

## **The Effect of Specific Traits on Teamwork Resulting in Production Increase Locally in Automobile Industries in Pune**

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### **Abstract**

Teamwork in the workplace offers the company and staffs the ability to become more familiar with each other and learn how to work together. There are several ways in which teamwork is important and vital to the success of the company and to the development of each employee. Understanding those important elements will assist in developing company policies geared toward encouraging team growth in the workplace. Teamwork is a global concept but traits to enhance teamwork are depended on culture and local values. On the other hand teamwork basically is a global value- country to country and culture to culture- but encourages peoples to take part in a team to resulting production increase need to study in people's habits and culture. Of course, some of traits and skills to enhance teamwork resulting production increase are independent of local values. This study tried to search in both traits and skills to enhance teamwork, whether depended to culture or independed from local values and also to form a model of Specific traits which enhance teamwork resulting production increase locally in automobile industries in Pune.

**Keywords:** Specific traits- enhance teamwork- production increase- automobile industries in Pune.

### **Introduction**

Pune is the 9th most populous city in India and the second largest in the state of Maharashtra after the state capital Mumbai. Pune is also the 101st largest city in the world, by population. It is situated 560 meters (1,837 feet) above sea level on the Deccan plateau, on the right bank of the Mutha river(Nalawade,2007). Pune city is the administrative headquarters of Pune district and was once the center of power of the Maratha Empire established by Shivaji Maharaj.

The automotive industry in India is one of the largest in the world with an annual production of 23.37 million vehicles in FY 2014-15, following a growth of 8.68 per cent over the last year. The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP). The Two Wheelers segment, with 81 per cent market share, is the leader of the Indian Automobile market, owing to a growing middle class and a young population. Moreover, the growing interest of companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 13 per cent market share.

More than 10 spiriting automobile industries exist in Pune and its made pune, an important city in Indian's automobile Industry.

The last decade and a half has witnessed a remarkable transformation of organizational structures worldwide. Although there are economic, strategic, and technological imperatives driving this transformation, one of its more compelling aspects has been an ongoing shift from work organized around individual jobs to team-based work structures (Lawler, Mohrman, & Ledford, 1995). Increasing global competition, consolidation, and innovation create pressures that are influencing the emergence of teams as basic building blocks of organizations. These pressures drive a need for diverse skills, expertise, and experience. They necessitate more rapid, flexible, and adaptive responses. Teams enable these characteristics. In addition, organizations have globalized

operations through expansion, mergers and acquisitions, and joint ventures placing increased importance on cross-cultural and mixed culture teams.

Advanced computer and communication technologies provide new tools to better link individuals with their team in real-time and even enable teams to be virtual—distributed in time and space.

This ongoing transformation in the basic organization of work has captured the attention of researchers and is reflected by new theories of team functioning, a rapidly growing number of empirical studies, and numerous literature reviews written on the burgeoning research on teams. It is also reflected in a shift in the locus of team research. For most of its history, small group research has been centered in social psychology (McGrath, 1997). Over the last 15 years, however, group and team research has become increasingly centered in the fields of organizational psychology and organizational behavior.

Indeed, Levine and Moreland (1990) in their extensive review of small group research concluded that, "Groups are alive and well, but living elsewhere. The torch has been passed to (or, more accurately, picked up by) colleagues in other disciplines, particularly organizational psychology" (p. 620). Several literature reviews published over the last 15 years help to document this shift in locus, characterize differences brought to group and team research by an organizational perspective, and provide a fairly comprehensive assessment this vast body of research. Goodman, Ravlin, and Schminke (1987) sent a signal marking the shift in locus and highlighted one of the key distinctions between the small group literature, which pays relatively little attention to the group task and its technology, and the organizational literature, which views what groups do and how they do it as a critical characteristics.

Similarly, Bettenhausen (1991) documented the emphasis in organizational research on task driven processes in teams, relative to the small group focus on interpersonal attraction and interaction.

Sundstrom, De Meuse, and Futrell (1990) presented an organizational systems perspective on teams that addressed both development and effectiveness; two issues rarely considered in concert. Hackman (1992) viewed groups as contexts for individual behavior, an important perspective because teams in part enact their context. Guzzo and Shea (1992) and Guzzo and Dickson (1996) reviewed team research in organizations. Cohen and Bailey (1997) and Sundstrom, McIntyre, Halfhill, and Richards (2000) provided focused reviews of work team effectiveness based on field research during the periods of 1990-1996 and 1980 to mid-1999, respectively. Finally, Gully (2000) presented an insightful assessment of team effectiveness research since 1985 that examines key boundary conditions. An examination of this body of work leads to the conclusion that there is an enormous wealth of information available on work teams in organizations. Nevertheless, answers too many fundamental questions remain elusive.

In this research we tried to adopt global teamwork values and based on other researches on local values to introduce a model for Specific traits which enhance teamwork resulting production increase locally in automobile industries in Pune.

### **Definition of teamwork and its types**

#### ***Teamwork***

Although some scholars distinguish work teams and work groups (Katzenbach & Smith, 1993), we make no such distinction and use the terms interchangeably. Others distinguish dyads or triads from larger teams. Although we acknowledge that intra-team processes increase in complexity with more team members, we do not highlight these distinctions in this chapter. Work teams and

groups come in a variety of types and sizes, cutting across different contexts, functions, internal processes, and external linkages.

However, several features provide a foundation for a basic definition. Work teams and groups: (a) are composed of two or more individuals, (b) who exist to perform organizationally relevant tasks, (c) share one or more common goals, (d) interact socially, (e) exhibit task interdependencies (i.e., workflow, goals, outcomes), (f) maintain and manage boundaries, and (g) are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity (Alderfer, 1977; Hackman, 1987; Hollenbeck, Ilgen, Sego, Hedlund, Major, & Phillips, 1995; Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996a; Kozlowski, Gully, Nason, & Smith, 1999; Salas, Dickinson, Converse, & Tannenbaum, 1992).

We view teams from an organizational systems perspective. Teams are embedded in an open yet bounded system composed of multiple levels. This broader system sets top-down constraints on team functioning. Simultaneously, team responses are complex bottom-up phenomena that emerge over time from individual cognition, affect, behavior, and interactions among members within the team context (Kozlowski & Klein, 2000). Based on this perspective, we assert that four conceptual issues are critical in efforts to investigate and understand work teams: (1) task or workflow interdependence, (2) contextual creation and constraint, (3) multilevel influences, and (4) temporal dynamics. We briefly introduce these issues below and use them as a basis to identify both the strengths and limitations of extant research.

The centrality of task interdependence is one issue that clearly distinguishes the work teams and small group literatures (Goodman et al., 1987). In the organizational literature, technology, and the tasks it entails, denotes the means by which system inputs are transformed or converted to outputs; technology is not equipment or support systems (e.g., McGrath & Hollingshead, 1994). Technology and its associated tasks create a structure that determines the flow of work and linkage across team members. Interactions among work team members are substantially influenced by this workflow structure (Steiner, 1972; Van de Ven, Delbecq, & Koenig, 1976), which links individual inputs, outcomes, and goals. Thus, it has a critical influence on team processes essential to team effectiveness. In contrast, laboratory tasks in small group research are often pooled or additive, thereby minimizing the necessity for task-driven interaction among team members (McGrath, 1997). From an organizational systems perspective, the task workflow sets interaction requirements and constraints that must be considered in team theory, research, and practice.

Teams are embedded in an organizational context and the team itself enacts a context for team members. The broader organizational context characterized by technology, structure, leadership, culture, and climate constrains teams and influences their responses. However, teams also represent a proximal context for the individuals who compose them. Team members operate in a bounded interactive context that they in part create by virtue of their attributes, interactions, and responses. Team-level normative expectations, shared perceptions, and compatible knowledge are generated by and emerge from individual interactions. Dynamic team processes in part create contextual structure that constrains subsequent team processes. Thus, the team context is a joint product of both top-down and bottom-up influences.

Organizations, teams, and individuals are bound together in a multilevel system. Teams don't behave, individuals do; but they do so in ways that create team level phenomena. Individuals are nested within teams, and teams in turn are linked to and nested in a larger multilevel system. This hierarchical nesting and coupling, which is characteristic of organizational systems, necessitates the use of multiple levels—individual, team, and the higher-level context—in efforts to understand and investigate team phenomena. However, many of the theoretical, measurement, and data analytic

issues relevant to a multilevel perspective on teams are often neglected in research and practice. These issues are especially important when researchers try to attribute individual characteristics to the team collective (e.g., team ability, team personality, team learning). Such generalizations necessitate precise multilevel theory and analyses to ensure the meaningfulness of the collective team-level construct (Kozlowski & Klein, 2000).

Unfortunately, there are many examples of such generalizations that lack the standing of true constructs.

Finally, time is an important characteristic of work teams (McGrath, 1990). Teams have a developmental lifespan; they form, mature, and evolve over time (Morgan, Salas, & Glickman, 1993).

Team constructs and phenomena are not static. Many, indeed, most team level phenomena (e.g., collective efficacy, mental models, performance) emerge upwards from the individual to the team level and unfold via complex temporal dynamics (Kozlowski et al., 1999) that include not only linear, but also cyclical, and episodic aspects (Kozlowski et al., 1996a; Marks, Mathieu, & Zaccaro, 2001). Although time is explicitly recognized in models of team development, it is largely neglected in many other areas of team research; yet time is relevant to virtually all team phenomena. It is impossible to understand team effectiveness without paying attention to the processes that unfold over time to yield it.

#### ***Specific traits and Teamwork types***

Work teams can assume a wide variety of different forms—they are not unitary entities. Many factors or contingencies relevant to effective team functioning vary across different types of teams, creating challenges for studying and understanding them. This fact is reflected in the many efforts to describe, classify, or otherwise distinguish differences among of teams. We consider some of the major distinctions below and then comment on their theoretical and research value.

**General Typologies.** General typologies are an effort to distinguish a broad range of team types. For example, Sundstrom and colleagues (2000) integrated the Sundstrom et al. (1990) and Cohen and Bailey (1997) typologies to yield six team categories: (1) production, (2) service, (3) management, (4) project, (5) action and performing, and (6) advisory. Production teams represent core employees who cyclically produce tangible products (e.g., automobile assembly) and vary on discretion from supervisor-led to semi-autonomous to self-directed. Service teams engage in repeated transactions with customers (e.g., airline attendants) who have different needs, making the nature of the transactions variable.

Senior managers of meaningful business units with primary responsibility for directing and coordinating lower level units under their authority comprise management teams. Project teams are temporary entities that execute specialized time-constrained tasks and then disband (e.g., new product development). Action and performing teams are composed of interdependent experts who engage in complex time-constrained performance events. Examples include aircrews, surgical teams, military units, and musicians.

#### ***More Specific Classifications***

In addition to general typologies, researchers have identified more specific types of teams. For example, some scholars have distinguished crews from other types of work teams (e.g., Cannon-Bowers, Salas, & Blickensderfer, 1998). The key distinguishing characteristic is the capability and necessity for crews to form and be immediately prepared to perform together effectively (Ginnett, 1993). Thus, advocates of this distinction assert that crews, unlike more conventional teams, do not go through an identifiable developmental process (Arrow, 1998). Examples include aircrews, military combat units, and surgical teams. However, it is notable that crews are used for team tasks that necessitate high expertise, extensive training, and well-developed, standardized performance

guidelines. Thus, while crews continually form, disband, and reform with new members as an integral part of their lifecycle, the high level of prior socialization, trained knowledge, and explicit performance standards provide strong structural supports that substitute for an extended group development process.

Top management teams (TMT; Hambrick & Mason, 1984; Jackson, 1992a) represent another specific classification, one based on level in the organizational hierarchy. Because it is difficult to gain access to TMTs, much of the research on TMT effectiveness has focused on factors that can be gleaned through archival records. As a result, research has centered on TMT composition (e.g., heterogeneity of function, organizational tenure, team tenure, age, and education; team size) and the external environment (e.g., industry as a proxy for environmental turbulence, market characteristics), and their effects on organizational effectiveness (Eisenhardt & Schoonhoven, 1990; Finkelstein & Hambrick, 1990; Simons, Pelled, & Smith, 1999; Smith et al., 1994; West & Anderson, 1996). Although the amount of empirical work in this area is relatively small compared to work team research in general, the area is active and growing. One troubling aspect of this growing area, however, is its relative independence of the broader work team's literature (Cohen & Bailey, 1997). This is a neglected issue in need of rectification.

More recently, the globalization of organizations and changing nature of work have yielded new team forms such as distinctions based on culture—cross-cultural, mixed-culture, and transnational teams (Earley & Erez, 1997)—and collocation in time and space—virtual teams (Bell & Kozlowski, in press). (For example, the challenge of cross- and mixed-culture teams is to break through the barriers of different fundamental values, cultural assumptions, and stereotypes to successfully coordinate and jointly perform effectively. One of the biggest conceptual challenges in this area of work is dealing with the multiple levels—individual, group, organization, and culture—that are relevant to understanding such teams. Chao (2000) for example, presents a multilevel model of intercultural relationships that specifies how individual- and group-level interactions are affected by higher-level relationships. Essentially, interactions among individuals or groups of different cultures are affected by their cultural identities, and the relative standing of the cultures on factors important to the interaction. Variation in how groups deal with this higher-level linkage affects the quality of interaction and the potential for group effectiveness. Thus, Chao's model provides a basis to guide research on intercultural team interactions.

Bell and Kozlowski (in press) distinguish virtual teams from conventional face-to-face teams based on two features: (1) spatial distance—virtual team members are dispersed in space, and (2) technological mediation of information, data, and personal communication—virtual team members interact via advanced communications media. These two features enable diverse expertise—located worldwide—to be combined into a team that transcends the usual boundaries of space and time. As organizations and work continue to evolve, new types of work teams will be created and classified.

**The Role of Typology in Understanding Teams.** Although there is value in characterizing distinctions across different types of teams, description and classification are merely the first steps in comprehending the implications of such differences for effective team functioning. In our view, it is more useful to focus on the dimensions that underlie apparent differences in team classifications or typologies.

Surfacing such dimensions is a key to identifying the varying factors or contingencies that determine the effectiveness of different types of teams. Identifying these factors will better enable researchers and practitioners to specify design and operational factors that promote team effectiveness for different teams.

Some scholars have made steps in this direction. Sundstrom et al. (1990), for example, identified three dimensions underlying their typology: (1) work team differentiation—the degree to

which membership is inclusive, variable, or exclusive and the span of the team's lifecycle; (2) external integration—the degree to which the team's task is entrained by, that is requires synchronization with, organizational paces external to the team; and (3) work cycles—the general length of the team's task and the degree to which performance episodes are multiple, variable, repeatable, and novel.

Kozlowski et al. (1999) focused directly on dimensions rather than classification, proposing that five features—(1) task, (2) goals, (3) roles, (4) process emphasis, and (5) performance demands—distinguish teams ranging along a simple to complex continuum. Complex teams are characterized by (1) tasks that are externally driven, dynamic, and structured by explicit workflows; (2) common goals that necessitate specific individual contributions that may shift over a work cycle; (3) roles that are specified and differentiated such that they required specialized knowledge and skill; (4) a process emphasis that focuses on task-based roles, task interaction, and performance coordination; and (5) performance demands that require coordinated individual performance in real-time, the capability to adapt to shifting goals and contingencies, and a capacity to continually improve over time. In contrast, simple teams are characterized by (1) tasks that are internally oriented, static, and unstructured in that they lack explicit workflows; (2) common goals that make no specific demands for individual contributions and which are fixed for the team's lifecycle; (3) roles that are unspecified and undifferentiated, such that all team members possess essentially equivalent knowledge and skill; (4) a process emphasis that focuses on social roles, social interaction, normative behavior, and conflict; and (5) by minimal performance demands that allow pooled or additive contributions to the group product. Similarly, Bell and Kozlowski (in press) characterized a continuum of team complexity ranging from simple to complex based on the dimensions of: (1) task environment, (2) external coupling, (3) internal coupling, and (4) workflow interdependence. The complex end of the continuum, relative to the simple end, is defined by tasks that are dynamic as opposed to static, external coupling that is tight rather than loose, and internal coupling that is synchronous and strong in contrast to asynchronous and weak. Workflow interdependence ranges from complex to simple as: intensive, reciprocal, sequential, and pooled (see Van de Ven et al., 1976).

Looking across the dimensions described previously, we believe the following features capture most of the unique characteristics that distinguish different team forms: (1) the external environment or organizational context in terms of its (a) dynamics and (b) degree of required coupling; (2) team boundary permeability and spanning, (3) member (a) diversity and (b) collocation/spatial distribution; (4) internal coupling requirements; (5) workflow interdependence with its implications for (a) goal, (b) role, (c) process, and (d) performance demands; and (6) temporal characteristics that determine the nature of (a) performance episodes and cycles and (b) the team lifecycle. We offer these features as a point of departure for a concerted effort to develop a definitive set of dimensions that characterize key contingencies essential for the effectiveness of different types of teams. We believe that continuing efforts to better characterize dimensions that distinguish different types of teams can help pay big theoretical dividends. More to the point, we believe that focusing on typology and classification is misguided if viewed as an end in itself; there is the danger of reifying classifications and failing to see underlying factors that account for apparent differences. Rather, by surfacing dimensions that distinguish teams, we will be better equipped to identify the critical contingencies relevant to effectiveness for different types of teams. Understanding what factors constrain and influence effectiveness for different types of teams will enable theoretical progress and better targeted interventions. This issue currently represents a major gap in theory and research, and substantially limits our ability to develop meaningful applications and interventions designed to enhance team effectiveness.

### **Team Composition and output enhancement**

Events within teams often reflect the number and type of people who are its members. As a result, considerable research has focused on team composition, or the nature and attributes of team members (for a review, see Jackson & Joshi, in press). Team composition is of research and practical interest because the combination of member attributes can have a powerful influence on team processes and outcomes. A better understanding of such effects will help practitioners to select and construct more effective teams. Moreland and Levine (1992) categorized team composition research along three dimensions.

First, different characteristics of a team and its members can be studied, including size, demographics, abilities and skills, and personalities. Second, the distribution of a given characteristic within a group can be assessed. Measures of central tendency and variability are typically used, but special configurations are sometimes measured as well. Third, different analytical perspectives can be taken toward the composition of a team. Team composition can be viewed as a consequence of various social or psychological processes (e.g., socialization), as a context that moderates or shapes other behavioral or social phenomena, or as a cause that influences team structure, dynamics, or performance.

We review and discuss team composition issues along each of these three dimensions. First, we provide a brief review of research that has focused on different characteristics of teams and their members. Second, we discuss issues relating to levels of conceptualization and analysis in research on team composition. Finally, we discuss some practical implications that can emerge from a better understanding of team composition and its effects on team structure, dynamics, and performance.

#### **Team Size**

Researchers have offered recommendations concerning the best size for various types of teams.

Katzenbach and Smith (1993) suggested that work teams should contain a dozen or so members, whereas Scharf (1989) suggested that seven was the best size. A variety of other such recommendations are easily found in the literature. Such recommendations are difficult to evaluate, because they are often based on personal experiences rather than empirical evidence. However, it is also difficult to determine what constitutes appropriate team size from empirical research. Some research suggests that size has a curvilinear relationship with effectiveness such that too few or too many members reduces performance (Nieva, Fleishman, & Reick, 1985), whereas other studies have found team size to be unrelated to performance (Hackman & Vidmar, 1970; Martz, Vogel, & Nunamaker, 1992) or increasing team size actually improves performance without limit (Campion, Medsker, & Higgs, 1993).

These differing recommendations and results are likely due to the fact that appropriate team size is contingent on the task and the environment in which the team operates. For example, larger teams may have access to more resources, such as time, energy, money, and expertise, that may not only facilitate team performance on more difficult tasks but also can provide more “slack” if environmental conditions worsen (Hill, 1982).

However, larger teams can also experience coordination problems that interfere with performance (e.g., Lantané, Williams, & Harkins, 1979) and motivation losses caused by a dispersion of responsibility (Sheppard, 1993). Overall, the question of the “optimal” group size is a complex one and future research is needed to determine the impact of team size given specific team contingencies, such as the nature of the team task and its consequent internal and external coupling demands.

### **Demographic Diversity**

The extent to which team processes and outcomes are influenced by the homogeneity or heterogeneity of team member demographic characteristics has also been the focus of considerable attention, although it is difficult to determine whether team diversity is desirable. Studies have reported that diversity has positive (Bantel, 1994; Gladstein, 1984), negative (Haleblian & Finkelstein, 1993; Jackson et al., 1991; Pelled, Eisenhardt, & Xin, 1999; Wiersema & Bird, 1993), or even no effects on team effectiveness (Campion et al., 1993). These mixed findings have led reviewers to draw different conclusions regarding the effects of diversity: Bettenhausen (1991) concluded that groups composed of similar members perform better than those composed of dissimilar members, whereas Jackson, May, and Whitney (1995) concluded that diversity tends to have a positive relationship with team effectiveness. Argote and McGrath (1993) suggested that the effect of diversity on team outcomes is likely to depend on four factors. First, the effects of diversity probably depend on the nature of the team's task. Jackson et al. (1995), for example, concluded that the value of member heterogeneity for team performance is clearest in the domains of creative and intellectual tasks. Second, the effects of diversity may depend on the particular outcomes studied. Research seems to suggest that diversity may have a positive effect on performance, but a more negative effect on behavioral outcomes, such as team member turnover. Third, research has shown that the impact of diversity may vary across time. Watson, Kumar, and Michaelsen (1993), for example, found that homogeneous groups displayed better initial performance than heterogeneous groups, but these effects dissipated across time and heterogeneous groups later performed better than more homogeneous groups. Finally, the impact of diversity may depend on the attributes on which homogeneity-heterogeneity is assessed. Some research suggests that diversity in demographic characteristics may have negative consequences, but diversity in terms of skills and expertise may have positive effects. Future research needs to examine these factors and how they may constrain or moderate the impact of diversity on team processes and outcomes.

### **Dispositions and Abilities**

In addition to demographic diversity, researchers have also considered team composition effects of constructs like personality and cognitive ability on team effectiveness. Unlike demographic diversity, which is usually directly conceptualized and assessed as a team-level property (homogeneity/heterogeneity), personality and ability are fundamentally individual-level psychological characteristics.

Such constructs necessitate models of emergence to guide conceptualization, measurement, and representation at the team level. Many potential representations are possible including averages, highest or lowest, variance, and even complex configurations. In the absence of an explicit theoretical model of emergence to guide composition, "team personality" or "team ability" (or other such constructs) are of questionable construct validity and research may yield spurious findings (Kozlowski & Klein, 2000). Personality. The last decade has witnessed renewed interest in personality that has been extended to teams as researchers have examined the impact of team personality composition on team effectiveness.

In general, this research has found a link between aggregate team member personality and team performance (Jackson, 1992a; Moreland & Levine, 1992). Consistent with individual-level research, team-level conscientiousness appears to be a fairly potent positive predictor of team effectiveness (Barrick, Stewart, Neubert, & Mount, 1998; Neuman, Wagner, & Christiansen, 1999; Neuman & Wright, 1999). Although conscientiousness has been most frequently studied, some research suggests that other Big Five personality factors, such as extraversion (Barry & Stewart,



1997) and agreeableness (Neuman & Wright, 1999), may also play a role in determining work team effectiveness.

Although team personality composition appears to be a relatively robust predictor of team effectiveness, research suggests that different compositions may be more or less effective depending on the task and the amount of member interaction required for effective team performance. Research has found that team-level conscientiousness is more strongly related to effectiveness for performance and planning tasks than it is for creativity and decision-making tasks (Barry & Stewart, 1997; Neuman & Wright, 1999). In contrast, team-level extraversion seems to have a greater impact on team effectiveness for decision-making tasks than for performance or planning tasks, possibly because the former involve a greater degree of persuasion and personal influence (Barry & Stewart, 1997; Neuman & Wright, 1999).

Similarly, LePine, Collquit, and Erez (2000) found that team conscientiousness and openness did not predict team decision effectiveness. However, when decision rules were changed to require adaptability, conscientiousness became negative and openness positive predictors of decision effectiveness. Although the mechanisms by which team personality composition influences team performance require further investigation, it is clear that personality composition has important implications for team effectiveness.

**Cognitive Ability.** Among the factors studied in relation to work team effectiveness, one consistent predictor is team members' collective cognitive ability. Team members' average cognitive ability is related to team performance among military tank crews (Tziner & Eden, 1985), assembly and maintenance teams (Barrick et al., 1998), and service teams (Neuman & Wright, 1999). In addition, LePine, Hollenbeck, Ilgen, and Hedlund (1997) found that the performance of hierarchical decisionmaking teams was enhanced when both the leader and staff were high in cognitive ability.

A meta-analysis by Devine and Phillips (2000) found a positive relationship between average team cognitive ability and team performance of .19, which increased to .30 when a large outlier study was omitted. Moderator analyses suggested that the relationship between team-level cognitive ability and performance is fairly consistent across information-processing and behavioral tasks. However, team-level cognitive ability exhibited a considerably stronger relationship with team performance for unfamiliar tasks ( $r = .36$ ) vs. familiar tasks ( $r = .12$ ), and the strength of the ability-performance relationship differed somewhat depending on whether the lowest member score was used ( $r = .25$ ) or the team average was utilized ( $r = .30$ ). Although research in this area is promising, continued work is needed to identify those conditions under which team-level cognitive ability has more or less of an impact on team performance.

### **Theoretical and Empirical Issues**

Levels of conceptualization, measurement, and analysis have tended to be either ignored or treated simply in much of the research on team composition. The dominant use of averaging or additive models to guide the aggregation of individual characteristics to the team level suggests the use of simple team tasks or a very limited conceptualization of the compositional construct at the higher level (Kozlowski & Klein, 2000). Such issues are critical for developing a sound understanding how team member attributes combine to form higher-level constructs and must be carefully articulated. Welldefined models of emergence need to guide the representation of individual-level characteristics at the team level. Kozlowski and Klein (2000) provide a differentiated typology of six different emergent processes, based on contextual constraints and interaction processes, for how lower-level phenomena manifest at higher levels. Such models can assist researchers in determining the most appropriate method for representing lower-level

phenomena at higher levels. For example, when emergence is more continuous and linear, averaged or summed values are an appropriate method of representing lower-level phenomena at the team level. However, when emergence is more discontinuous and nonlinear, it is more appropriate to use dispersion or configural models to capture the emergent characteristic of the team. For example, conceptualizing team composition as a pattern of different but compatible personalities represents the use of a configural model (e.g., Stewart & Barrick, in press).

There has also been a relative lack of attention to the latent constructs that underlie variables of interest within research on team demographic composition. As a result, it is often difficult to determine precisely how or why variables such as team member age, tenure, or demographics influence team processes and outcomes. Recent research on team personality and cognitive ability composition has placed greater attention on understanding these underlying constructs; however, additional research is needed to identify the mechanisms by which team composition has its effects.

### **Applied Issues**

An understanding of team composition can serve as a valuable tool for selecting and constructing effective teams. Procedures could be designed to produce the optimal blend of employee characteristics (Driskell, Hogan, & Salas, 1987; Heslin, 1964; Jackson, 1992b) including hiring new workers or firing old ones, training current workers, or engaging the services of adjunct workers, such as temporary employees or consultants (Klimoski & Jones, 1995; Moreland et al., 1996; Stevens & Campion, 1994).

Although past work provides some valuable information about how to manage team composition, researchers have often adopted a “more is better” approach (i.e., the additive model assumption) suggesting that the person with the highest score on a particular attribute (e.g., cognitive ability) or the most skilled individual should be selected for the team. However, recent research suggests that it may be more important to create an appropriate configuration of team member characteristics. For example, research by Stewart and Barrick (in press) suggests that if a team consists of a lot of extraverts, it may be better to hire a less extraverted person or even an introvert. Conversely, if a team has no extraverts, it may be important to hire highly extraverted applicants. To create an appropriate blend of team member characteristics, one will need to know what personality traits currently compose the team and the target team personality configuration before selecting a particular individual. It may also be important to consider the team’s task, because it may be important to have a homogenous group of team members for some types of tasks and a heterogeneous team composition for others (Neuman & Wright, 1999). Human resource systems such as selection, training, and performance appraisal, must be conceptualized and managed at the team level (Schneider, Smith, & Sipe, 2000) to appropriately address composition issues. Focusing on the individual level alone will not provide the information needed to make effective decisions regarding team composition. Including the team level provides information concerning not only the team’s current composition but also the team’s tasks and processes which assist in the development of an appropriate combination of team member characteristics for the task at hand.

### **Specific Traits and group Formation**

Teams may be formed a new, where all members are new to each other and the team. Or, teams with a developmental history may have influxes and outflows of members that affect its composition and character. In either instance, development and newcomer socialization are relevant issues. Socialization has generally been seen as a mechanism for bringing new members into existing teams or groups. With few exceptions, much of this theory and research has focused on the socialization of individuals into the organization and, while theoretically relevant, has paid relatively little attention to the work group or team as central to the socialization process. That is, the vast

majority of work on socialization in work settings focuses on organizational influences, but is far less sensitive to the proximal social and work context within which socialization actually takes place. While socialization is a critical aspect of team maintenance and continuance, we know relatively little about it in the team context. Development tends to assume the formation of a brand new team with no prior history. Much of the classic theory in this area also assumes no broader organizational context, work roles, or prescribed interactions. Consider, for example, Tuckman's (1965) classic model of group development, with its sequential stages of forming, storming, norming, and performing. Clinical and therapy groups, which provided the foundation for this model, have no prior history, no broader context, and are almost completely unstructured save for a common goal: to "get well." Thus, the dominant focus in Tuckman's model is on the group's struggle to create structure to regulate their interpersonal interactions and to finally make progress toward the goal. Although this model—and the many, many others based on it—provides a useful contribution to our understanding of group development for simple teams, it provides little theoretical insight on skill development for work groups. As discussed in the prior section, work teams are subject to variety of structural features that drive interactions and exchanges among members. Interpersonal issues are relevant, but they do not dominate the developmental process. Yet, with few exceptions (Gersick, 1988; Kozlowski et al., 1999; McGrath, 1990; Morgan, Salas, & Glickman, 1993), there are relatively few theories that are specifically targeted on work team development.

### ***Socialization***

Existing teams are governed by a relatively stable set of norms, role expectations, and shared systems of knowledge and meaning (e.g., group climate, mental models). These informal structures emerge through social and work-based interactions among members across a group's developmental history. Newcomers present a potential challenge to this stable structure and are thus subject to efforts by group members to assimilate the person to it. At the same time, newcomers are confronted by a novel and ambiguous social and work context. While they want very much to "fit in" and "learn the ropes" and are generally prepared to accept guidance from the group, they may also seek to have the group accommodate to their needs, values, and capabilities. Thus, work group socialization is a process of mutual influence in which newcomers attempt to reduce uncertainty by learning about the work and group context; guided by group members who facilitate assimilation to existing norms, expectations, and meaning systems; while at the same time newcomers attempt to exert influence on the group to accommodate to their unique attributes and needs (Anderson & Thomas, 1996; Moreland & Levine, 1982).

Interestingly, even though researchers clearly recognize the centrality of the work group in the socialization process, the dominant perspective in the literature is characterized by a focus on organizational socialization—not on a primary process of work group socialization that occurs within a broader and more distal organizational context (Chao, Kozlowski, Major, & Gardner, 1994). Virtually all efforts to identify the relevant content of newcomer socialization make provision for learning about the work group and its social structure (e.g., Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994), but it is merely one part of a broader process. Moreover, early theory and research on organizational socialization can be characterized as accentuating the powerful influence that the organizational context exerted on newcomers in an effort to assimilate them. This was later followed by a shift in perspective that emphasized the proactive role that newcomers play in shaping their own socialization process. Missing is the sense of mutual influence as the group seeks to assimilate the newcomer, and the newcomer endeavors to adapt while seeking accommodation by the group. This is a major shortcoming of the socialization literature, and means that our knowledge of the process team socialization is limited. There are, however, some notable exceptions.

### ***Group and Team Socialization***

Moreland and Levine (1982) detail a model of group socialization that focuses on membership processes, primarily applicable to autonomous voluntary groups who control their own membership and are not nested in a broader organizational context. Its major focus is on mutual decisions on the part of a newcomer and the group regarding joining, assimilation and accommodation, and continuance or withdrawal of membership. The model spans five phases: investigation, socialization, maintenance, resocialization, and remembrance. Difficulties in assimilation or accommodation may prompt the group to resocialize a newcomer. Resocialization failure leads to lower commitment and exit.

Aspects of the model are potentially relevant to team socialization—in particular its explicit attention to the group as the primary locus of socialization and mutual expectations as drivers of the process.

Remarkably, although the model has been elaborated in several papers, it has generated relatively little research attention and the little research that has been conducted has been limited to ad hoc laboratory groups. Thus, the utility of the model to work team socialization remains to be examined. Based on a focused review of the organizational socialization literature, Anderson and Thomas (1996) present a model that is explicitly focused on work group socialization and the mutual influence of the newcomer and the group on outcomes of the process. Thus, it is an effort to address the neglected issues noted above. The model spans the socialization phases of anticipation, encounter, and adjustment, identifying potential characteristics of the newcomer and the group that may contribute to socialization as a process of mutual influence and adjustment. Although the model is too recent to have prompted research, the authors provide propositions that may serve as a point of departure for such efforts.

**Direct Findings for Work Group Socialization.** Although most socialization research has neglected explicit attention to the role of the work group, there are some exceptions; additionally, useful knowledge regarding team socialization can be gleaned from existing research. For example, as one aspect of their study, Chao et al. (1994) focused on how the quality of newcomer role development relations with their leader and team influenced role outcomes of ambiguity and conflict, with the role outcomes in turn expected to influence socialization effectiveness. Results indicated that newcomer role development quality predicted role outcomes. Moreover, role outcomes were better predictors of socialization effectiveness than organizational tactics, especially over time. Chao et al. concluded that these findings supported the primacy of the work group, not the organization, as the locus of socialization. Similarly, Major, Kozlowski, Chao, and Gardner (1995) examined the potential effects of leader and team relations on ameliorating the negative effects of unmet newcomer expectations on socialization outcomes. “Reality shock” is one of the major challenges for newcomers as they confront the unpleasant fact that their work expectations are largely unmet. An inability to resolve reality shock yields low commitment and satisfaction, and generally leads to withdrawal. Major et al. reasoned that positive relationships with work group members would moderate the effects of reality shock, weakening its relationship with negative outcomes. They reported support for their proposition, and concluded that high quality interactions with work group members provided an important support for effective socialization.

**Indirect Findings for Work Group Socialization.** Results from research on socialization practices indicates that newcomers view supervisors and work group members as available and helpful socialization agents who are far more helpful than formal socialization practices (Louis, Posner & Powell, 1983). Research on newcomer information acquisition also indicates the importance of work group members in the process of learning, sense-making, and adjustment. Ostroff and Kozlowski (1992) hypothesized that newcomers have to resolve issues of their fit in the work group before they can

turn attention to task and role issues. In support, they reported that newcomers focused on acquiring group knowledge early on, later shifting to task and role issues. Organizational factors were of lowest priority.

They also found that supervisors and social learning in the group context were the most effective newcomer strategies for learning about the role and group. Perhaps most important, they reported that increasing newcomer reliance on the supervisor over time as a source of information was related to increases in newcomer satisfaction, commitment, and adjustment over time. Role of the Group in Socialization. The research reviewed above clearly indicates that group leaders and members are key players in newcomer socialization. Unfortunately, however, this research provides little insight about group characteristics and their precise role in the socialization process.

Moreland and Levine (1989) provide several suggestions in this regard. For example, they suggest that groups with a longer developmental history present a more difficult socialization challenge to the newcomer, because such groups will demand more assimilation and will resist accommodation efforts.

There is some support for this notion. Katz (1982) reported that younger R & D groups communicated more with outsiders and were more open to new ideas; older groups were more insular. Similarly, groups that are typified by stable membership present a more difficult socialization environment relative to groups with frequent personnel inflows and outflows. And, groups that are more successful are more likely to be insular, whereas groups experiencing performance problems may be more open to suggestions from newcomers with requisite knowledge and abilities. Groups can also apply deliberate socialization tactics. By controlling recruitment and selection they can influence the quality of fit, thereby aiding assimilation. By “encapsulating” the newcomer—maximizing their time and energy commitment to the group—they tie the newcomer to the group, minimizing alternative commitments and enhancing socialization. There is, however, little solid support for the effectiveness of these tactics in realistic team situations. More theory and research are clearly needed on work team socialization.

### ***Development***

**Classic Stage Models:** Several models describe the developmental stages groups pass through over their life span. The descriptive characteristics of these models are remarkably parallel to Tuckman's (1965) widely cited model of group development (Kozlowski et al., 1999). Tuckman reviewed the group literature, defined by therapy, T-group, natural, and laboratory group studies, and proposed that groups go through the developmental stages of forming, storming, norming, and performing.

As team members first come together during the formation stage, they cautiously begin to explore the group and attempt to establish some social structure. They attempt to define the group task and to establish how they will accomplish it. As team members realize that defining the task is more difficult than expected, they move to the storming stage. Members argue about what actions the group should take. Different factions may form as conflict progresses. As the group finally reconciles competing loyalties and responsibilities, it begins to firmly establish ground rules, roles, and status. During this norming stage, members reduce emotional conflict and become more cooperative, developing a sense of cohesion and common goals. As these normative expectations take hold, the group moves to the performing stage. Members are able to prevent group problems, or to work through them when they arise. They become closely attached to the team and satisfied with its progress as they move toward their common goal.

**Implications for Work Team Development:** Although classic stage models of group development provide rich descriptions of social interaction processes, they have tended to focus on the simpler types of teams—those with tasks that have undefined workflows and internally driven

processes. Thus, they focus primary attention on the interpersonal ambiguity and conflict that new group members endure as they attempt to create a social hierarchy with common norms to guide interactions among members.

This focus has several implications. First, the models have not been sensitive to the organizational context. When new teams form in organizations, members typically bring socialization and cultural knowledge that reduces much—though not all—of the social uncertainty present at group formation.

Second, the models have a limited conceptualization of the task, its contingencies, dynamics, and the temporal constraints these factors set on team activities. The task is often viewed as a single incident of project planning, problem solving or decision-making that is determined by internal group dynamics; external contingencies are not acknowledged. There is no consideration of externally driven task dynamics, including variations in task complexity, difficulty, or tempo, and little recognition of multiple task episodes that cycle demands on the team. Third, the focus on unstructured task situations means that the models do not consider the development of task-relevant patterns of interaction and exchange among members that is dictated by workflow structure. Instead, group interaction is driven by interpersonal attractions and conflicts. Thus, the models tend to focus on self-insight and interpersonal processes, rather than specifying the task and team-relevant knowledge and learning that accrue during development.

Fourth, the models are collectively oriented, with the group or team conceptualized as a holistic entity. This is a relevant perspective when member contributions to team outcomes represent simple aggregations. However, when composition to the higher level is represented by more complex patterns,

There is a need to better disentangle the individual, dyadic, and team-level contributions. Finally, the models provide only a general description of the particular issues that arise during development, the means by which they are addressed, and the results of the process. Thus, like the socialization literature, much of the literature on team development provides relatively little insight regarding the development of work teams. There are, however, some notable exceptions.

One of the points noted above and a central theme in this chapter is the need to consider time, its dynamics, and effects. Work teams are linked to an external context that sets the pace, tempo, and cycles of team activities (Kelly, Futoran, & McGrath, 1990), which may change over time necessitating adaptation. This has important implications for work team development, which is not necessarily a uniform series of fixed stages. Gersick (1988, 1989), for example, observed the developmental processes of sixteen project teams (8 field and 8 lab) with lifecycles ranging from a week to six months and proposed a two-stage punctuated equilibrium model (PEM) of group development. Gersick's key conclusion is that group development is not dictated by a linear progression of stages. Rather, it is linked to an external deadline that paces progress. Early group interactions establish stable norms that pattern group activity though an initial period of inertia. At the halfway point, a significant transformation occurs—the punctuated equilibrium—as groups reorganize to focus on task completion. This model represents an important contribution to our understanding of group development because it acknowledges that the process is influenced by external temporal contingencies in addition to internal factors. It should also be noted that the PEM may be limited to project or problem-solving teams with a single fixed objective and limited lifespan, although this does capture a substantial segment of teams in organizations.

Although the PEM is often regarded as a direct challenge to stage models of development (e.g., Guzzo & Shea, 1992), some scholars view the two perspectives as distinctive, yet complementary. Chang, Bordia, and Duck (in press) contrasted Wheelan's (1994) integrative model of group development—a classic stage model—with Gersick's PEM. Examining 25 student project

groups, they concluded that the models are complementary depending on (1) what content is addressed and (2) what unit of analysis is used in regard to time. Content that focused on group processes and structure and more micro timing tended to support linear development, whereas content that focused on the groups' approach to their task and more macro timing tended to support the PEM. These findings suggest that neither perspective alone is an adequate account of team development—we need broader, more integrative models. Similarly, Morgan et al. (1993) formulated a model of work team development that integrated the Tuckman and Gersick models. The model was designed to apply to work teams operating in complex environments where coordination is a central aspect of effective performance. Assumptions of the model are that: (1) team development processes shift over time, (2) shifting processes form reciprocal process-outcome linkages such that intermediate outcomes serve as inputs for subsequent processes, and (3) team members acquire contextually grounded skills that lead to improvements in team effectiveness over time.

This integration of Gersick and Tuckman yields a model with nine stages of development: preforming, forming, storming, norming, performing-I, reforming (punctuated equilibrium transition), performing-II, conforming, and de-forming. Another key feature of the model is the distinction made between taskwork (task relevant knowledge and skill development) and teamwork (knowledge and skills that enhance the quality of team member interactions, i.e., coordination, cooperation, communication) that must be integrated in parallel as a central aspect of the developmental process. Research by Glickman et al. (1987) provides general support for the primary assumptions of the model and, in particular, the distinction between taskwork and teamwork skills and their necessary integration for team effectiveness.

More recently, Kozlowski and colleagues (1999) have proposed a normative model of team compilation that integrates team development with a performance perspective. That is, team performance and adaptability at any given point in time are viewed as dynamic consequences of a continuous developmental process. There are three key conceptual features of the theory. First, temporal dynamics are viewed in terms of both linear and cyclical time, representing the effects of developmental processes and task episodes, respectively. Team capabilities improve developmentally prompting transition to more advanced phases of skill acquisition. Within a phase, variations in task episodes or cycles provide opportunities for learning and skill acquisition (see also Kozlowski et al., 1996a; Kozlowski, Gully, Salas, & Cannon-Bowers, 1996b). Second, developmental transitions prompt attention to different content that is the focus of new learning, different processes by which knowledge and skills are acquired, and different outcomes that capture current capabilities. Third, team compilation is viewed as an emergent multilevel phenomenon. Knowledge, skills, and performance outcomes compile successively upwards across focal levels from an individual self-focus to dyadic exchanges to an adaptive team network.

The model is formulated around four phase transitions, each with a distinct focal level and content, process, and outcome specifications. In phase 1, individuals are focused on resolving their fit in social space through a socialization process. This yields outcomes of interpersonal knowledge and team orientation, providing a foundation for shared norms, goals, and climate perceptions. In phase 2, individuals focus on acquiring task knowledge via skill acquisition processes with outcomes of task mastery and self-regulation skills. In phase 3, the level shifts to dyads that must negotiate role relationships, identifying key role sets and routines to guide task driven interactions. In phase 4, the level shifts to the team as it creates a flexible network of role interdependencies that will enable continuous improvement and adaptability to novel and challenging demands. Although there are no direct tests of the model, it is synthesized from a substantial and diverse literature. DeShon, Kozlowski, Schmidt, Wiechmann, and Milner (2001) provide preliminary support for the

basic proposition that developmental shifts in focal level from individual to team contribute to team performance adaptability.

### Conclusion

Teams are alive and well and living in organizations. This reality is pushing the field of industrial and organizational psychology to shift from a science and practice that is primarily focused on the individual level—our traditional roots—to a field that encompasses multiple levels: individual, team, and organization. Because teams occupy the intersection of the multilevel perspective, they bridge the gap between the individual and the organizational system as a whole. They become a focal point. They challenge us to attend to the organizational context, team task, levels, and time. They challenge us to develop new theories, new methodologies, new measurement tools, and new applications, not to just attempt to dust off and generalize our current ones. This creates major challenges for many of our field's traditional methods (e.g., selection, appraisal, training), but it also creates opportunities for theoretical innovation and advances in practice. Our field has much to learn and much to do, but we are confident that industrial and organizational psychology is capable of meeting the challenge afforded by the organization of work around teams.

Specific traits which enhance teamwork resulting production are categorized in two main types: Global values and traits and local traits. Both of them must be mentioned to introduce a model for enhance teamwork resulting production increase locally in automobile industries in Pune.

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