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Toward Understanding the Functions of Peer Influence: A Summary and Synthesis of Recent Empirical Research

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Abstract

Compelling evidence demonstrates that peer influence is a pervasive force during adolescence, one that shapes adaptive and maladaptive attitudes and behaviors. This literature review focuses on factors that make adolescence a period of special vulnerability to peer influence. Herein we advance the Influence-Compatibility Model, which integrates converging views about early adolescence as a period of increased conformity with evidence that peer influence functions to increase affiliate similarity. Together, these developmental forces smooth the establishment of friendships and integration into the peer group, promote interpersonal and intragroup compatibility, and eliminate differences that might result in social exclusion.

The rapid onset of a diverse array of maladaptive behaviors during the early years of adolescence occurs at the same time as important shifts in the social world, the most obvious being the increasing salience of peers. The sudden adoption of troublesome and troubling behaviors is conventionally attributed to peer influence (Gifford-Smith, Dodge, Dishion, & McCord, 2005). A firm foundation of longitudinal and experimental data have established the importance of peers during adolescence and tied peer influence to adolescent adjustment outcomes (Brechwald & Prinstein, 2011). In this review, we summarize recent findings that reinforce these conclusions and turn our attention to explaining the functions of peer influence.

The review has two parts. First, we provide an overview of factors that make adolescence a period of special vulnerability to peer influence. Second, we elaborate a model of peer influence that explains its function, which we argue is to increase similarity with friends and peer group affiliates with the goal of improving compatibility and eliminating differences that might result in social exclusion. We focus on research during the past decade to advance these aims.

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Peer Influence: A Précis

In this section we define the construct of peer influence and discuss its manifestation in friendships and peer groups. Although our focus is on adolescence, the definitions we advance are appropriate for all age periods.

Defining and Operationalizing Peer Influence

Peer influence is easier to define than to operationalize. A representative definition follows: "Influence occurs when an individual acts or thinks in ways that he or she might not otherwise act or think, an effect that can be attributed to experiences with friends and affiliates" (Laursen, 2018, p. 447). Thus, peer influence is defined as instances where one person affects, or is affected by, one other or multiple others who are similar in age.

Change is a common theme in definitions of influence: Individuals change in response to friends and affiliates. The alterations wrought by peer influence can be for good or for ill. Peer influence is a neutral term, agnostic to the type of change. In this sense, peer influence stands apart from peer pressure and socialization, which describe (respectively) maladaptive and adaptive change (Laursen, 2018). Peer pressure has negative connotations that imply compulsion or persuasion, whereas socialization is a positive term that refers to the transmission of skills and competencies. Influence subsumes both constructs but is synonymous with neither.

Influence assumes *directional change*. The direction of change is determined by the characteristics of the partner or group, with heightened similarity as the endpoint. Peer influence almost always increases resemblances between friends and affiliates. Although the prospect of complementarity has been raised (Kindermann & Gest, 2018), there is little evidence that peer influence during adolescence promotes differentiated roles and or enhances distinctions.

Peer influence ought not be conflated with *homophily*, which we define as similarities between friends in a dyad or among peers in a network. Homophily has origins in several processes: selection, deselection, and influence. A substantial portion of friend and peer group similarities is pre-existing, because similarity is a foundation for relationship formation (McPherson, Smith-Lovin, & Cook, 2001; Veenstra, Dijkstra, Steglich, & Van Zalk, 2013). Adolescents make friends with similar others and join groups of similar others, a process known as *selection similarity*. Evidence suggests that selection similarity and peer influence each account for a substantial portion of friend homophily across a wide range of domains (Laninga-Wijnen & Veenstra, 2021). Peer groups also become more homogeneous through a process known as *deselection* (or peer group pruning). Over time, the composition of the group changes such that the dissimilar depart at higher rates than the similar. Recent studies illustrate deselection effects for cigarette smoking (DeLay et al., 2013) and depressive symptoms (van Zalk, Kerr, Branje, Stattin, & Meeus, 2010). Failure to account for selection and deselection may result in the overestimation of peer influence.

Developmental Factors that Promote Similarity Among Peers during Adolescence

In this section we provide evidence for the claim that conformity peaks during adolescence. We discuss why adolescents are especially vulnerable to peer influence and how this contributes to developmental changes in conformity.

Adolescence as a Period of Heightened Conformity

Conformity implies uniformity, a product of efforts designed to avoid being seen as different. Conformity leads to homophily. Adolescence has long been viewed as a period of heightened conformity to peers and resemblances between peers are assumed to be strongest during adolescence. We briefly summarize evidence for this claim.

Some of the first experiments on conformity involved college students, who famously changed their reports of perceptions of objects in response to diverging reports from confederates (Asch, 1956). When applied to youth, it became clear that conformity responses increased across childhood, peaked during early adolescence, and declined thereafter (Costanzo & Shaw, 1966). Experimental studies of conformity have enjoyed a resurgence. A recent study replicated the inverted U-shaped developmental trend found with perceptual conformity tasks; again, the greatest response shift occurred in early adolescence (Large, Pellicano, Mojzisch, & Krug, 2019). Conformity also peaked during early adolescence when experiment participants were given the opportunity to revise ratings of the riskiness of everyday tasks after receiving contradictory feedback from a confederate (Knoll, Magis-Weinberg, Speekenbrink, & Blakemore, 2015). Same-age peer confederates elicited the greatest conformity responses. These experimental findings are consistent with results from hypothetical dilemmas (Sim & Koh, 2003) and self-report inventories that gauge resistance to peer pressure (Steinberg & Monahan, 2007).

Does evidence of heightened conformity mean that peer influence is greatest during early to mid-adolescence? We do not know for sure. We do know that friend similarity on self-reported problem behaviors peaks during early to mid-adolescence (Richmond, Laursen, & Stattin, 2019). Studies of this sort, however, do not partition variance attributable to influence from variance attributable to selection similarity, leaving open the possibility that developmental shifts in the preference for making friends with similar others are responsible to changes in homophily. We conclude that resemblances among friends and affiliates are strongest in the early years of adolescence, with the apex of similarities coinciding with a developmental tendency to alter attitudes and behaviors so as to minimize differences with others.

Adolescence as a Period of Heightened Socio-Affective Sensitivity

Neuroscientific insights are rapidly emerging into the pace and manner of adolescent brain development. Neurological development accompanies changes in socio-affective sensitivities that alter the salience and value of certain types of input (Dumontheil, 2016), and that spur revisions to self- and other-oriented thought (Crone & Fuligni, 2020). The social information processing network model describes variability in the maturation of the

neural nodes (and in the connections between nodes) designed to detect social stimuli, and the affective and cognitive nodes designed to process social stimuli (Nelson, Leibenluft, McClure, & Pine, 2005). Mismatch models posit asynchronous maturational timetables in the limbic system and the prefrontal cortex (Casey, Getz, & Galvan, 2008; Steinberg, 2005). In each case, the result may be a heightened sensitivity in adolescence to emotional input during decision making. Other models emphasize the role of socio-affective processes in underlying activation patterns, suggesting that the increased salience of novelty seeking and social stimuli (particularly from peers) interact with emerging cognitive control systems in a way that provides adolescents with adaptive flexibility to adjust motives and priorities in the face of developmentally unprecedented shifts in social demands (Crone & Dahl, 2012).

There is an increasing interest in studying the neural underpinnings of peer experiences in order to understand how peer interactions relate to adjustment and well-being (Güroğlu & Veenstra, 2021). The presence of peers activates regions of the brain associated with reward processing, which heightens adolescent sensitivity to the receipt of rewards (Smith, Steinberg, Strang, & Chein, 2015). Both prosocial and risk-taking behaviors can be rewarding, particularly if observed and reinforced by peers. Friends appear to elicit stronger neurological responses than other peers (Schreuders, Smeekens, Cillessen, & Güroğlu, 2019).

Other accounts emphasize brain development in regions associated with social evaluation. Building on the observation that adolescents are preoccupied with an “imaginary audience” (Elkind & Bowen, 1979), scholars have hypothesized a developmental period marked by hypersensitivity to peer social judgements (Somerville, 2013). A consequence may be that perspective taking cues activate regions of the brain that are especially attuned to peer input (van Hoorn, van Dijk, Güroğlu, & Crone, 2016). Self-conscious emotions elicited by peer attention, and brain activity linked to social responsiveness, peak in mid-adolescence (Somerville et al., 2013).

Taken together, the evidence suggests that adolescents are neurologically primed to monitor input from peers. During a time when the social landscape is shifting rapidly to accommodate peers, adolescents are especially responsive to their feedback.

Adolescence as a Period of Heightened Susceptibility to Peer Influence

Adolescence is a period of rapid cognitive, social, and physical transformation. We argue that the form, pace, and scope of these changes increase the perceived need for similarity with peers, leaving adolescents vulnerable to peer influence. Below we highlight the most salient maturational milestones and discuss their consequences for susceptibility to peer influence.

Structural changes in school and free time settings.—In most Western cultures, the onset of adolescence coincides with the transition from primary to middle schools. Children move from a predictable world where most of their time is spent in relatively small, familiar groups that are closely monitored by the same teacher, to a larger, impersonal, uncertain world populated by unfamiliar peers, with diffuse adult supervision (Eccles, Lord, & Buchanan, 1996). Out of school, children transition from a predictable world where free

time is spent at home monitored by parents or in structured activities directed by familiar adults, to an uncertain world where online and offline leisure activities typically involve minimal contact with adults.

Susceptibility to peer influence is an adaptive consequence of the structural changes that characterize adolescence. As adult oversight rapidly recedes, peers assume enormous significance (Coleman, 1961). Failure to adapt can be ruinous. Adolescents quickly learn to rely on close peers for companionship, protection, and guidance as they navigate novel contexts where norms are established and enforced by peers. Afraid of the social consequences of nonconformity, most conclude that the best way to get along is to go along.

Autonomy and the maturity gap.—Compared with children, young adolescents have more freedom over where they go and what they do. They exercise that freedom by expanding the scope and frequency of activities with friends, in person and online. Adolescents walk, bike, and use public transport unsupervised. They create an electronic identity. Appearance becomes a matter of personal choice. In this sense, adolescents assume many of the trappings of adulthood.

With biological maturity, adolescents increasingly look like adults, but they remain subject to parental and legal restrictions. The disconnect between biological and social maturity, known as the maturity gap, creates a specific form of adolescence-limited conformity pressure (Moffitt, 1993). Deviant peers signal their autonomy by displaying behaviors reserved for adults and by acting in ways that are contrary to adult authority. Doing so boosts their status with peers. Fearing a loss of prestige, high-status individuals respond by mimicking behaviors that signal maturity. Lower status individuals follow suit. Conflict with parents erupts over efforts to escape oversight and adapt to peer expectations (Dijkstra et al., 2015). Adolescents who fail to conform risk exclusion by affiliates who do not wish to be perceived as immature by association.

Identity development and de-identification.—Adolescent identity development is a work in progress. A first step involves differentiation from parents. De-identification describes a process whereby adolescents seek to establish unique identities through behaviors and attitudes that set them apart from parents (Koepke & Denissen, 2012). Adolescents are keen to develop an identity that emphasizes their equal standing. As children acquire a more nuanced appreciation of interpersonal distinctions and an increasingly egalitarian view of relationships, they aspire to reciprocity and equal power in interactions with others (Youniss & Smollar, 1987).

The intimacy, loyalty, and reciprocity that characterize adolescent friendships proffer a uniquely sheltered context for identity exploration (Kerpelman & Pittman, 2001). Peer relationships provide a safe space for experimentation, including trying and discarding different identities. New identities can be forged by befriending someone known for the characteristics to which one aspires and adopting these attributes. The normative search for one’s own identity, established apart from parents, leaves an opening for input from and influence by others. For most young adolescents, friends are the obvious choice.

Peer influence should peak when identities are in a state of flux. The taste uncertainty principle asserts that imitation increases in line with individual uncertainty about preferences (Moutoussis, Dolan, & Dayan, 2016). Children and young adolescents lack clear identities and the values and principles that accompany a forged identity. Findings from experimental studies indicate that peer influence is greatest when adolescents are confronted with unfamiliar tasks that have uncertain outcomes (van Hoorn, Crone, & van Leijenhorst, 2017). As adolescents grow more secure in their identities and more settled in their tastes, peer influence should decline.

The Influence-Compatibility Model

This section addresses the motives and functions of peer influence. To this end, we advance the influence-compatibility model, which argues that peer influence serves to increase similarity with friends and peer group affiliates, which in turn promotes compatibility. The cultivation of compatibility is essential for success in the adolescent peer world, because it makes one a more desirable companion and reduces the risk of friendlessness and exclusion. Figure 1 provides an overview of the model.

The Primacy of Peers in Adolescent Culture

Adolescents are mindful of the need to maintain good peer relationships. The rapid reorganization of the social world that begins in early adolescence has several noteworthy consequences. Educational structures “have taken not only job-training out of the parents’ hands, but have quite effectively taken away the whole adolescent. The adolescent is dumped into a society of peers” (Coleman, 1961, p. 4). In response to age segregation and physical separation, adolescents create a distinct social order, where most important social interactions take place in the company of agemates and where the peer group maintains only tenuous (and sometimes contentious) connections to adult society.

Adolescent culture operates by its own rules and norms. Increasingly, adolescents withhold information about activities and whereabouts from parents (Frijns, Keijsers, Branje, & Meeus, 2010), fortifying the unique (and isolated) status of the peer group. As a consequence, parents know little about problems with peers and have few intervention options should difficulties come to light. Consider anti-bullying interventions, which are effective in primary school, when parents and teachers are actively involved in the social lives of children, but tend to flounder during middle school, when adults disengage from peer culture (Yeager, Fong, Lee, & Espelage, 2015). Not surprisingly, many adolescents report feeling closer to friends and romantic partners than to parents, and the proportion who report such sentiments grows across the middle school years (Laursen & Williams, 1997).

Most adolescents recognize that friends are required to successfully navigate peer culture. Young adolescents without friends are victimized more frequently and present greater internalizing and externalizing symptoms than those with friends (Hodges, Boivin, Vitaro, & Bukowski, 1999). Friends are particularly important to those whose undesirable characteristics, such as depressive symptoms and social skills difficulties, place them at risk for victimization (Fox & Boulton, 2006; Kochel, Bagwell, Ladd, & Rudolph, 2017). Losing friends can be devastating, particularly for those who do not make friends easily

(Bukowski, Laursen, & Hoza, 2010). The risks are greatest during school transitions, which are peak periods for friendship loss and friendlessness (Felmlee, McMillan, Inara Rodis, & Osgood, 2018).

The consequences of rejection and exclusion from the peer group are also severe. Experiments and self-reports agree that peer rejection increases depressed mood (Platt, Kadosh, & Lau, 2013). Rejection inhibits friendship formation, which can lead to internalizing problems (Pedersen, Vitaro, Barker, & Borge, 2007). Isolation from the peer group anticipates loneliness and diminished self-esteem (Witvliet et al., 2010), which also fosters anxiety and depression (Bosacki, Dane, & Marini, 2007). Negative outcomes associated with rejection are not limited to affective disorders. Peer rejection anticipates dropping out of school (French & Conrad, 2001), no doubt because school experiences are not pleasant for those who are disliked. Finally, being disliked by peers exacerbates the risk of substance misuse among those who are depressed or aggressive (Prinstein & La Greca, 2004; Richmond, Laursen, Kerr, & Stattin, 2015).

Peer Influence Promotes Similarity and Enhances Compatibility

Peer influence is a tool for maintaining and increasing resemblances between friends and among affiliates. In this way, influence promotes compatibility by enhancing similarity. Peers value similarity because it provides a foundation for interpersonal affinity and intragroup harmony (Laursen, 2017). Individuals who share attitudes, interests, and behaviors find it easy to get along. They are, in a word, compatible.

Dictionary definitions of compatibility emphasize the ability to live and work together, successfully and in harmony. The term has a long history in the study of close relationships (see Ickes 1985; Kelly et al., 1983), referring to interpersonal connections that promote interdependence, goals, and outcomes in a manner that avoids conflict and relationship disruption. Figure 1 specifies the components of interpersonal and intragroup compatibility, and describes how compatibility contributes to the success of friendships and peer affiliate groups.

Although there is no commonly accepted conceptual framework that describes how compatibility contributes to the success of a friendship, lay descriptions emphasize mutual enjoyment of time spent together, ease of communication, harmony, and engagement without conflict (Bagwell & Schmidt, 2013). Similarity fosters each.

Compatible partners are rewarding partners. To facilitate shared positive experiences, friends reward each other with laughter, praise, and affection (Newcomb & Brady, 1982). It is pleasing to be imitated, so adolescents emulate those they like. The rewards that flow from imitation promote similarity and increase the likelihood of further imitation (and greater similarity). Maladaptive similarity is not exempt from learning principles.

Cooperation is key to compatibility. Cooperation is a source of consonance and efficiency (Bukowski, Motzoi, & Meyer, 2009). Cooperation enables friends and peer group members to coordinate and attain goals by synchronizing behavior. Cohesion fosters cooperation and is best attained when individuals subordinate their identities to the friendship or

the group. Subordination of self to attain relationship goals is an important way that partners demonstrate compatibility, because reciprocity assumptions are built on partner need satisfaction. Across late childhood and early adolescence, there is a growing realization that the success of relationships and groups sometimes requires individual sacrifice (Laursen, Finkelstein, & Betts, 2001). Sacrifice that comes in the guise of cooperation and compromise enhances compatibility. Cognitive dissonance can help smooth the way. Observed differences between the self and a friend (or affiliate group members) are a source of unwanted dissonance, which can be eliminated by reducing dissimilarities (Juvonen & Galván, 2008).

Identity signaling is a key mechanism for enforcing similarity in a peer group (Berger, 2008). Identity markers help distinguish in-group members from out-group members. Some identity markers reflect social norms, which encompass principles and values that are sources of agreement and causes for unity (Veenstra, Dijkstra, & Kreager, 2018). To gain admission into a group, adolescents are expected to indicate their compatibility by endorsing the group's social norms, usually with a visible identity signal. Once admitted, adolescents must demonstrate compatibility by adopting other markers and conforming to less visible norms when they are revealed by group members.

Similarity and Compatibility Reduce the Threat of Friendship Dissolution and Peer Group Exclusion

Dissimilarities are dangerous to relationships. They breed negative thoughts and deeds. Differences are a primary source of disagreement between friends, because they threaten to undermine compatibility. Whenever there is conflict, there is the potential for negative affect, which is highly disruptive to ongoing social interactions (Laursen et al., 2001). For this reason, adolescents take great pains to avoid coercive conflict interchanges. Winning an argument may mean risking a friendship. For that reason, it is often better to concede or negotiate and minimize differences than prevail and lose a friend. To mitigate relationship dissatisfaction, friends may agree to jointly address threats to compatibility. Conflict may be averted by preemptively changing in response to suggestions or observations. The upshot is that the potential dangers of conflict motivate friends to exercise influence in ways that increase similarity and build common ground, making it easier to bridge differences when they arise.

Differences also alter perceptions about relationships. Confronted with conflict and persistent disparities, friends may question whether they share the costs and benefits of affiliation equally. Disequilibrium (real or perceived) undermines assumptions about commitment (Laursen & Hartup, 2002). Perceptions of inequality and concerns about commitment take a toll on friendship satisfaction. Dissatisfied friends become former friends, replaced by companions who are more compatible. To avoid this eventuality, adolescents strive to minimize differences, encourage compatibility, and strengthen investments in the relationship.

Similarity is essential for the smooth functioning of a peer group. Peer groups coalesce around priorities, which fosters the appearance of consensus about activities and comportment. Discussion and negotiation are inefficient and impractical in a group;

individual members are expected to conform, taking cues from leaders. Those who differ pose a threat to unity, both because the process of building consensus is cumbersome and because deliberation increases the potential for discord (Kindermann & Gest, 2018). For some, dissimilarity sparks conflict with group members demanding conformity. For others, dissimilarity prompts marginalization, as group members shy away from those whose position is tenuous. The threat of exclusion hangs heavy over everyone. Incompatibility is a ticket out of the group.

Eventually, conformity pressures extend to areas that are less than central to the group's identity. Individuals adopt ancillary attitudes and behaviors observed among others in the group, embracing consensus over matter deemed unimportant. Conformity is bolstered through pluralistic ignorance, which occurs when individuals who privately reject a norm incorrectly assume that most others accept it, and so display public behaviors consistent with the norm to avoid appearing discordant (Miller & McFarland, 1991). All of this enforced similarity elicits compatibility among group members who fear that nonconformity will lead to exclusion.

Conceptual Counterparts

In this section we provide an overview of other theories that address the origins and functions of peer influence. Whereas the influence-compatibility model focuses on conformity motives and functions, the following models elaborate on the mechanisms that transform peer expectations into conformity. In this sense, the models serve as constructive counterparts.

Identity Maintenance Models

Early sociological (Hughes, 1945) and social psychological (Festinger, 1954; Schachter, 1951) characterizations of small groups emphasized social comparison processes that facilitated uniformity. Fearing the sanctions levied against those who undermine group norms, individuals monitor and modify their own behavior, to avoid being perceived as an outlier (Wellen & Neale, 2006). However, no one wants to be perceived as unoriginal. Optimal distinctiveness theory (Brewer, 1991) holds that individuals seek balanced self-views, integrated into a cohesive group of like-minded others but different in ways that highlight a unique individual identity. Thus, optimal distinctiveness theory proffers insight into domains where conformity is expected. Conformity pressures should be strong in areas that touch upon the group identity. Distinctiveness is tolerated when it does not conflict with the priorities of the group and the image it seeks to project.

Cognitive Social Influence Models

The theory of reasoned action (Fishbein & Ajzen, 1975) holds that behaviors are a function of intentions, and intentions are a product of attitudes about behaviors and perceptions of subjective norms. Thus, individuals who view a behavior positively and who think others do the same are inclined to engage in the behavior. Intentions direct actions. Beliefs about one's abilities bolster intentions and strengthen confidence in successful outcomes, further increasing the likelihood that an individual will engage in a behavior (Ajzen, 1991). Not all

conformity is premeditated. Sometimes social norms are filtered through attitudes toward and willingness to engage in a behavior (Gibbons, Gerrard, & Lane, 2003). Perceived norms can determine openness to an experience, which shapes decisions about how to behave should the opportunity arise.

Intrasubjectivity Models.—Peers shape behaviors through rewards in the form of attention and praise, reinforcing behaviors they value and enjoy. Deviancy training describes a process whereby antisocial friends and affiliates reward each other for committing and recounting deviant acts (Dishion & Tipsord, 2011). Deviant talk also serves as an attractor, a touchstone that helps to organize friendships and peer groups (Dishion, Piehler, & Myers, 2008). Intrasubjectivity refers to the shared understanding that emerges among deviant peers through engagement in and discussions of antisocial acts. Deviant talk and delinquent activities become the foci of social experiences. Participants are not necessarily motivated to resemble peers, so much as they are to engage in behaviors that maintain rewarding exchanges and interpersonal connections. The original theory describes peer influence over the development of antisocial behavior, but it can be applied to any behavioral domain that animates relationships.

Balance Theories.—Differences in attitudes and behaviors are a source of both interpersonal friction and cognitive dissonance, both of which cause disequilibrium (Heider, 1958). To reduce disequilibrium tensions, an individual may take steps to remedy imbalances by seeking more compatible companions or by reducing dissimilarities with current companions. Balance theory applications hold that friends should be motivated to bridge gaps that separate them. One means to this end is to strengthen similarities in liking and disliking specific others (Rambaran, Dijkstra, Munniksma, & Cillessen, 2015). Balance is not restricted to attitudes toward others: Friends should seek middle ground in all domains that threaten equilibrium.

Conceptual Underpinnings of the Influence-Compatibility Model

Friendships are motivated by and organized around similarities. Like attracts like (Byrne, 1971). Individuals are attracted to those with whom they share attitudes and interests. Similarities also increase the likelihood that social interactions will be rewarding, providing a familiar framework for conversations and activities. Rewarding interactions are repeated.

Compared to other age periods, adolescents have more incentive and greater opportunity to maximize compatibility by enhancing similarity (Laursen, 2018). Practical constraints restrain friendship similarity during childhood and adulthood. Propinquity constraints limit the options children have for friends. Many parents of children do not hesitate to interfere with influence processes that promote similarity. Adult friendships are often subordinate to romantic, family, and employment obligations; friend influence may be ineffectual in the face of countervailing relationship pressures (DeLay, Laursen, Bukowski, Kerr, & Stattin, 2016). Once settled, adults may become more tolerant of differences between friends, because loyalty and support (as opposed to uniformity) are increasingly prized commodities, because options for friends decline with age, and because adult contact with friends is limited to and structured around areas where similarities are maintained. In

contrast, adolescents prioritize friendships and enjoy considerable latitude in their selection and maintenance.

Repulsion also plays a role in compatibility. Underpinning a preference to befriend similar others is an aversion for those who differ (Smeaton, Byrne, & Murnen, 1989). Avoiding dissimilar others narrows the pool of potential friends to those who share resemblances. Repulsion may be especially relevant during the second decade of life, given the outsized importance of peer groups. Antipathies for dissimilar outgroups – such as those between those who embrace school culture and those who reject it (e.g., Laursen et al., 2010) – create a perceived urgency for cohesion, which suppresses the expression of differences within the group (Bornstein, 2003). Thus, a heightened concern about avoiding the dissimilar increases the attractiveness of those who are similar.

Converging conceptual arguments hold that similarity is a foundation for successful peer relationships because it enhances compatibility, which reduces the risk of friendlessness and social exclusion. We describe these arguments with an eye toward their application during adolescence.

Understanding Voluntary Affiliations

The influence strategies used to promote similarity in friend dyads differ from those in peer groups. Friendships are wholly voluntary. Friends can leave the relationship at any time should they become dissatisfied, so participants must behave with an eye toward preserving the affiliation. Cliques are interconnected friend dyads. Also voluntary, they may contain associations that require an individual to affiliate with a third party in order to maintain a shared friendship. Most adolescents have differing investments and interests in the continuity of friendships compared to relationships with clique members.

Interactions between friends often take place in private settings. Secrets and opinions are shared, and the behaviors observed are not intended for public consumption. Influence is exercised subtly (e.g., through praise) and sometimes evoked indirectly (e.g., through passive imitation: Harakeh & Vollebergh, 2012). The special nature of the relationship means that friends hold unique influence over inner states, attitudes, values, and beliefs, and the behaviors that derive from them. In contrast, many affiliates in peer groups are not close and do not aspire to be close. They worry little about the future of the affiliation, which frees them from constraints against the use of coercive influence tactics. Group members are expected to adhere to conformity demands in observable areas, which may be enforced through scapegoating, criticism and shaming, or preferential resource allocation, usually by high-status group members (Laninga-Wijnen et al., 2020).

Variations in the exercise of influence have important implications for its functions (Brown, Bakken, Ameringer, & Mahon, 2008). For friends, influence enhances compatibility and intimacy, facilitating shared affect and the smooth resolution of differences, which boosts felt security and confidence in the continuity of the relationship. For group members, influence enhances compatibility and uniformity, creating a hierarchy with mechanisms of enforcement that facilitate order, smooth functioning, and effective mobilization and organization. Thus, friends seek inner-state, attitude, and value similarity because it fosters

closeness, whereas groups pursue observable behavior similarity because it promotes cohesion.

Understanding the Need to Belong

Humans have an innate drive to forge lasting mutually beneficial relationships (Baumeister & Leary, 1995). The need to belong probably has origins in the survival and reproductive benefits that accrue from group membership. Affiliative drives do not focus on specific relationships, but may provide the impetus for evolved regulatory mechanisms preparing humans to attend to social signals necessary for success in different situations (Bugental, 2000). We focus on reciprocity, because it is among peers that adolescents learn how equals in voluntary affiliations manage obligations, negotiate settlements, and exert influence.

Over the course of evolutionary history, experiences that satisfied the human need to form close relationships also encouraged a predisposition for adaptive algorithms that address different relationship functions. These algorithms serve as the foundation for deep level cognitive structures that organize relationships into distinct natural categories that reflect social interaction domains (Sedikides, Olsen, & Reis, 1993). The social category of close peer relationships encompasses communal-sharing relationships built on equal reward distribution and a shared identity. Reciprocity-based relationships can be transitory, meaning that individuals need ready strategies to identify new relationships. How better to recognize a partner capable of equal contribution and effort than one who shares similar attributes?

Self-determination theory (Ryan & Deci, 2017) similarly argues that humans are motivated by a set of basic psychological needs. Broadly speaking, much of human behavior is intrinsically motivated, with the goal of optimizing developmental outcomes through the satisfaction of needs. One such motive is relatedness, a basic, universal need that undergirds behaviors designed to establish feelings of connectedness and intimacy with others (Ryan & Deci, 2000). The theory does not specify a need for friendship *per se*, but it makes clear that friends are capable of satisfying this need and that many individuals rely on friends to do so.

Friends fulfill unique social needs, which makes friendships uniquely influential. Intimacy, camaraderie, instrumental support, and emotional support set friendships apart from other relationships. Attachment theory, a prominent need-based model, argues that attachment figures hold special status because they satisfy a need for felt security (Ainsworth, 1989). During adolescence, some security needs are best met by peers. Friends serve as safe havens that facilitate exploration of the peer social world (Nickerson & Nagle, 2005). Intimacy and emulation draw friends closer, strengthening ties that both satisfy needs and bolster compatibility. Need satisfaction also heightens susceptibility to influence, because the recipient has incurred an obligation that must be repaid and the need-satisfier reaps the benefits of enhanced stature and credibility.

Understanding the Need for Status

Behavior is influenced by social norms. Typically, norm conformity is enforced through social groups (Veenstra et al., 2018). Adolescents prioritize popularity, because of the influence that popular youth wield and the privileges they enjoy. All things being equal, popular peers are more influential than average peers (Dijkstra, Lindenberg, & Veenstra,

2008). Popular adolescents have access to rewards that are not available to others, such as admiration, inclusion in exclusive social events, and favorable resource allocation (Hawley, 2014). Popular adolescents utilize an array of strategies to attract and influence peers. Some bully to maintain popularity, identifying new victims across the school year to increase visibility (van der Ploeg, Steglich, & Veenstra, 2020). Others take a positive route. Being perceived as someone who is fun to be around is also an effective strategy for boosting popularity (Laursen, Altman, Bukowski, & Wei, 2020).

Popular peers dictate prescriptive norms. For instance, adolescents are likely to adopt a positive attitude toward friend risk-behavior in classrooms where popular peers value risk-taking (Rambaran, Dijkstra, & Stark, 2013). Popular peers also set descriptive norms. In classrooms where popular peers are aggressive, classmates increase their aggression; in classrooms where popular peers are prosocial, classmates increase their prosociality (Laninga-Wijnen et al., 2020). The power of status attracts others. Lower status adolescents who gain the favor of a popular individual see their own popularity increase, a process referred to as “basking in reflected glory” (Dijkstra, Cillessen, Lindenberg, & Veenstra, 2010). In this way, popular adolescents attract peers who are willing to emulate their behavior in order to receive the rewards of enhanced status.

Empirical Support for the Influence-Compatibility Model

There has been an upsurge of research on adolescent peer influence during the past decade. Contemporary studies illustrate the scope of peer influence, documenting the extent to which friends and peer group members embrace similarity and confirming the social consequences of failing to do so.

Our review of the empirical literature is divided into three parts. The first part explores relationship settings. Consistent with the claim that the function of peer influence is to promote compatibility, new findings indicate that influence is strongest within friend dyads and affiliate groups. The second part examines behavioral domains. Once thought to be isolated to problem behaviors, new findings indicate that peer influence is pervasive across adaptive and maladaptive attitudes and behaviors. The third part examines incompatibility as an antecedent of exclusion. New findings underscore the dangers that dissimilarity poses to friendship stability.

New Evidence on Relationship Contexts

Influence should be particularly strong in friendships and affiliate groups, because adolescents invest in these relationships and have the most to lose from their loss. Adolescents are quick to adjust their behavior when they enter a new peer group, putting distance between themselves and the group they have left, so as to better resemble new friends and affiliates (Berger & Rodkin, 2012; Kiuru, Burk, Laursen, Salmela-Aro, & Nurmi, 2010). The process differs from selection similarity in that adolescents are changing their behavior – just before or just after (the timing is not altogether clear) joining a new friendship group – in ways that increase similarity (Popp, Laursen, Kerr, Stattin, & Burk, 2008; Poulin, Kiesner, Pedersen, & Dishion, 2011). Doing so smooths the way for integration, minimizes threats to group cohesion, and reduces the risk of exclusion.

The effects of compatibility are well documented. Compatibility makes interactions more effective and efficient. As closeness increases, so does influence. Consider results from a natural experiment that examined influence in dyads tasked with learning a new computer program over the course of a school semester: Friends influenced each other's rate of learning, but nonfriends did not; greater liking predicted greater learning (DeLay et al., 2014; Hartl, DeLay, et al., 2015). Similarly, friend influence over prosocial behavior increased as a function of intimacy and companionship (Barry & Wentzel, 2006). Compatibility does not always have beneficent consequences. Best friends exert more influence over depressive symptoms than do other friends (Giletta et al., 2011).

Changing interpersonal priorities are reflected in relationship similarity. Romantic partners gradually supplant friends in the ladder of important and influential relationships (Laursen & Williams, 1997), which helps to explain why adolescent friends with romantic partners are less similar on alcohol misuse than friends without romantic partners (DeLay et al., 2016). Friend similarity decreases after the onset of dating, at the same time that romantic partners become more similar. Romantic partners also become increasingly important sources of influence over other forms of delinquent behavior (Haynie, Giordano, Manning, & Longmore, 2005). It is worth noting, however, that cohort shifts that have delayed the timing of departure from home, cohabitation, and marriage may also prolong the influence of friends and postpone the rise of romantic relationship influence.

New Evidence on the Scope of Peer Influence

Historically, research on peer influence has focused on maladaptive behavior. The tendency to focus on problems reinforced views of peers as a nefarious force. Research during the past decade has prompted scholars to revisit this bias. If the function of peer influence is to promote compatibility that reduces the risk of friendship loss and group exclusion then it follows that influence should not be limited to a narrow range of behaviors but should instead apply to any domain that could threaten satisfaction and cohesion. Compelling new evidence indicates that peer influence is not limited to problem behaviors.

Nowhere has progress been more evident than in the area of school adjustment. Results from longitudinal social network analyses indicate that peers exert a positive influence over school grades (Duxbury & Haynie, 2020; Gremmen, Dijkstra, Steglich, & Veenstra, 2017). Peer network affiliates also influence interest in school and engagement in classroom activities (Shin & Ryan, 2014). All is not rosy, however. Friends and peer affiliates are responsible for increases in truancy and school misconduct (Geven, Weesie, & van Tubergen, 2013; Rambaran et al., 2017). Peers also contribute to declining preferences for STEM courses among adolescent girls (Raabe, Boda, & Stadtfeld, 2019).

Further evidence that peer influence is not limited to deviance comes from research on prosocial behavior. An experimental study of resource allocation revealed that adolescents who were reinforced (via thumbs-up emojis) for donating monetary tokens to be evenly distributed among anonymous classmates contributed more tokens across subsequent trials (van Hoorn, van Dijk, Meuwese, Rieffe, & Crone, 2016). In another experimental study using a simulated electronic chat room, prosocial responses to hypothetical dilemmas (in the form of intent to volunteer ratings) increased the most in response to higher status peers

(Choukas-Bradley, Giletta, Cohen, & Prinstein, 2015). Social networks studies describe group influence effects for defending against bullies (Huitsing, Snijders, Van Duijn, & Veenstra, 2014) as well as for performing prosocial acts (Laninga-Wijnen et al., 2020; Logis, Rodkin, Gest, & Ahn, 2013; Shin, Ryan, & North, 2019), with the strongest findings emerging in the highest status groups (Ellis & Zarbatany, 2007).

New research sheds light on peer influence over health-related behaviors. Network studies confirm that adolescent friends become more similar over time in physical activity (de la Haye, Robins, Mohr, & Wilson, 2011; Long, Barrett, & Lockhart, 2017) and body weight (Simpkins, Schaefer, Price, & Vest, 2013; Zhang et al., 2015). Friends influence self-injury behaviors (Prinstein et al., 2010). Over time, adolescent friends become more similar in terms of their sexual experiences (Prinstein, Meade, & Cohen, 2003; Trinh, Lee, Halpern, & Moody, 2019). Adolescent alcohol and drug use are clearly shaped by friends (Allen, Loeb, Kansky, & Davis, 2020; Hiatt, Laursen, Stattin, & Kerr, 2017) and peer group affiliates (Burk, van der Vorst, Kerr, & Stattin, 2012; Osgood et al., 2013). Cigarette smoking similarity, however, is more complicated. Peers may play a role in the adoption of the habit (McMillan, Felmlee, & Osgood, 2018), but they do not determine the rate at which an adolescent smokes (DeLay et al., 2013; Mathys, Burk, & Cillessen, 2013), presumably because addictive behaviors are driven by endogenous motives.

Peer influence shapes affective experiences. Negative affect can spread between friends through corumination, a form of disclosure that involves rehashing problems, mutual encouragement of problem talk, and dwelling on negative affect (Rose, Schwartz-Mette, Glick, Smith, & Luebbe, 2014). Genetically-informed studies emphasize its nonshared environmental effects, underscoring the notion that corumination is a dyadic phenomenon, constructed by friends (Dirghangi et al., 2015). Depressive symptoms spread between friends (Giletta et al., 2011) and affiliates in a peer network (Cheadle & Goosby, 2012; van Zalk et al., 2010) and corumination is an important vehicle of transmission (Schwartz-Mette & Rose, 2012). Importantly, heightened affect similarity is not a product of contagion (symptoms spread from the more depressed to the less depressed) but rather convergence (symptoms decline among the most depressed and increase among the least depressed) (Kiuru et al., 2012). Peers shape positive affect too. Self-reports of happiness spread through convergence (van Workum et al., 2013). Adolescents with friends who were above average on happiness became happier, whereas adolescents with friends who were below average on happiness became less happy.

We have known for some time that peers exert considerable influence over deviant and antisocial behavior. Confidence in these conclusions is bolstered by recent research deploying sophisticated methodological procedures that both eliminate confounds and rule out alternative explanations. Early research tended to aggregate different forms of problem behavior. New evidence unpacking the etiology of problem behavior indicates that delinquency spreads among affiliates in a peer network, independent of substance use (Haynie, Doogan, & Soller, 2014; McMillan et al., 2018). Genetically informed research indicates that although adolescent substance use and gambling have a significant, overlapping genetic component, nonshared environmental contributions were equally

substantial, highlighting the important role that peers play in the development of each form of problem behavior (Vitaro et al., 2014).

New Evidence on the Consequences of Dissimilarity

Until recently, speculation on the interpersonal consequences of dissimilarity far outpaced research on the topic. We know that participants in stable adolescent friendships are more similar than those in unstable friendships on a host of adaptive and maladaptive traits (Hafen, Laursen, Burk, Kerr, & Stattin, 2011). Often overlooked is that comparisons of stable and unstable friendships are not sufficient to establish dissimilarity as a cause of friendship dissolution. A long list of undesirable individual characteristics have also been linked to friendship instability, consistent with the logic that some children are difficult company (Poulin & Chan, 2010).

New findings indicate that adolescent friendship dissolution is the result of dissimilarity, not unpalatable individual traits. Two studies deployed survival analyses to contrast individual traits and dyadic differences on these traits in the prediction of friendship instability across middle school and high school. In the first study, differences between friends in physical aggression, school competence, and peer acceptance predicted the occurrence and timing of friendship dissolution; individual levels of each did not (Hartl, Laursen, & Cillessen, 2015). In the second study, differences between friends in depressive symptoms, anxiety symptoms, and (for boys only) submissiveness predicted friendship dissolution; individual levels of each did not (Guimond, Laursen, Hartl, & Cillessen, 2019). The risk of instability due to dissimilarity was not trivial: For every one standard deviation difference between friends on an attribute, the odds of friendship dissolution increased between 20% to 80%. A third study confirmed the importance of dissimilarity to friendship stability: Differences on school grades and attitudes, as well as on alcohol and cigarette consumption, were associated with adolescent friendship dissolution (Rude & Herda, 2010). The findings challenge the view that adolescents with undesirable traits are at risk for exclusion and suggest instead that compatibility is the key to a successful friendship.

Future Directions

More research is needed on the particulars surrounding similarity priorities that underlie manifestations of influence. It is logical to assume that some friends and peer groups emphasize physical activities, whereas others prioritize academic achievement, and that selection, influence, and compatibility reflect these priorities. Yet support for this proposition is scarce. Also unclear is the contribution of social norms to the domains in which influence is exercised and to the success of influence attempts.

The influence-compatibility model holds that friendships and peer groups form on the basis of similarities and that friends and affiliates increase their similarity in order to minimize threats posed by differences. We do not assume that friends and affiliates strive for perfect uniformity. Comparison processes depend on self-definitions (Tesser, Campbell, & Smith, 1984). Which differences are tolerated (or even celebrated) and which ones are perceived to be threatening will vary across dyads and groups. Efforts to minimize differences are expected in areas that one partner deems important. Thus, within a domain, the onus of

change is on those who are initially indifferent, as those who are passionate about an activity seek companions to share their passion and who define themselves accordingly. Differences in domains tangential to self-definitions are apt to be tolerated as long as they are not a source of conflict. A challenge for research is to identify behavioral domains that are relevant to the identity of individuals and peer groups and disentangle measures of change in these domains from those that are unimportant to participants.

The influence-compatibility model focuses on similarities in domains that are malleable. In so doing, we do not intend to dismiss the relevance of fixed characteristics. We know that adolescents tend to make friends with those who are the same age and gender, and with those who come from similar ethnic and socioeconomic backgrounds (Haynie et al., 2014; Jugert, Leszczensky, & Pink, 2020). We also know that friendships between adolescents who share similar fixed traits are more apt to be stable (and thus potential sources of influence) than are friendships that are dissimilar on fixed traits (Hartl, Laursen, et al., 2015; Rude & Herda, 2010). It is important to note that a preference for peers with similar backgrounds may arise from behavioral tendencies that are correlated with background attributes. For instance, friendship choices that appear to be driven by demographics may be a product of musical taste, which correlates with fixed characteristics such as gender, age, and ethnicity (Stark & Flache, 2012). In raising this point, we do not mean to suggest that demographics are irrelevant to friend selection. We do mean to suggest, however, that the role of fixed attributes may be overstated because estimates of initial similarity may be inflated by confounds with malleable attributes. Studies are needed that determine the relative importance that adolescents assign to fixed attributes, and to ascertain the point in the friendship selection process that these considerations become determinant. The results will provide a clearer picture of the variables that define the parameters within which friends influence one another.

From an early age, children rely on similarity to predict the friendship status of others (Liberman & Shaw, 2019). Do adolescents put this knowledge to use, changing behaviors to increase their chances of establishing friendships with desirable others? We cannot say, because there are daunting methodological challenges surrounding the assessment of motivated change in advance of friendship formation. The process undoubtedly involves a series of strategic behavioral shifts before initiating social interactions with prospective friends, subsequent alterations on the basis of rewarding exchanges, and adaptive conformity in response to deepening friendships.

Current empirical efforts probably underestimate the magnitude of peer influence, because influence sometimes takes the form of resisting change. There are no doubt instances where peers discourage one another from revising the way they think and act, a phenomenon illustrated by cigarette smoking resistance (Teunissen et al., 2012). So far scholars have not had much success in measuring influence to maintain or resist behaviors.

Our review paid particular attention to the prominence of popular peers. Further research is needed on other characteristics tied to influence. Promising candidates abound. Relatively younger adolescents and late maturing boys appear susceptible to influence (Popp et al., 2008; Widman, Choukas-Bradley, Helms, & Prinstein, 2016). Influence has been tied to

relatively peer acceptance, consistent with the notion that adolescents with few friends worry that noncompliance could lead to friendlessness (Laursen, Hafen, Kerr, & Stattin, 2012). Finally, influence is linked to relationship perceptions. Influential friends are viewed as supportive and invested in the relationship (Allen et al., 2020; Hiatt et al., 2017).

There are noticeable gaps in our knowledge base. Little is known about whether and how peer experiences entrain the biological system and how the biological system influences peer experiences. Nor do we know which neural profiles are linked to heightened sensitivity for compatibility (Stephens, Silbert, & Hasson, 2010). We know a good deal about influence in school settings, but little about how influence is exercised on streets, in clubs, and online. Finally, too little attention has been given to demographic characteristics as moderators of peer influence (Lessard, Kogachi, & Juvonen, 2019). At this moment, the safest conclusion is that it is premature to offer conclusions about contextual variability in peer influence.

Conclusions

Assertions about the salience of peer influence rest on a firm foundation. Most agree that the empirical evidence for peer influence meets widely accepted standards of causality (McGloin & Thomas, 2019). Few topics in adolescent development can make a similar claim.

The consequences of peer influence may be well-established, but its motives and functions are not. Herein we advanced a framework for understanding peer influence. Peer influence serves many purposes, but we hold that one of its most important functions is to increase similarity between friends and affiliates, because similarity enhances compatibility, reducing the social risks that accompany differences and dissimilarity. The model advanced herein is not specific to adolescence, but it is particularly relevant to this period of heightened vulnerability to peer influence. Emerging evidence supports the basic tenets of the influence-compatibility model and we suspect that the next decade in review will provide new insights into the manner and purpose of peer influence and its role in interpersonal and intragroup compatibility.

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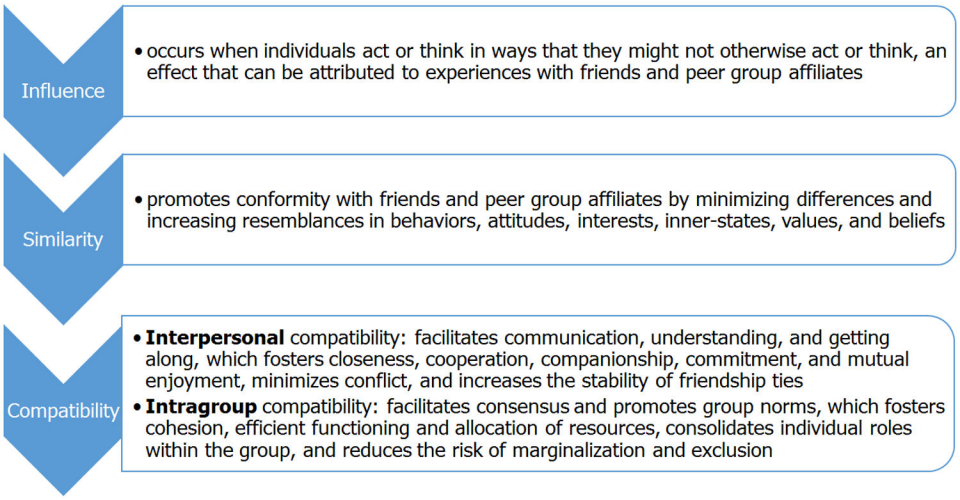

Figure 1.
The Influence-Compatibility Model: Peer Conformity Motives and Functions