolescents’ personal values and their constructions of self fold in the influence of close relations’ values (e.g., parents (Barni, Knafo, Ben-Arieh, & Haj-Yahia, 2014; Barni et al., 2011; Knafo & Schwartz,

2004); siblings (Whiteman et al., 2011; Sulloway, 2007)) as well as qualities of the relationship itself like that of closeness (Knafo & Schwartz, 2012) or warmth (Kasser et al., 1995) and ideological setting (Hammack, 2011). These findings attest to the importance of considering the synergistic interactions between the developing adolescent, their key social partners (e.g., siblings, peers) (e.g., Larson et al., 2012) and socialization agents (e.g., media) (e.g., Jensen, et al., 2011), and other intertwined aspects of the transaction with their socio-cultural environments (Bronfenbrenner, 1986), explicating value development (Bandura, 2002; Greenfield, 2013).

In terms of such dynamic value acquisition through transactions between the adolescent and their social ecologies, young people exchange cultural knowledge and social capital, including values, norms, expectations, and reinforcements of certain outcomes with influential socialization figures such as teachers and school administration (Perez-Felkner, 2013). Here, there are individual-level (Kroger et al., 2010), social (Knafo & Schwartz, 2004, 2012), and contextual differences (Knafo, 2003) in the presentation and expression of adolescents' value orientations.

Taken together, such literature accords with the immediate findings, suggesting that adolescents are motivated to *actively* construct socially congruent values through a transactional process with the people they are close to, such as siblings and parents. Ostensibly, these particular relationships comprise contexts for value orientation development in their own right, while these socializing individuals are so influential in forming their sense of self as well as sense of belonging and understanding of the socio-cultural world at large (Bandura, 1986; Dunning, 2000; Tesser, 1988). Moreover, central relationships were seen to promote *individuation* with respect to the differentiation of values across adolescents in conjunction with

sociality and relatedness (Reis et al., 2000). Intrafamilial socialization, for instance, proved to be pivotal in egalitarian gender role orientation socialization (e.g., Davis & Wills, 2010) (Article 1) and influenced value orientation and social relationship structure in the reciprocal bond exhibited between brothers and sisters (e.g., McGuire & Shanahan, 2010) (Article 2).

As such, the development of values in adolescence on the whole constitutes a critical *transactional* process of *adaptation* to their respective environments' contexts and relationships, and, in consideration of equality-related influences, these values are partly circumscribed by wider socio-cultural values and organization (Cavell et al., 2007). In this way, adolescents' interlocking ecologies can be considered as the container inside of which value orientation development occurs (Vollegbergh et al., 2001), linked with qualities of the environment itself (e.g., school climate, Article 3) and pivotal socialization agents (e.g., siblings, Article 2). Agentic features of adolescent value development were additionally seen, refuting former passive models of socialization.

Specifically, traditional gendered and cultural patterns were supported, that is, 'successfully transmitted' and internalized in some contexts, whilst being refuted, contested, or rejected in others. This was the case for strong gender role socialization within the family (Article 1) and increased communitarian social value orientations in collectivistic contexts versus increased individual-focused value orientations in individualistic contexts (Articles 2). For instance, this pattern was exhibited in daughters' egalitarian challenging of traditional gender role orientation (Article 1), adolescent siblings' adaptation to globalization influences and their accompanying values (Article 2), and both boys' and girls' strong mastery, performance, and social

goal orientations across cultures (Article 3). Collectively, these findings are informed by reciprocal models of value development as depicted in Grusec and Goodnow's (1994) two-step process of values internalization and Kuczynski and Parkin's (2007, 2009) transactional perspective of socialization. Next we will see how it is such conclusions can be drawn from a study of the literature and results at hand.

8.4 Micro-Level Factors

8.4.1 Socio-Cognitive Developmental Perspectives in Social Knowledge Acquisition and Value Orientation Socialization

On the whole, the present work found evidence supporting the view that adolescents' possess high-levels of socially congruent knowledge, viz. personal, social, and cultural values. Further, these values are held to reflect particular contexts of development, and are linked in turn to their related attitudes, perceptions, and motivations (Bandura, 1989; Rohan, 2000). The values and attitudes studied (presented in Table 4.1, p. 57) included traditional versus egalitarian gender roles (Article 1), widespread socio-cultural value orientations (Article 2), and motivational goal orientation and perceptions of school climate (Article 3). These values and interlinked intrapsychic micro-psychological phenomena (e.g., attitudes, perceptions, motivations) appeared to confirm expectations vis-à-vis Developmental Systems Perspectives (DSP) (e.g., Ford & Lerner, 1992) and to be best understood through ecological person-in-context models of development (e.g., Super & Harkness, 1986) considering the transactional nature of adaptive individualization processes, exercising of agency, and fulfilment of basic psychological needs (e.g., Baumeister & Muraven, 1996; Cote, 1996; Marshall & Adams, 1996; Ryan & Deci, 2002).

8.4.2 Siblings' and Parent-Adolescent Value Orientations: Coherence and Accuracy in Social Knowledge

To begin, in the case of adolescents' value concordance in the context of the intrafamilial system and specific parent-child subsystem (Article 1), siblings and their parents of both genders displayed high levels of similarity as predicted by social learning and social cognitive development theory (Bandura, 1979, 1986). This is critical to note, in that prior research has largely failed to address the influence of opposite-gender parent-child and sibling subsystems on one another within the same family (Edwards et al., 2006; Floyd, 1996; Pike, 2012). The findings demonstrate the variable influence of different subsystems, especially the father-child relationship, which was largely previously neglected, while considering adolescent siblings' ability to formulate their own coherent set of gender role orientation ideology.

Such acquisition of social information can be construed as developmentally adaptive in the sense that family relationships, and the sibling relationship in particular, represent what has been postulated as a prime training ground for socialization, and social and self development (e.g., Cox, 2010; Dunn, 2011; Kramer, 2010). What is more, adolescents are able to develop distinct yet often interrelated value sets to their family members (e.g., political and religious values between parent-child (Acock & Bengston, 1978; gender ideology between father-child (Davis & Wills, 2010); gender role between brothers and sisters (McHale, Crouter, & Tucker, 1999); hierarchic self-interest comprised of individualism, competitiveness, success orientation, and Machiavellianism (Hadjar, 2004; Hadjar et al., 2008)). This formation can be seen to transpire across adolescence during which complex dynamic values orientations, accordant attitudes, and identities are thought to be taking form (e.g., Daniel et al., 2012; Stephens et al., 1992).

This proposition is additionally undergirded by work demarcating the relative balance between continuity and change in values and identity over the life's course (e.g., Elder, 1994; Hammack, 2014). As other longitudinal work has discovered, adolescent siblings and the quality of their relationship influence one another's life

trajectories and associated life choices due in kind to socializing effects like value transmission and social learning (e.g., Conger & Little, 2010; Cox, 2010; Craine, Tanaka, Nishina, & Conger, 2009; Granic et al., 2003; Kim et al., 2007).

It then follows, in view of sibling and parental influence, that the ability to develop a differentiated representation of personal as opposed to others' values concurrent with prevailing socio-cultural values can be construed as ecologically adaptive for social life (Duriez et al., 2007; Gottlieb, 2002). Involved processes include social comparison (Ansbacher & Ansbacher, 1956; Krüger, 2000) as well as modelling and social learning dynamics (Bandura, 1989), and these are particularly active in adolescent sibling's social identity and self development (McHale et al., 2011) and in value development in the context of warm, supportive, and non-coercive parent-adolescent relations (Knafo & Assor, 2007; Knafo & Galansky, 2008; Knafo & Schwartz, 2003, 2004, 2009, 2012). What is more, these socialization processes are influenced by interactions across ecological settings as in the case of parent-school ideological congruence (Knafo, 2003).

Adding to these observations, the first contribution illustrates the detection of both commonalities and variances across brother-sister pairs and within families regarding gender role orientation socialization. Adolescent mixed-gender sibling dyads largely resembled one another in terms of gender role orientations yet were able to perceive or at least reported differential gender socialization through gender-specific parenting behaviour on the part of their parents, and this was variable across gender. This goes against the gendered closeness perspective (e.g., Floyd, 1996), which postulates that females display greater levels of intimacy, sensitivity, and disclosure and thus possess higher levels of value concordance and awareness between themselves and their parents. However, both brothers and sisters were highly similar to their mothers' and fathers' gender value orientations. Other research has also found a lack of differentiation among brothers and sisters in terms of their intrafamilial value concordance, relationship practices, and quality (e.g., Floyd, 1996; Troll & Benston, 1979). All the same, this area remains unclear with a number of

other studies indicating gender differences between parent-child value socialization (e.g., Barni & Ranieri, 2010; Barni et al., 2011; Knafo & Schwartz, 2003, 2012). These discrepancies may be accounted for through domain- and context-based analyses (Grønhøj, A., & Thøgersen, 2009; Grusec & Davidov, 2010).

Interestingly, novel evidence for the important role of fathers in intrafamilial development of gender role orientation was uncovered, in which paternal effects were exhibited at both the attitudinal as well as behavioural parameter though mothers' influence was limited to their attitudes. This parallels past research, indicating the direct bearing of mothers' attitudes over and above the negligible impact of their behavioural influence (Wight, 2008), and the direct influence of fathers' attitudes in both their sons' and daughters' gender socialization (O'Bryan et al., 2004). The significant influence of fathers and mothers on their children of opposite gender additionally challenges some of the precepts of Bandura's socio-cognitive and social learning theory which postulates greater concordance between similar (e.g., gendered) relationship partners.

When drawn together, the above observations might well signpost large-scale cultural shifts in perceptions and influence of gender and gender equality, however variable (Fraser, 2013; Lesthaeghe, 2010; Manago et al., 2014). Altered social value orientations may then manifest in the more active role of fathers in children's socialization in combination with the increased attention researchers now grant fathers (e.g., Davis & Wills, 2010; Lamb, 2013). A previous claim further accentuates daughters' influence within the family subsystem, wherein fathers' traditional gender role orientations have been found to decrease with the presence of a daughter (Shafer & Malholtra, 2011).

Finally, in contrasting religious to gender orientation intergenerational transmission, a large-scale longitudinal study found that parent-child gender role attitude concordance was less consistent and weaker, and this was predicted to be connected, in part, to relational, life course, and societal processes (Min, Silverstein, & Lendon, 2012). However, this study did not look at within-family socialization

influences over multiple time points, necessary for further comprehension. In summation, the current research highlights the criticality of taking into account contexts such as the family as a system in addition to the relative influence of various subsystems in adolescents' gendered values socialization (Minuchin, 2002). Moving toward such integrated multi-levelled interactional analyses, it is essential to consider the transactional nature of developing individuals in their environments.

8.5 Environmental Influences

8.5.1 Environmental Affordances and Adolescent 'Fit' in Values Development

Structural factors like those of parental workplace factors and adolescents' socio-economic status impact development and social relationships in adolescence (e.g., Hadjar et al., 2008; Macmillan, 2011). They are thereby crucial in the socialization of values (Kohn, 1969; Savage et al., 2013). In illustration of the importance of social structuration in adolescent value development, the third article found support for the positive influence of autonomy-supportive school climate and the negative influence of harsh controlling climates across gender and culture in terms of academic motivation. A main aim of education is to instil prosocial motivations and orientations toward academic achievement and adjustment (Cohen et al., 2009). Thus, we see that where students perceived their school climates to be autonomy-supporting as well as less punitive and controlling, social, mastery (intrinsic), and performance-based (extrinsic) academic goal orientations were accordingly positively associated across the three nations and gender groupings.

This pattern of findings follows correspondent theory on dimensions of autonomy versus control or, alternately construed, warmth versus harshness (i.e., Maccoby & Martin, 1983) from the parent-child relationship (Baumrind, 1991a, 1991b). Likewise, Duriez and colleagues (2007) found that adolescent authoritarianism was linked to parenting style (low support and high control), parental goal promotion, and support for inequality (as measured by social dominance

orientation) was tied to parents' promotion of extrinsic goals. Knafo and Assor (2007) additionally discovered that adolescent and youth autonomous in contrast to controlled motivation toward agreement with parental values correlates with subjective well-being beyond parent-adolescent value concordance.

Nonetheless, as a recent meta-analysis of 40 years worth of research on intrinsic motivation and extrinsic incentives alludes, it is essential to consider the dynamic interplay of multiple elements beyond performance such as well-being *and* satisfaction across ages and contexts (e.g., school, home) as results indicated differential impacts of motivational aspects (Cerasoli, Nicklin, & Ford, 2014). Thus, the collective results seem to suggest positive adolescent outcomes are fostered when the adolescents' relationships and contexts support autonomy and related intrinsic value promotion in contrast to controlling and externalized value dynamics (e.g., Deci, Koestner, & Ryan, 1999; Jang et al., 2010).

Furthermore, in a separate study situated in the Israeli context, school-parent ideological fit in terms of values promoted impacted adolescents' congruence with their parents' values in addition to their accuracy in value perception and acceptance (Knafo, 2003). These interrelated strands of evidence provide rationale for the transactional and reciprocal nature between the adolescent, their key relationships, and contexts in the development of values and other socio-attitudinal phenomena (Kuczynski & Parkin, 2007, 2009; Sameroff, 2009; Sameroff & MacKenzie, 2003b). In this way, the 'fit' between context and adolescent may foster social adaptation with accordant variability across individuals, groups, and specific contexts with differential features (e.g., Eccles et al., 1993; Eccles & Roeser, 2011). Notably, as again predicted by SDT (Deci & Ryan, 2000, 2002), certain environmental affordances in structure will be more or less likely to scaffold psychological well-being, prosocial values, and other domain-based (i.e., academic social, performance, mastery) outcomes.

Additionally, in the second article, broad cultural orientations toward collectivism or familism were seen to promote social bonding and relatedness among siblings as they took on the role of caretakers. These social responsibilities could also

foster a sense of individual agency and maturation in interdependent sibling relations. Conversely, prior individualistic research among adolescent siblings emphasizes competition, individuation, comparison, and conflict reflective of competitive market-based ecologies and their social values (e.g., Hagan et al., 1998; Kasser et al., 2007; Milevsky, 2011; Noller, Conway, & Blakeley-Smith, 2008; Sisler & Ittel, 2014). This observation was further supported by the shift to the advancement of individual achievement in the face of increasing individualism and industrialization with parallel trends toward formal education's role of socialization in contrast to former familial collectivistic *Gemeinschaft*-based socialization processes (Greenfield, 2009; Greenfield, Maynard, & Childs, 2003; Maynard, 2004; Maynard & Greenfield, 2008).

As Kasser and Sheldon elucidate (2011), extrinsic rewards-based values like that of individualistic achievement, performance, materialism, and competition are tied to feelings that one's psychological needs are not met and an overall sense of insecurity. In a study of maternal and social contexts, late adolescents' materialistic values were discovered to relate to less nurturing maternal relationships (Kasser, et al., 1995). Of particular note, and in further accordance with the universality of SDT, these patterns of the beneficial qualities of socially-oriented and intrinsic values in the second and third contribution seemed to hold across gender and cultural grouping.

Additional substantiation of SDT's postulates addresses the detrimental psychological impact of materialism, external rewards-focused values, and associated environmental influences as detected in a meta-analysis of 753 effect sizes (Dittmar et al., 2014), as opposed to the augmenting influence of intrinsic, self-transcendent values in predicting well-being over time (e.g., Zhang et al., 2014). Inside of the educational context, further backing includes Ku and researchers' (2014) multi-study cross-sectional, longitudinal, and experimental investigation of British and Chinese students' learning outcomes. Here, students' learning was either stifled through materialistic influences or enhanced through intrinsic mastery-oriented approaches. It remains to be seen exactly how fulfilment of the proposed basic psychological needs of autonomy, belongingness, and competence impacts the developing young person

(Super & Harkness, 1986) across concentric contexts as in the interactions between school climate and family environment over time.

8.5.2 Ecological Interactions and Dynamic Adolescent-in-Context Models

As Bronfenbrenner's ecological systems view of human development (1979, 1986) and DSP's (see Scheithauer et al., 2009) theoretical implications declare, intersecting contexts and their interactions contribute to the embedded individual's construction of self and meaning (Cote, 1996). These influences interweave across the macro-level in the case of the socio-cultural environment (e.g., Greenfield, 2013; Kagitcibasi, 2013; Trommsdorff & Chen, 2012), meso-level in the case of school climate, community, and parental exchanges (e.g., Duncan & Raudenbush, 2001), micro-level in the case of relationship dynamics (e.g., McFarland, Moody, Diehl, Smith & Thomas, 2014), or psychological intra-individual characteristics (e.g., Rohan, 2000), and all shape adolescents' value development (see Figure 1.1, p. 4). With a match between personal and perceived socio-environmental values, optimal well-being and functioning can be suspected. Indeed, Allport (1955) and Rohan (2000) contend that the balance or tension between personal value priorities and perceived social value priorities represents a dynamic lifelong process.

We see then see that contextualized study is required so as to grasp mediating and moderating 'deep' level cultural, social, and individual values, social structures, and their interactions thought to dictate these complex, multi-levelled relationships in socio-cultural development (Erez & Gati, 2004; Nsamenang, 2011; Sidanius & Pratto, 2001). In the examination of academic under-achievement, for example, such multi-contextual survey linked social status and lowered academic achievement by way of individual, group, institutional, and cultural processes, including shifting of values between students of differential social, economic, and cultural capital (Van Laar & Sidanius, 2001). In keeping with these insights, the three articles underscore the need for integrated ecological and DSP views of development to survey adolescents' values and socio-cultural influences across contexts.

8.5.3 Gendered Values, Gendered Systems?

A common theme running through the research findings called out the relatively higher levels of agreement with social and gender equality and egalitarian values among females and the increased adherence of males to traditional values (Articles 1 and 2). This echoes past work on gender stratification / intensification theory (Priess et al., 2009) as seen in young males' heightened gender socialization and anti-egalitarian ideology in contrast to young females who largely exhibited the lowest levels of such phenomena, with expected cultural variability (e.g., Schwartz & Rubel, 2005; Schwartz & Rubel-Lifschitz, 2009). This would appear to fit with the first article's findings on increased power and hierarchy-enhancing, anti-egalitarian gender ideology and values on the part of males versus females, further in line with the multi-level explanations of social dominance theory (SDT; Sidanius & Pratto, 2001), system justification theory (e.g., Jost et al., 2004), social and individual identity (e.g., Stryker, 1968), social capital (e.g., Cote, 1996; Hagan et al., 2004), and social identity theory (e.g., Tajfel, 1982) (see Jost, 2011). The interfacing of these multi-levelled theories of social value orientations draw out privileged groups' (males') potential increased interest or at least predisposition toward continuing (gendered) hierarchies from which they could stand to benefit (Fraser, 2013).

As the current work additionally discovered, the impact of mothers' and fathers' workplace autonomy had no bearing on families' gender role socialization yet increased education was related to more egalitarian views across genders. Taken together with the third contributions' findings of positive relationship of perceived democratic environment on females' and males' goal orientations alike, it would appear that environmental setting affordances (i.e., in the form of liberal humanistic educational values) exert beneficial influence on both genders.

Importantly, it did not appear as if such impacts were lessened in collectivistic settings (Articles 2 and 3) whereby hierarchy and role prescription at large were to be expected, and thought to contribute to overall group harmony or binding orientations (e.g., Wright & Baril, 2013). This may likewise indicate the greater sway of

individualizing values and processes (e.g., autonomy and individuation) and social identity influences (i.e., gender role prescriptions versus choice) in globally-spreading individualistic values with modernization and formalized education (Manago et al., 2014), whereas the converse holds for *binding* value orientations (e.g., hierarchy, authority, tradition) and socio-cultural aspects in collectivistic interdependent settings (Vauclair & Fischer, 2011). Contributory mechanisms to the apparent amplified weight of individualistic values in individualistic settings or their difference across gender did not fully correspond with the current findings. Future work would do well to tie in Boer and Fischer's (2013) empirical cross-national study and their hypotheses in partitioning out value-social attitude linkages in varying contexts. While this prediction stresses the differential strength and consistency of value-attitude associations in individualistic versus collectivistic settings (*context independence hypothesis*), the immediate data only partially aligned with this developing theory.

Considering the complexity of socio-cultural systems in accounting for gender gaps (Hyde, 2014), if egalitarianism is not highly valued, or where power values are more prevalent, acting in accordance with gendered ideologies (e.g., beliefs, values, scripts, roles) which acquire certain types of socio-cultural capital (Bourdieu, 1986) would serve as a motivational and adaptive influence. For example, females' increased gender egalitarianism and shift toward formal educational performance-tied values (Article 2) and males' support for traditional gender roles (Article 1) proffer certain adaptive functions for the individual in their given environments.

Specific values systems apportion out differential complexes of social, cultural, and educational capital in line with these values and according socio-structural organization (Bourdieu, 1985; Sidanius & Pratto, 2001). Tenably, adolescents accurately perceive differential allocation of such social information and resources based on group belonging in a bidirectional process with their environments (Nosek et al., 2009). As Cavell and authors (2007) state, "individual differences and early experiences also affect children's success in various social contexts and codetermine their choice of future social contexts...children invest time and energy in

contexts that offer greater and more reliable payoffs than other contexts” (p. 47). Just how these interdependent socio-cultural and structural forces influence adolescents’ personal and social values development awaits future study, though complementary meta-theories like system justification theory (Jost, 2011) and diversities of feminist thought (hooks, 2000) can lend added insight into socialization and value orientation development (Jost et al., 2009).

Finally, multi-national studies on cultural values, social structures, and gender equality interlink support for social equality as tied to universalism and benevolence (Schwartz & Rubel-Lifschitz, 2009) on the whole with gender equality specifically (Fischer, et al., 2012). Fittingly, one additional reading of the above discovery regarding the lack of influence of mothers’ direct gendered behaviours may indicate simply that present social structuration did not enable mothers’ equal access to work, so as to engender a “do as I say, not as I do” (Wight, 2008) dynamic in their adolescents’ gender socialization. This attitude-behaviour discrepancy in adolescents’ value socialization has been additionally found by Knafo and Schwartz wherein mothers’ word-deed consistency was significantly associated to accuracy and acceptance of values while fathers’ warmth alone was important in value acceptance (2012).

Alternatively, Rubel-Lifschitz and Schwartz (2009) cite that as gender equality rises, inborn gender preferences will more readily take root. This then leads to a dovetailing between men and women such that females will pursue benevolence and universalism values while males pursue self-direction, power, and hierarchy-bound values. Other socio-biological explanations highlight males’ socialization toward agentic / autonomous values and behaviours and females’ social and relationally-based socialization (e.g., Leaper & Friedman, 2007). While somewhat in keeping with the differential gender role socialization of brothers and sisters, these predictions do not entirely correspond with the results of the third contribution. Moreover, the patterns of relationships were remarkably similar across culture and in consideration of gender as revealed in the multiple indicator multi-group analyses of

motivational goal orientation as predicted by the social equality contextual variable of school climate.

8.5.4 Gender Similarity Hypothesis

On the whole, males and females continued to largely resemble one another across the studies, and these variances in patterned relationships among values, attitudes, and motivations were relative: absolute level differences were not extreme. This is consistent with Hyde's (2005) *gender similarity hypothesis*, drawing attention to the predominant similarity between the genders, which is nevertheless thought to be influenced by cultural dimensions (Hamil et al., 2015; Hofstede, 2001). Still, some of the findings did remain inconclusive. As per one of Hofstede's cultural dimension indices of masculinity-femininity (Table 2.1), Germany scores relatively high on masculinity ratings, which would seem to predict decreased similarity between the sexes. In line with the first article, females displayed significantly higher levels of gender egalitarianism than males, across age. However, within the findings of the third study, German boys and girls were largely indistinguishable on the measures of academic goal orientation.

Collectively considered, this evidence aligns with ecological, domain-specific study of value orientations. For instance, refuting the cross-contextual gender invariance hypothesis of SDO (Sidanius, Pratto, & Bobo, 1994), wherein males are expected to support inequality and social dominance more than women, German females displayed high-levels of social dominance orientation (SDO) with older German women exhibiting even higher SDO levels than males (Küpper & Zick, 2011). A critical perspective on the invariance hypothesis cites rather the *contextual* invariance of gender inequality and anti-egalitarian political ideologies exhibited in non-voluntary, male-dominated, and non-democratic contexts in contrast to positive influence within more equal settings (Zakrisson, 2008). More tellingly, recent cross-cultural evidence points toward a movement of support for gender equality, at least by

females (e.g., Inglehart & Norris, 2003). This would seem to indicate shifts toward self-directive, autonomy-supporting, post-materialist values enactment (Deci & Ryan, 1991; Inglehart & Welzel, 2005; Schwartz, 1994).

The present cross-contextual, macro- and micro-level examination of adolescent boys' and girls' differential cultural learning promotes our contextualized understanding but, noticeably, this is an issue in need of much greater ecological research involving gender equality and development of specific value sets (Schwartz & Rubel-Lifschitz, 2009). Future research would do well to delineate where and under what conditions gender variability can be expected and its magnitude regarding socio-culturally constructed and adaptive value orientations, attitudes, and behaviours.

8.5.5 Cultural Value Systems Dynamics

As Sidanius and Pratto highlight in their theory of social inequality, gender represents an immutable factor in continued inequality (e.g., 2001), though Foels and Reid (2010) draw attention to the mediational role of social power and cognitive complexity in accounting for the proposed differential between genders. Likewise, Cleary (1996) suggests females may appear to benefit the most from democratic modes of relating in schools in explication of the decreased involvement and participation of girls upon entry into high school, though the positive influence of democratic school climate was apparent for both female and male adolescents (Article 3). Similarly, the augmented influence of formal education in children's socialization and lessening of extended family ties is also intertwined with women's increased participation in the workforce (e.g., Bianchi, 2000; Maynard & Greenfield, 2008), in alignment with increasing urbanization, individualistic values, market forces, and the so-called second demographic transition (Lesthaeghe, 2010) (Article 2). Mothers' rising participation in the workforce paired with increased direct childcare on behalf of both parents' has been shown to positively influence children and adolescents' development (Carneiro, Meghir, & Parey, 2013; Kalil, Ryan, & Corey, 2012), and specifically relates to egalitarian gender ideologies within families (Article 1).

Certainly, added inquiry is necessitated to illustrate additional variables and mechanisms involved in the divergence between males' and females' values socialization in adolescence across and within cultures.

8.6 Interactional, Multi-Level Influences

8.6.1 Adaptation and the Adolescent-in-Context

Taken together, this body of findings falls into person-in-context theorizations of adolescent value and identity development, whereby individuals develop accordantly adaptive orientations which affords individual and socio-cultural functioning (e.g., Kagitcibasi, 1982; Kagitcibasi, Ataca, & Diri, 2010). Such adaptive means of operating within specific environments or contexts transpires through reciprocal interactions, accumulating identity capital and a sense of self via interrelated agency-relatedness constructions (i.e., individualization (Adams & Marshall, 1996; Baumeister & Muraven, 1996; Cote, 1996, 2000; Cote & Schwartz, 2002).

As of yet, however, there is little consensus on when and under what conditions such agency-relatedness concerns coalesce or diverge across particular socio-cultural ecologies. For instance, researchers have postulated that collectivistic students and females will display relatively increased social and relational selves, motivations, and goals stemming from socio-culturally-variable values whereas Western students and males will exhibit increased personal and individualistic goals as they are socialized toward competition and achievement-linked identities (Gneezy & Rustichini, 2004; King et al., 2010). Still, the collated results found this premise to be equivocal. Nevertheless, as stated, the centrality of values in adolescents' meaning-making, socio-cultural resource accrual, and identity formation in transaction with - and adaptation to - their unique contexts provides both a nuanced and parsimonious response (Hammack, 2014).

8.6.2 *Social Knowledge*

As social dominance theory additionally elucidates (Sidanius & Pratto, 2001), and with which the current research corresponds, individuals in particular socio-cultural milieus or those who possess highly similar socio-demographic characteristics tend to exhibit considerable consensus in terms of value and social knowledge (Kenny & Acitelli, 2001; Knafo & Galansky, 2008). Just how do young people acquire and come to align so closely to the predominant socio-cultural value hierarchy (Schwartz, 1990)? It appears as if the social interactions from all surveyed contexts influence the development of accordant or adaptive value sets and their interrelated phenomena in adolescents (e.g., Knafo & Schwartz, 2012), though the underlying nature of these complex interactions awaits additional inquiry (Grusec & Davidov, 2010).

Social similarity in terms of social, cultural, or economic capital looks to exert a moderate effect on variability between and within groups of individuals. This notion aligns with Rokeach's (1973) theory of value acquisition, Kohn's (1969) analysis of social class and values socialization, and Knafo and Schwartz's (2003, 2004) view of similarity of shared experience in values development. Specifically, Knafo and colleagues (2012) found support for the strong positive associations among adolescents' values related to power and violent school climates and the mitigating influence of universalistic values. Critically, with higher levels of school violence values exerted even stronger influence. These findings highlight the interactive effects of combining environmental, social, and individual-level factors. Relatedly, in the first contribution, familial socio-economic status, as operationalized as parental education and income, positively influenced gender role ideology among family members. This echoes earlier notions vis-à-vis the importance of examining individuals-in-context and the impact of values on cognitions, attitudes, and behaviour at the aggregate level.

8.6.3 *Structure versus Agency: Adaptation, Identity, and Value Acquisition*

The foregoing work lends support to the relative influence of structure and agency (e.g., Coleman, 1986, 1990) in adolescents' value orientation development. Core socio-cultural values are thought to shape particular environments which guide how individuals develop a sense of self and other through institution-bound interactions (e.g., school systems, Eccles & Roeser, 2009). Illustrative of this, when adolescent students perceived high levels of authoritarian disciplinary measures, their motivations were negatively impacted with opposite patterns for democratic climates (Article 3). However, adaptation and resilience were also observed as in adolescents' adaptive merging of traditional values within rapidly changing cultural climates (Article 2) and contesting traditional gender role values (Article 1). In more recent literatures, adolescence has been emphasized as a time of skill building and resiliency training (Steinberg, 2008, 2014), combined with continuity of personal and socio-cultural values, identity, and meaning-making narratives (Hammack, 2011, 2014).

Such variegations in values at the personal, social, and cultural level may play an adaptive functional role for individuals (Baumeister & Muraven, 1996). As they expound in their concept of adaptation in identity construction:

“We propose that the relationship of identity to social context be understood in terms of *adaptation*. More precisely individual identity is an adaptation to a social context. The concept of adaptation is useful because it does not imply mere passive acquisition of identity by individuals, but it also does not overstate the scope of self-determination. History, culture, and the proximate structure of social relations create a context in which the individual identity must exist. People have individual wants and needs that must be satisfied within that context. Individuals actively choose, alter, and modify their identities based on what will enable them to get along best in that context.” (p. 405)

The idea depicted above is of particular use to the present conceptualizations in that identity is comprised of a group of self-definitions of profound meaning with the inclusion and non-exclusivity of values and priorities, character, potentials, and social roles (Baumeister, 1986). In this way, adolescents' values and the identities they construct and assume are likely a product and reflection of their (1) individual-level characteristics, (2) their social worlds and the socialization experiences afforded by them, including their individualization (differentiation in a socio-culturally specific milieu), and (3) their interactions with these contexts and key figures therein. Adaptation to and alteration of the socio-culturally available options and scripts offered to the individual varies in accordance with these multi-levelled phenomena and so identify and characterize the space for personal, social, and cultural change and development (Greenfield, 2009, 2013; Kagitcibasi, 1980, 1990, 2000; Kagitcibasi et al., 2010), as portrayed throughout the second contribution. Along these lines, a recent large-scale study of grandmother, mother, and adolescent daughter triads across the independent and interdependent contexts of Germany and Indonesia illustrates an example of rigorous research into contextualized adolescent value development. Albert, Trommsdorff, and Wisnubrata (2009) discovered the heightened intergenerational transmission of less common values (i.e., individualistic values in Indonesia), illuminating the alternate pathways and contexts of value orientation transmission, and their adaptive potential in rapidly changing socio-cultural contexts.

This is where the current research assists in delineating the importance of nuanced accounting for gender and cultural influences in specific ecologies. A socio-culturally uninformed, universalist etic-imposed approach in terms of absolute levels, mechanisms, or processes in value development in adolescence is not supported in light of the evidence or theory (Berry, 1989; Super & Harkness, 1979). However, what does appear to bolster interdependent adolescent development across contexts, whether in their relationships, families, schools, or entire socio-cultural environment, are the underpinnings of postulated psychological needs for all individuals, as propounded by SDT (Ryan & Deci, 2001).

Table 8.3

Taxonomy of Possible Cross-Cultural Differences (King & McInerney, 2014)

Cross-Cultural Differences	Descriptive Definition	Methodological Approach
Differential meanings	Meaning ascribed to a construct or a psychological phenomenon may be different across cultures	Semantic differential technique Prototype analysis In-depth qualitative interview
Differential factor structure	Construct's factor structure may be different across cultures	Exploratory factor analysis Confirmatory factor analysis Exploratory structural equation model
Differential salience	Psychological factors may be more relevant or salient in one culture vs. another	Mean-level differences through <i>t</i> tests, analysis of variance, latent mean differences Regression analysis Comparison of effect sizes
Differential nomological networks	Construct interrelationships may vary across cultures	Pan-cultural studies Moderator analysis

The SDT framework speaks to the positive influence of autonomy-support, social belonging, and contributions of competence. Importantly though, forthcoming research must attempt to explicitly address potential gender and cultural variability, contingencies or differences as expounded by Kagitcibasi (2013) (agency-relatedness across cultures), Greenfield (2009, 2013) (cultural values and pathways in human development), and others, including McInerney and colleagues' (e.g., King & McInerney, 2014; McInerney & Liem, 2009) cultural elaboration of Maehr's Personal Investment Theory (1984). For such purposes, King & McInerney's (2014) classification of cross-cultural investigations into psychological and social phenomena is assistive (see Table 8.3). Nonetheless, great amounts of work remain as the application of inherently multifaceted theory and correspondent methods is still in its nascence.

8.7 Discussion Concluding Remarks

Bearing in mind the above, no one perspective or explanatory cluster on contextualized value development can capture all of the complex and myriad variables and socio-cultural landscapes contributing to adolescents' value orientations. Here, an integrative pluralistic approach (Mitchell, 2004) combining established meta-theories of cultural trajectories through universal development (e.g., Berry, 1989; Greenfield et al., 2003; Nsamenang, 2008, 2011) assists in depicting how value orientations and interlinked phenomena such as social equality are perpetuated or, conversely, contested and so attenuated across multiple levels in adolescent development (e.g., Jost, 2011; Sidanius & Pratto, 2001). This framework lends particular insight into the interfacing of various actors and socio-cultural value systems which contribute to the alteration or maintenance of the socio-cultural stratification held as ubiquitous though markedly variable across cultures and history. A particularly promising strand of investigation includes the characteristics and conditions for positive social values development and change at each of these levels and how they influence one another.

Although such a model may seem to extend beyond the present findings at first glance, the perpetuation of hierarchy and inequality can only accurately be considered when drawing in such multi-levelled, embedded cultures of value orientations and motivations. Value systems are what drive individual, group, and cultural level interactions, directing societal functioning from entrenched institutional and policy measures to tangible everyday interactions (Schwartz, 2009). Cast in this light, any explanation of adolescent equality-related value formation and expression devoid of the role of wider socio-cultural forces at play in the maintenance and challenging of social inequality would be remiss.

Thus, on the whole, a line of inquiry worth actively pursuing includes the integration of ecological developmental systems perspectives on social inequality, and its rarely examined relation to personal, social, and cultural value development in

adolescence (Smetana & Killen, 2008). As individuals are seen to adapt to and, to a lesser degree, alter their environments, certain value sets and their ability to impart symbolic meaning as well as real resources and socio-cultural capital are discriminately assimilated into the core sense of self (Hitlin, 2003). From all accounts, the present integrated findings, as examined through ecological and dynamic systems lenses, show that adolescents actively formulate *coherent personal* and *accurate* assessments of prevailing social value orientations, attitudes, perceptions, and motivations in accordance with the contexts' relative fulfilment of core psychological needs. These value orientations can be considered a dynamic product of transactions with socio-cultural influences and central socialization figures, and are *adaptive* to their specific socio-cultural worlds. A bright future awaits investigation into the specific courses and mechanisms through which personal, social, and cultural values come together in the developing adolescent (Rohan, 2000).

Chapter 9. Limitations, Implications, and Conclusions for Adolescent Value Orientation Development

What exactly does the foregoing research mean for adolescents and those who work with them? This final section outlines the limits, educational and praxis-oriented implications, and conclusions of the current work. The confluence of the preceding chapters' findings provides the grounds for suggestions regarding policy and practice to benefit adolescents in particular. Subsequently, a case is made for contextual support of adolescents' positive value orientation development through interrelated pathways centring on ecological support for intrinsic values connected to basic psychological needs (e.g., Chirkov et al., 2003; Jang et al., 2010; Kasser, 2014). In following, a practicable example framework is presented entitled, 'Positive Values Orientation Development Strategy for Schools'.

9.1 Limitations

While this study has gained insight from its concurrent cross-contextual, diverse survey of adolescent values, and so contributed knowledge to the relationship between cultural, social, and individual or personal values orientations and related constructs, it bears limitations. The enlisted quantitative measures were a drawback in that due to resource constraints, extensive qualitative or other complementary ethnographic means for tapping into deep cultural processes (see, for instance, Greenfield, 1997) were not possible. However, the scales were considered as reliable and valid in assessing the targeted constructs across cultural grouping due to their prior adolescent-specific and cross-cultural applications; potential reference-group effects were minimized due to native-speaker back translations and utilization of short-form anchored response sets (Heine, Lehman, Peng, & Greenholtz, 2002).

In future studies, it would be most valuable, and indeed ‘utopian’ (Boehnke, 2001) to include value development-related processes in terms of value transmission and changes within contexts and across cohorts over time in order to disentangle Zeitgeist or generational-factors from socialization across generations. Furthermore, adoption of a learner-centered lens, as in latent class methods (e.g., Hayenga & Corpus, 2010; Lazarides, 2013) could assist in discernment of naturally occurring value and attitudinal profiles among adolescents. Additionally, as the thesis honed in on individual, intrafamilial, and wider socio-cultural-level analyses, classroom and school-level effects were not systematic addressed, thus forthcoming research should account for nested hierarchical, cultural, and gendered influences within and across cultures (e.g., Barni et al., 2014).

It would be useful for future inquiry to encompass sophisticated gender development frameworks within their analysis and utilize complementary scales, which enable the individual conceptions and perceptions of gender and self, necessary in a full analysis of gender-related dynamics (i.e., gender stereotype, self-concept, and gender identity development as in the Gender Self-Socialization Model (Tobin et al., 2010)). Ultimately, the interaction between culture and gender in adolescent value development needs to be examined with greater detail, including socio-demographically-linked variables such as political features, degree of gender equality, multiple indicators of socio-economic status, and educational system factors (e.g., Bradley & Corwyn, 2002). It is wholly insufficient to consider only individual-level factors in value orientation development and social change, which is the case for much of the research on socio-cultural constructs within mainstream psychology (e.g., Adams et al., 2015).

As portions of the present work were correlational in nature, aside from the first and second article which were cross-lagged and socio-historical, respectively, causal relations could not be presented and were not possible due to the cross-sectionality of the samples enlisted. The study of boys and girls and their across-time interactions with their cultural and social environments, inside and outside of their

sibling relationship, families, classrooms, schools, and communities is required in a full examination on gender and ecological dynamics of values orientation development.

By specifically speaking to as opposed to being constrained by a universalist ‘one-size fits all’ paradigm, which fails to detect significant cross-group variations in value and attitude-related patterns or acknowledge the often times very different manifestations of cultures (Hwang, 2015), the current ecological work assists in paving the way for more targeted approaches (e.g., Zepeda, Gonzales-Mena, Rothstein-Fisch, & Trumbull, 2006). Of course, it is still possible for between-student differences to serve as potential confounds (e.g. out-of-school environment and unique peer and non-peer constellations (Amnå et al., 2009), however, the work at hand specifically attempted to augment the diversity of studied samples, allowing for a unique assessment of the hypothesized culturally- and gender-variable value-linked social and psychological phenomena. More research is needed to clarify equivocations in follow-up empirical studies.

In addition, the very pluralistic nature of *life courses*, *adolescences*, *youths*, and *childhoods*, draws attention to the essential shaping role of culture, not to be neglected in universalist approaches (e.g., Jensen, 2012; Nsamenang, 2011). Anthropological and ethnographic theory and observation are illustrative of recent fruitful conceptualization, insights, and methods into human socio-cultural development (Greenfield, 1997; Hwang, 2015). These disciplined calls further solidify the overall need for greater socio-cultural survey across the lifespan within and across specific cultures, as advocated by Elder (1994), Albert and Trommsdorff (2014) and Greenfield (2009), and in consideration of the cultural Zeitgeist (Boehnke, 2001). Complementary to this point, qualitative accounts from adolescents themselves are required for fuller more accurate depictions as well as their triangulation with quantitative methodologies (e.g., Onwuegbuzie & Teddlie, 2003).

9.2 Future Research

A comprehensive research programme must attempt to encapsulate the complex nature of adolescence and changing values in ecological context (Greenfield, 2009). In consequent, no singular paradigm suffices to address the multidimensionality of adolescent values study across a myriad of socio-cultural environments. Nevertheless, as previously laid out, developmental systems theory and ecological perspectives of human development are able to account for the adolescent-in-context dynamic integral to responsible future work that honours both the individual agent whilst acknowledging the very real impact of social groupings and structures as they present across cultures (e.g., Archer, 2003; Keller & Greenfield, 2000). Systems-couched intrafamilial, school, community, and culturally specific research across time is likewise enabled within ecological and systems theory's consideration of microsocial, sociocultural, and temporal parameters.

Additional transdisciplinary, developmental approaches to the study of values development in adolescence will engender deeper cross-contextual, embedded understandings of individual, social, and cultural variations and similarities. Future integrative analysis would do well to tie in: (a) biological, (b) social, and (c) cultural elements (Runciman, 2009) and their interactions as the present work did not explicitly address the genetic and epigenetic versus shared and unique environmental influences shown to be at play in value development (Benjamin et al., 2012; Fowler & Dawes, 2013; Jost et al., 2014; Knafo, Israel, & Ebstein, 2011; Schermer, Vernon, Maio, & Jang, 2011). Moreover, the field as a whole lacks an organizing theory on how values impact cognitions, behaviours, and affect. Knowledge of this nature would assist in determining systems of influence in the construction of personal, social, and cultural values-related phenomena.

Building upon the present methodology, nested research designs, multiple methodologies, and multi-level statistical analyses proffer means of assessing system processes and contextualized influences between and within individuals. Although

such diverse, and admittedly complex approaches may seem to be overly complex, development itself is characterized by non-linearity and dynamic shifts in complexity theory terms (McKenzie & Sameroff, 2003). Adherence to traditional models which enlist the typical agents of suspected influence, which to-date stem from overly sampled cohorts (Henrich et al., 2010) will miss key phenomena or even, produce iatrogenic effects (see *The Bridging Cultures Project* for an example of how to counter such non-culturally informed influences (Rothstein-Fisch et al., 2009; Zepeda, et al., 2006)). Innovative research and educational initiatives means are called for in robust inquest into changing conceptualizations and presentations of adolescence in increasingly diversified and precarious globalized ecologies (Greenfield, 2013, 2015; Schoon & Silbereisen, 2009).

Values discourse draws in notions of social, cultural, and educational capital or resources. Social capital and social status theories delineate the power of symbolic culture as well as material outcomes in socialization considering youth as a capitalization period (Hagan et al., 1998; Hadjar, 2004). It is here that an anthropological or culturally-based sociological approach enlisting emic versus imposed etic approaches would assist in seeing how it is that structural frameworks like age, gender, educational, cultural or migrant background impacts and makes available different options to adolescents. In this way, value and identity development could be more closely examined in relation to the affordances granted to different groups (e.g., boys and girls, migrant versus non-migrant status, diverse families).

9.3 Implications for Policy and Praxis

“You must change values, then beliefs, then behaviour” – Clinton Bunke

The agenda for future research sets the stage for discoveries that will not only extend comprehension of adolescents and their social development broadly, and value development, specifically, in context; it informs potential measures toward positive values development and social equality for all adolescents and their communities.

Efforts that aspire to improve adolescents and their surrounding environments therefore need to acknowledge and address the ambiguity and rapid shifting of their particular social worlds and the socio-cultural capital they provide (Jensen et al., 2011).

The question presents itself in terms of how educators and policy makers can best address such challenges through policy and programming (Bosaki, 2012; Bronfenbrenner, 1974). It is, however, fundamental. Like Greenfield and researchers (Greenfield, Suzuki, & Rothstein-Fisch, 2006) write in regard to the educational context, “culture... is at the core of decisions made by teachers, parents, school officials, and administrators. As systems of values and beliefs....drive learning, socialization, and development” (p. 289) it is crucial to acknowledge the variability of what they term, ‘ethnotheories’ or specific socio-cultural value sets present within constructions of symbolic culture and related values in a timely manner. This approach may prove far more effective than failing to mention underpinning reasons for socio-cultural inequality, or neglecting the issue entirely (Dorling, 2011; Wilkinson & Pickett, 2010). In fact, a recent examination headed by Vincent and Iqbal (Institute of Education, University College London, 2015) discovered more divisions among children’s friendship networks along social class lines than by ethnicity in part due to parental management of social relationships. It seems young people are not the only ones in need of ‘remediation.’

Finally, social equality affirming (social hierarchy attenuating) efforts that enable self-determination, agency or autonomy (Kagitcibasi, 2013; Ryan & Deci, 2002) in a context of warmth and acceptance (Buist et al., 2002; Van Ijzendoorn & Sagi, 1999) could lead to largely universal positive impacts, though, in line with the present research, the route of attaining such equality ought to be sensitive to the given group and individual (Alonso-Arbiol, Abubakar, & Van de Vijver, 2014; Sayer, 2011). Practicably, increased democratic input into decision-making and so, autonomy-support when presented in safe, secure, and warm conditions denoted as

‘authoritative’ (e.g., Baumrind, 1991b; Maccoby & Martin, 1983) seems to foster the psychological need of agency / autonomy in the educational setting.

The present work also supports foregoing successful contextualized interventions in adolescents’ prosocial development through the sibling relationship with its reciprocal elements (e.g., Kramer, 2010); the benefit of fostering positive parent-child relationships for socialization (e.g., Cavell et al., 2007); and supportive socio-emotional, scholastic, and civic school settings (e.g., Cohen, 2006; Jones & Bouffard, 2012). Important to note, when increased participation alone is present under certain conditions (e.g., collectivistic cultural setting; lack of structure or guidelines), this may signal disorder to some individuals and therefore have a variable influence on (adolescents’) value development and psychological need fulfilment (Rudy & Grusec, 2001). In following SDT, both structure and autonomy are crucial for adolescents’ well-being (Jang, Reeve, & Deci, 2010).

Thus, by concomitantly examining the structure and values-based content of social and educational interventions and their interactions (e.g., Jones & Bouffard, 2012), researchers, educators, and policy makers are in a better position to foster long-lasting prosocial and beneficial outcomes (e.g., decreased stress, increased life satisfaction, growth and well-being vs. malfunctioning and ill-being (Vansteenkiste & Ryan, 2013). Positive value orientation development initiatives and strategies will then spur long-lasting learning and life success through promotion of self-transcendent values and intrinsic motivation in place of materialistic performance-based aims (Kasser, 2014; Ku et al., 2014). Through systematic evaluations of these efforts, impending research can continue building a base of evidence to develop the most efficacious values education. This would effectively: 1) replace ineffective, harmful, “remedial”, individual measures disconnected from institutional, structural or cultural change (e.g., Hammack, 2011) and 2) increase overall long-term impact, reducing costs and resources compared to isolated (e.g., non-intersectional, non-ecological) approaches (e.g., Cohen, 2006; Cohen et al., 2009; Weissbourd, Bouffard, & Jones, 2013).

9.3.1 Adolescents as Cultural Brokers

Adolescent biological imperatives cut across cultures (Weisfeld, 1999), yet the impact of socio-cultural factors shape development, contributing to incredibly diversity of cultural variation in the length and characteristics of adolescence (see Brown & Larson, 2002). In light of what has been deemed the second demographic shift in combination with globalization processes (e.g., urbanization, communication and technological advancement, shifting emphases on women's workforce participation, career success, and familial trends) and their related values (Ashby & Schoon, 2010), adolescence and the transition into young adulthood and then adulthood occupies a central role in understanding cultural continuance and change between generations (Greenfield, 2009; Manago et al., 2014).

To extrapolate from and Guan, Greenfield, & Orellana (2014), an agentic view of adolescent development sees young people serving as 'cultural brokers' (e.g., Trickett & Jones, 2007) between generations and entire cultures, as they are exquisitely adapted to negotiating and meeting the demands of cultural assimilation, integration, rejection, or maintenance (Berry, 1997). It is with this conceptualization that the present thesis brings the promissory power of examining adolescents' value orientation as it manifests in multiple contexts; adolescence serves as a window to cultural continuance and social change (Heine, 2011). It proffers space for challenging socio-cultural inequalities and so, positive transformation (Unger, 2004).

However, specific subgroups of adolescents such as bicultural individuals are at particular risk when predominant values across multiple contexts are conflicting or else at a mismatch to their developmental needs and background contexts (e.g., No et al., 2011). Moreover, a gender-sensitive approach additionally attests to the central role of shifting value orientations, whereby modernizing socio-demographic-linked changes move individuals away from what Manago and colleagues state as, "*complementary and ascribed gender roles*" to those which are "*chosen and equal*" as well as notions of "*procreation and family responsibility*" to that of "*personal*

pleasure and responsibility” (2014, p. 198). Paying heed to changes in different developmental goals of interdependence and independence (Greenfield, 1994) thus enables policy makers and educators to best motivate and encourage prosocial and personal development in adolescent girls and boys.

Not to group all adolescents solely in reference to their socio-demographic characteristics, a transactional view of development lends insight into the interface between the individual and their environment. Others have spoken to this interactive co-constitutive nature including Kuczynski & Parkin (2007, 2009), Sameroff (2003), and Archer (2003). In this way, a comprehensive depiction of adolescents interacting with their socio-cultural world can paint a fuller picture of how and under what conditions cultural, social, and individual values, and accordant capital or resources, come to be, and, come to change (Cote & Schwartz, 2002; Greenfield, 2009). Unger (2004) depicts the ‘negative capability’ of an organism in its socio-cultural environment and all the ways in which traditional or predominant values can shift through their ingenuity and adaptive, creative responding. It is in this space of multi-levelled ecologies of developing individuals that individual, social, and cultural capital can be contested, acquired, shifted, and accumulated.

In thinking with educator and anti-oppression academic, bell hooks (1994, 2000), while equality has been a side focus in the present thesis, it is critical to ask, “equal with who?” in striving for self-actualization and community cultivation beyond dominant ideals, values, and ideologies. Complementarily, Karen Barad’s (2007) complexity-oriented view of ecological-individual intra-action, or alternately expressed, of intersectional entangled (in-) equalities (Roth, 2013), leads us to conceive of the combined ‘dance’ of the developing adolescent with their environment. Consequently, funding and programming which specifically leverages’ the adaptive, resilient, and creative opportunities for ‘intra-action’ through coordinated activities in adolescence would be particularly effective and impactful with respect to inclusive ideologies (Vespa, 2009).

Already, a generative and creative dialogic intervention toward autonomy-support and orientation has proven effective in the school context (Kaplan & Assor, 2012) along with meta-analytic evidence of autonomy-support interventions in general (Su & Reeve, 2011), and further linked to prosocial behaviour (Gagne, 2003). Guardians, educators, policy makers, and stakeholders can further do justice to the diversity of adolescents' experiences through the direct adoption of a person and community-centred model in co-constructed, intersectional research, education, and implementation (Kozleski, Artiles, & Waitoller, 2013; Science & Justice Research Centre (Collaborations Group), 2013); Topping & Trickey, 2007).

Table 9.1

Ecological Strategy for Value Development in Schools

Positive Values Orientation Development Strategy for Schools	
School-level	<p>Students, staff, guardians, administration and other stakeholders co-determine school rules laid out in a charter to form climates of non-coercive participation. Understood by all, democratic, and clearly displayed.</p> <p>- Provide education on disciplinary harshness and positive value orientations (e.g., adaptive goal- and egalitarian gender orientations); voluntary school-wide community service initiatives.</p>
Classroom-level	<p>Climates of democratic decision-making and low disciplinary harshness through co-determination of rules, lesson content, accountable follow-through, etc..</p> <p>-Positive value orientation support through educative materials, discussion groups, peer support learning.</p>
Educational staff-level	<p>Model and espouse values (e.g., input in decision-making, gender egalitarianism, non-punitive measures) with students as well as peers.</p> <p>-Professional development trainings: embed positive values education in daily school activities.</p>
Family-level	<p>Offer seminars on positive value orientation development for guardians, families.</p> <p>-For instance, gender-specific parenting training for guardians and conflict resolution for siblings.</p>

9.4 Conclusion: Ecological Values Orientation Development in Adolescence

With the onset of accelerated intermingling of values in a diversified, interconnected world, investigation of adolescents' value orientations is both timely and critical (Bosaki, 2012; Jensen et al., 2011). It is imperative to depict the construction and manifestation of adolescents' values and socio-attitudinal orientations across various milieus, in the face of complicating globalization forces such as widespread development of, and movement to, urban areas along with educational system reformation and technological and socio-political upheavals (Greenfield, 2015; Ruddick, 2003). Furthermore, the socio-cultural and personal nature of values are of particular relevance to teens (Bandura, 1989; Schwartz, 1992; Smetana, 2010) who are tasked with attempting to balance agency/autonomy and relatedness (Kagitcibasi, 2013), identity formation and role expectations (Adams & Marshall, 1996; Baumeister & Muraven, 1996), running alongside deep-seated value orientation and worldview formation (Piaget, 1932; Rohan, 2000; Sears & Levy, 2003).

By adopting a socio-ecological systems view of socialization and values orientation formation and expression, the work at hand contributes, to the author's knowledge, the first comprehensive account of diverse groups of adolescents' value orientations in light of socio-cultural influences tied to equality across multiple contexts. Significant departures were predicted from previously held compartmentalized and, arguably, static notions of adolescent values socialization. Past inquests were frequently scattered, uni-disciplinary, and limited in scope, typically avoiding the interplay of structure and agency or young people's role altogether (Killen & Smetana, 2010). Rather, integration of diverse sub-disciplines like the political, sociological, psychological, and anthropological insights made presently available allow for increased understanding and enhanced potential for application.

This thesis aimed to inform the current dearth of knowledge with respect to adolescents' value orientation development through the analysis of specific contexts by enlisting apposite socio-ecological and developmental systems perspective theory

and methodology. The previous sections contained a synthesizing discussion of the three illustrative articles depicting adolescent value orientations across multiple contexts, and expounded differential facets of values development with an emphasis on interlinked socio-cultural factors of culture and gender.

The first contribution investigated intrafamilial socialization of Gender Role Orientation (GRO) in adolescent siblings through the application of a longitudinal multi-level model, highlighting familial and macro-level (parental workplace and socioeconomic status) contexts. The second article situated the adolescent sibling relationship in international and cross-cultural context, synthesizing research on the interplay between cultural value change and human development and how they come to bear on brothers and sisters. The final contribution offered a cross-cultural and gendered analysis of adolescents' goal orientations (mastery, performance, and social motivations) in relation to school climate dimensions (democratic input into decision-making and harsh disciplinary) set in an educational context.

Taken together, the three articles present and inform a dynamic multi-faceted view of value orientations in adolescence as they manifest within and across central contexts of development. Overall, adolescents' values were seen to reflect adaptive individualization and socialization processes in consideration of basic psychological needs (e.g., Ryan & Deci, 2002) and appeared to be socio-culturally aligned to their unique environmental contexts. Agentic, transactional ecological models of values development aided in depicting underpinning universalities in addition to patterns of variances considering gender and culture. By applying dynamic systems views of social stability and change in related to human development, core value orientations and their impact on the structure of particular socio-cultural systems and individuals within them (e.g., Greenfield, 2009, 2013), the current work paves the way for future inquiry at the individual, relational, group, and cultural level (Wuthnow, 2008). Moreover, it holds educators and policy makers accountable for their central role in promoting positive value orientation development, as socio-cultural influences shaped

adolescents' values in regards to environmental affordances supporting their core psychological needs.

In view of the increased meeting of diverse cultures and values, forthcoming research is encouraged to adopt further ecological and systems-based examinations, including the self-determination theory (SDT) and structure-agency paradigms in relation to adaptation specifically, and to practice integrative pluralism of fields and perspectives in the study of adolescents' value orientations. This task is easier said than done, as much of the predominant literature stems from isolated readings of political and sociological theory and psychological value transmission theory in addition to limited - often ethnocentric - views of what is essentially a plurality of 'adolescences'. Still, it is at the intersection and departures of various groups' and individuals' value orientation development that abundant insights into how best to foster positive development might be uncovered. In so doing, the thesis calls for additional ecological value orientation study in adolescence through cross-contextual, multi-faceted approaches summarized as 'integrative pluralism' to benefit developing individuals and their wider socio-cultural environments.

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Tables Continued

Table 7.3

Means and Standard Deviations by Culture and Gender with Independent Samples t-tests for Within Country Gender Differences and Effect Sizes

		Germany				Kenya				Spain			
		Male		Female		Male		Female		Male		Female	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
		<i>t</i> (<i>df</i>) / Cohen's <i>d</i>				<i>t</i> (<i>df</i>) / Cohen's <i>d</i>				<i>t</i> (<i>df</i>) / Cohen's <i>d</i>			
		<i>N</i> = 148		<i>N</i> = 149		<i>N</i> = 122		<i>N</i> = 170		<i>N</i> = 91		<i>N</i> = 95	
Goal orientation	Mastery	4.35	.47	4.26	.67	4.43	.63	4.63	.49	4.04	.62	4.34	.61
		<i>t</i> (<i>df</i> = 295) = 1.32				<i>t</i> (<i>df</i> = 290) = -2.92**				<i>t</i> (<i>df</i> = 184) = -3.29***			
	Performance	3.57	.77	3.44	.77	3.81	.61	3.86	.69	3.71	.52	3.59	.58
		<i>t</i> (<i>df</i> = 295) = 1.46				<i>t</i> (<i>df</i> = 290) = -.69				<i>t</i> (<i>df</i> = 184) = 1.48			
	Social	3.61	.78	3.59	.80	4.04	.67	4.20	.57	3.60	.63	3.84	.62
		<i>t</i> (<i>df</i> = 295) = .17				<i>t</i> (<i>df</i> = 290) = -2.18**				<i>t</i> (<i>df</i> = 184) = -2.56**			
School climate	Democratic	2.78	.74	2.76	.70	2.76	.87	2.84	.92	2.98	.67	3.13	.66
		<i>t</i> (<i>df</i> = 295) = .33				<i>t</i> (<i>df</i> = 290) = -.79				<i>t</i> (<i>df</i> = 184) = -1.61			
	Harsh	3.24	.59	3.31	.55	2.96	.67	3.05	.65	3.46	.58	3.40	.59
		<i>t</i> (<i>df</i> = 295) = -.99				<i>t</i> (<i>df</i> = 290) = -1.22				<i>t</i> (<i>df</i> = 184) = .60			

Note. *d* = Cohen's *d* effect size; **p* < .05, ***p* < .01, ****p* < .001.

Appendices

Appendix 1. Measures Administered in Article 1 (GERO Study)

A). Construct: Gender Role Orientation (GRO)

Reference: (Krampen, 1983)

Answer Format: Likert; Strong disagreement (1) to Strong agreement (5)

Gender Role Orientation (GRO) Mothers

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
Frauen sollte zugunsten des Mannes auf Karriere verzichten. [Women should avoid a career for her husband's sake.]	1.75	.94	.530
Mann sollte Führungsposition einnehmen. [Men should take on leadership positions.]	1.36	.75	.465
Mädchen sollten Frauenberufe erlernen. [Girls should learn women's jobs.]	1.43	.77	.378
Männer sollten nicht nur Haushalt und Kinder machen. [Men should not only do housework and take care of children.]	1.48	.89	.405
Cronbach's α (4 items) = $\alpha_{\text{mothers}} = .67$			
Note. <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

Gender Role Orientation (GRO) Fathers

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
Frauen sollte zugunsten des Mannes auf Karriere verzichten. [Women should avoid a career for her husband's sake.]	1.73	.95	.586
Mann sollte Führungsposition einnehmen. [Men should take on leadership positions.]	1.61	.99	.644
Mädchen sollten Frauenberufe erlernen. [Girls should learn women's jobs.]	1.54	.91	.442
Männer sollten nicht nur Haushalt und Kinder machen. [Men should not only do housework and take care of children.]	1.97	1.12	.492
Cronbach's α (4 items) = $\alpha_{\text{fathers}} = .742$			
Note. <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

Gender Role Orientation (GRO) Sons

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
Frauen sollte zugunsten des Mannes auf Karriere verzichten. [Women should avoid a career for her husband's sake.]	2.15	1.16	.638
Mann sollte Führungsposition einnehmen. [Men should take on leadership positions.]	2.10	1.27	.736
Mädchen sollten Frauenberufe erlernen. [Girls should learn women's jobs.]	1.88	1.22	.619
Männer sollten nicht nur Haushalt und Kinder machen. [Men should not only do housework and take care of children.]	2.21	1.44	.600
Cronbach's α (4 items) = $\alpha_{\text{sons}} = .812$			
<i>Note.</i> <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

Gender Role Orientation (GRO) Daughters

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
Frauen sollte zugunsten des Mannes auf Karriere verzichten. [Women should avoid a career for her husband's sake.]	1.39	.68	.588
Mann sollte Führungsposition einnehmen. [Men should take on leadership positions.]	1.37	.99	.461
Mädchen sollten Frauenberufe erlernen. [Girls should learn women's jobs.]	1.37	.91	.257
Männer sollten nicht nur Haushalt und Kinder machen. [Men should not only do housework and take care of children.]	1.48	1.12	.474
Cronbach's α (4 items) = $\alpha_{\text{daughters}} = .614$			
<i>Note.</i> <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

B). Construct: Gender-Specific Parenting (GSP)

Reference: (Hoffman & Kloska, 1995)

Answer Format: Likert; Strong disagreement (1) to Strong agreement (5), stem, “For my mother / father...”

Gender-Specific Parenting (GSP) Sons

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
It is more important to raise a son to be strong and independent than to raise a daughter that way.	1.40	.82	.524
It is as important to steer a daughter toward a good job as it is with a son. (-)	1.31	.72	.408
Education is important for both sons and daughters but is more important for a son.	1.73	.89	.303
I see nothing wrong with giving a little boy a doll to play with. (-)	2.66	1.34	.208
Cronbach's α (4 items) = $\alpha_{\text{sons}} = .693$			
<i>Note.</i> (-) = recoded item; <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

Gender-Specific Parenting (GSP) Daughters

<i>Scale Items</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
It is more important to raise a son to be strong and independent than to raise a daughter that way.	1.30	.69	.414
It is as important to steer a daughter toward a good job as it is with a son. (-)	1.16	.58	.303
Education is important for both sons and daughters but is more important for a son.	1.26	.55	.380
There is nothing wrong with giving a little boy a doll to play with. (-)	1.71	.93	.347
Cronbach's α (4 items) = $\alpha_{\text{daughters}} = .564$			
<i>Note.</i> (-) = recoded item; <i>M</i> = Mean, <i>SD</i> = Standard Deviation, <i>r_{it}</i> = Item-total Correlation			

C). Construct: Workplace Autonomy (WPA) (Parental)

Reference: (based on Hagan, Boehnke, & Merkens, 2004)

Answer Format: Dichotomous; No (1); Yes (2) answer to stem, “In your workplace....”

Scale Item

1. Do you carry out instructions from other co-workers?
 2. Do you give co-workers instructions?
 3. Do co-workers lead other co-workers in turn?
 4. Do you give advice to other co-workers?
 5. Does the person who gives you instructions, receive instructions themselves?
 6. Do you receive instructions?
-

Appendix 2. Scales Administered in Article 3 (Cross-Cultural Study)

Construct: School Climate

Reference: (Brand et al., 2003)

Answer Format: Likert; Strong disagreement (1) to Strong agreement (5)

A). Input in Decision-Making (Democratic, Autonomy-Support Climate)

<i>Scale Item</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
In our school, students are given the chance to help make decisions.	3.52	1.18	.400
Students in this school have a say in how things work.	3.33	1.15	.420
Students get to help decide some of the rules in this school.	2.70	1.26	.476
Teachers ask students what they want to learn about.	2.34	1.23	.390
Students help decide how class time is spent.	2.36	1.22	.440
Cronbach's α (5 items) = .672			

Note. $N = 784$; M = Mean, SD = Standard Deviation, r_{it} = Item-total Correlation

B). Harsh Disciplinary Practices (Punitive, Authoritarian Climate)

<i>Scale Item</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
Most of our teachers expect us to do everything on command.	3.86	1.21	.261
When they ask a question, our teachers often want to hear only one particular answer.	3.18	1.33	.382
Most of our teachers demand complete silence during lessons.	3.65	1.16	.393
Our teachers make most decisions without asking us for our opinion.	3.09	1.24	.505
What of what happens during lessons is usually exclusively up to our teacher.	3.18	1.23	.420
It is easy for a student to get kicked out of class in this school.	2.84	1.24	.342
The rules in this school are too strict.	3.07	1.22	.280
Students get in trouble for breaking small rules.	3.57	1.17	.225
Teachers are very strict here.	3.18	1.12	.354
Students get in trouble for voicing their opinion.	2.52	1.29	.399
Cronbach's α (10 items) = .697			

Note. $N = 784$; M = Mean, SD = Standard Deviation, r_{it} = Item-total Correlation

Construct: Academic Motivation Orientations

Measure: General Achievement Goal Orientation Scale (GAGOS)

Reference: (McInerney et al., 2003)

Answer Format: Likert; Strong disagreement (1) to Strong agreement (5)

A). Mastery Goal Orientation

<i>Scale Item</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
I am most motivated when I see my work improve.	4.51	.75	.695
I am most motivated when I am good at something.	4.47	.74	.642
I am most motivated when I solve a problem.	4.28	.79	.671
I am most motivated when I am becoming better at my work.	4.41	.72	.753
I am most motivated when I am confident I can do my schoolwork.	4.14	.87	.574
Cronbach's α (6 items) = 0.851			

Note. $N = 784$; M = Mean, SD = Standard Deviation, r_{it} = Item-total Correlation

B). Performance Goal Orientation

<i>Scale Item</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
I am most motivated when I get a reward.	4.03	1.01	.477
I am most motivated when I get good marks.	4.43	.83	.377
I am most motivated when I am noticed by others.	3.20	1.16	.454
I am most motivated when I am competing with others.	3.51	1.18	.516
I am most motivated when I am in charge of a group.	3.35	1.10	.541
I am most motivated when I am praised.	3.61	1.14	.442
I am most motivated when I am doing better than others.	3.83	1.12	.551
I am most motivated when I become a leader.	3.31	1.26	.542
Cronbach's α (8 items) = 0.784			

Note. $N = 784$; M = Mean, SD = Standard Deviation, r_{it} = Item-total Correlation

C). Social Goal Orientation

<i>Scale Item</i>	<i>M</i>	<i>SD</i>	<i>r_{it}</i>
I am most motivated when I work with others.	3.77	.98	.67
I am most motivated when I am in a group.	3.58	1.07	.54
I am most motivated when I work with friends at school.	3.92	.90	.54
I am most motivated when I am helping others.	4.01	.93	.62
I am most motivated when I am showing concern for others.	3.84	1.06	.56
Cronbach's α (5 items) = 0.800			

Note. $N = 784$; M = Mean, SD = Standard Deviation, r_{it} = Item-total Correlation