The Punctuated-Tuckman: Towards a New Group Development Model

Andrew C. Hurt and Sarah M. Trombley
Texas A&M University

Two commonly accepted theories of group development are the Tuckman model (Tuckman & Jensen, 1977) and the Punctuated-Equilibrium model (Gersick, 1988). Critiques of both are that they assume linear development and that they fail to account for outside influences. In contrast, Tubbs (2004) suggests that group development should be viewed from a systems perspective. This paper proposes a model that could assist the educator of group development theories in integrating Tuckman, PEM, and Tubbs's models.

Keywords: Tuckman, Punctuated-Equilibrium, Systems theory

As organizations attempt to achieve higher levels of performance, organizational leaders have begun focusing on creating high functioning groups. Well organized groups can potentially accomplish more than individuals. The problem that arises is how do effective groups form? Group development is a topic that has long been studied, but has few definite answers. In educational settings, group development tends to focus primarily on Tuckman's model of group development. While Tuckman's theory has many benefits, ignoring or under utilizing other group development theories does a disservice to those responsible for learning how to create dynamic and high performing groups. With the various theories available, educators of group development theory need to explore alternate avenues instead of relying solely on Tuckman's model of group development, thus this paper presents a case for integrating three group development theories

Towards a Case for Integration

The Tuckman model assumes that groups progress linearly through five separate stages. For over 30 years, educators have been requiring their students to learn these five stages: forming, storming, norming, performing, and adjourning. Admittedly, the Tuckman model has its benefits yet, if educators want to provide students with a well rounded education on group development theories then they must divert their instruction away from the Tuckman model. While it is appropriate for educators to continue to teach the Tuckman model, care needs to be taken to ensure that other group development theories are introduced to students.

Tuckman's model is flexible enough to allow for integration of other group development models. One model in particular, Connie Gersick's Punctuated-Equilibrium Model (PEM) (Gersick, 1988, 1989, 1991) provides ample opportunity for a hybrid of Tuckman's and itself. The PEM suggests that groups go through three phases as they progress toward the accomplishment of a task. Each phase is marked by an increased level of task performance as time runs short and deadlines approach. Although Gersick's model is not nearly as well known as the Tuckman model, it does provide educators a method of gauging time within group development. Admittedly, both models have several similarities. Both models assume that group development is a linear process and use the idea of stages to depict moments in group development. Finally, fundamental to both models is a positivist assumption that groups will strive for success or the accomplishment of an objective. These similarities between the two models are what several authors (Agazarian & Gantt, 2003; Connors & Caple, 2005; Tubbs, 2004) also consider to be limitations of both models.

Tubbs (2004) approaches group development from a systems perspective. In what he called "general systems theory" (p. 14), Ludwig von Bertalanffy proposed that conceptualizing an event as a system allows researchers to study the dynamic nature of that event. Tubbs suggests that we can use von Bertalanffy systems theory to analyze group development. Tubb's theory of group development proposes three basic processes that are the inputs, outputs and throughputs of a group. Each of these three processes allow a group to change based on the events that take place. Additionally, a systems perspective allows the group to adapt by learning from their misfortunes through feedback. In Tubbs's system, there is feedback connecting every point within each process. This feedback allows the group to change based on desired performance outcomes.

These three scholarly accepted, yet differing views of how groups develop, provide educators a unique

perspective on group development. However, given the hypothesized over-reliance on the Tuckman model, the era in which these theories were developed, and the critiques of each theory, it seems appropriate to attempt an integration of these three models in order to assist the educators of group development theories. Thus the research question addressed in this study is how the group development theories proposed by Tuckman, Gersick, and Tubbs can be integrated.

Integration of these three models is important for several reasons. First, integration will create a better, more robust model to describe group development. The Tuckman model does a passable job of allowing an individual to conceptualize the stages that groups move through; however it does not provide adequate clarification as to when each of these phases starts and stops. In contrast, the PEM looks at group performance as a function of time, yet does a less than adequate job of clearly defining the stages of group development. Likewise, Tubbs' systems perspective provides ample mechanisms to facilitate changes in groups, but does not focus on how the group accomplishes a task. Thus by integrating, a more comprehensive model for describing group development could be created. Second, an integrated model will provide educators a mechanism for presenting to students a clearer view of how groups develop. As Chang, Duck and Bordia (2006, p. 539) suggest, "as educators, are we setting up our classroom groups for potential failure by not providing sufficient training prior to group experiences." Students often find it difficult to remember and categorize the various stages, phases, and/or strata's of the multiple group development models. An integrated model will reduce these problems by giving instructors a more universal model of group development. Finally, it is also the hope that an integrated model will encourage educators to stray from their over-reliance on the Tuckman model.

An integration of Tuckman's, Gersick's, and Tubbs' models will additionally benefit the field of Human Resource Development (HRD). As a discipline that walks a fine line between the realm of education and the realm of business, HRD would benefit greatly from a new model of group development. As mentioned above there are numerous reasons for integrating these three models from the educator's perspective. However, there are also several benefits of integration from the business person's perspective. For-profit organizations are becoming even more reliant on groups to perform their operations than ever before (Miller, 2003; Tubbs, 2004). Often businesses do not have time to adequately consider all of the factors that contribute to group development therefore integrating three scholarly accepted theories would expedite this organizational process. Additionally, an integrated model would provide a better perspective on the entire group development process, thus allowing an organization to potentially increase the efficiency and effectiveness of their groups.

Literature Review

In order to discuss an integration of Tuckman's, Gersick's, and Tubbs' group development models, some background information on these three models is needed. This section provides a brief literature review of the Tuckman model, the Punctuated-Equilibrium model, and a systems approach to group development; how they were formed, research conducted on them, and their critiques.

Tuckman Model

In 1965, Bruce Tuckman published an article dealing with the stages of group development. In total, he analyzed 50 articles dealing with group development from three types of groups: therapy groups, training groups, and laboratory groups. Tuckman postulated that four general stages of group development could be identified within each of these three types of groups. These four stages form what we know today as the foundation of the Tuckman model and are used to describe how groups progress from their initial formation until the completion of their task. Tuckman entitles these stages: forming, storming, norming, and performing.

In the first stage, *forming*, Tuckman suggested that members of a group orient to the task at hand. The group comes together and formulates what needs to be accomplished, introduces themselves to each other, and establishes initial behaviors for performance. In the second stage, known as *storming*, Tuckman labels this as an "intragroup conflict" (p.386) stage. He suggested that once a group has formed they will initially become hostile toward each other as personality and group structures are forced onto members. "Group members become hostile toward one another and toward a therapist or trainer as a means of expressing their individuality and resisting the formation of group structure" (p. 386). The third stage, *norming*; is characterized by a "development of group cohesion" (p. 386). Group members begin to accept the situation that they are in and in doing so start to develop shared beliefs and attitudes. These shared attitudes become the group norms and facilitate entry in to the fourth stage, *performing*. In the fourth stage, group member can now work towards the accomplishment of a task because they have solved any group infighting and defined their individual roles. In this stage there is a focus on what Tuckman calls "role-relatedness" (p.387), which is how individual members perceive themselves relative to the group and the accomplishment of the groups' task. Additionally, Tuckman suggests that in this fourth stage there is the

"emergence of solutions" (p.387). The group becomes a problem-solving entity and thus puts forth the necessary effort to accomplish their task, hence a solution is found.

In 1977 with the help of Mary Ann Jensen, Tuckman revisited his model of group development. In this update to the model, Tuckman and Jensen reviewed an additional 22 studies focusing on group developmental stages. As a result of that review they added an additional fifth stage to Tuckman's model, *adjourning*. In this final stage, members of a group have completed their task and accomplished the group's goals. The group then terminates their activities. This termination is often characterized by sadness in members as there is a feeling of loss having disbanded as a group.

Tuckman's five stage model of group development was developed over 30 years ago and since then has been critiqued by numerous researchers. First, there is an assumption that groups progress linearly through each of the five stages. Several authors (Agazarian & Gantt, 2003; Connors & Caple, 2005; Miller, 2003; Tubbs, 2004) have suggested that the Tuckman model is deficient in its ability to describe groups that do not follow this linear progression. For instance, what happens when a group fails in the norming stage? The Tuckman model suggests that a group can not move into the performing stage without first completing the norming. Hence in the situation above, according to the Tuckman model, the group would fail to accomplish their task. Another critique of the Tuckman model is that there is no time oriented data associated with each stage (Gersick, 1988; 1989; 1991). How long does it take a group to move from each stage? Obviously, there would be some variation from group to group, but in general there is no way of plotting a group's development progression over time. The Tuckman model has also been called deficient in its ability to take on a systems approach to group development. Stewart Tubbs (2004) believes that groups can be viewed from a systems perspective; with inputs, outputs, throughputs, and a feedback loop. In the Tuckman model the systems perspective does not exist. Additionally, systems thinkers like Tubbs also suggests that the Tuckman model should be circular in nature. A circular Tuckman model would allow the group process to continually build on itself via a feedback loop; groups would learn from their mistakes and improve as a whole. Finally, there are likely hundreds of authors who have suggested that the five stages of the Tuckman model are either not enough or too many to describe the stages of group development.

Punctuated-Equilibrium Model

The Punctuated-Equilibrium Model (PEM), developed by Connie Gersick (1988; 1989), outlines three different stages that group's progress through as they work towards the completion of a project. What makes Gersick's model unique is that it is built upon the natural sciences evolutionary theory of a punctuated-equilibrium. Proposed as an alternate theory of evolution from Darwin's popular evolutionary theory, this evolutionary theory suggests that the human species developed as a result of periods of punctuated-equilibrium. In Darwin's theory, human evolution is linear and progressive. Through a process of natural selection Darwin's theory essentially states that small incremental changes over time have eventually resulted in the human species that we know today. Darwin suggested that this process is continually happening and that we as a species continue to improve because only the successful evolutionary changes will continue. Alternately, the theory of a punctuated-equilibrium says that humans evolve not through continuous incremental changes as Darwin suggested, but rather from periods of rapid and dramatic evolutionary change.

Gersick theorized that group development is similarly characterized by periods of punctuated-equilibrium. Thus as a group progresses toward the completion of their task, they will exhibit long periods of inertia, interspersed with brief revolutionary changes. Gersick's model suggests that these periods of inertia are triggered primarily by group members' awareness of time and task deadlines. An example of Gersick's model can be seen in Figure 1.

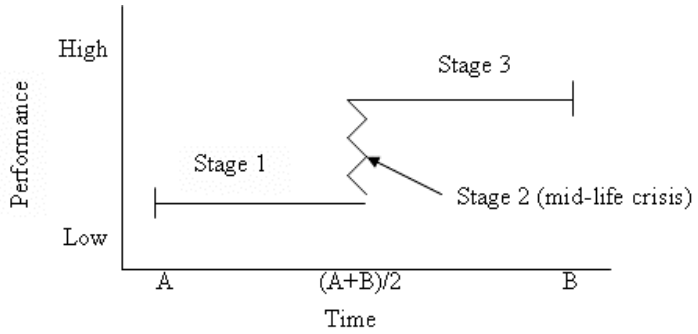

Figure 1. Punctuated-Equilibrium Model (Gersick, 1988; 1989)

Within the PEM, Gersick suggested that there are three stages of group development. In the first stage (see Figure 1), groups are formed and the group defines its direction. At the onset of stage one, groups will define their goals and basic assumptions about both the project and the members of the group. This first stage is categorized with a high level of relaxation and socialization. Members consider the deadline for the project to be far in the future thus there is little need for a high level of performance. Toward the end of the first stage there is a high level of inertia. Performance is relatively low, members still feel that the deadline for the project is far in the future and so there is little need for a high level of activity towards completion of the project.

The second stage (see Figure 1) of the model is a transition phase. Often referred to as the *mid-life crisis*, this stage comes at approximately the halfway point of the completion date (A+B/2). A sense of urgency appears in the fore ground of members minds, which up till now has not been dealt with. Thus the group puts forth a significant amount of effort toward the completion of the task in a relatively short amount of time. Toward the end of the second stage, problems are confronted, criticisms about the project or group begin to be taken seriously, and performance is high.

Finally, the third stage of the PEM (see Figure 1) is characterized by changes in the group which facilitate the accomplishment of the task. At the beginning of stage three, the group chooses to drop old unsuccessful patterns of behavior and adopts new perspectives; the group sets a new direction for their goals. These new goals lead the group into a high level of performance. This increase in performance relative to time is a result of the group recognizing that the time available until the deadline is short. The group realizes the project is due very soon so they put forth a final burst of energy to complete their tasks with most of the activity occurring during the last meeting.

After presenting (1988) and testing (1989) her model, Gersick later suggested that the PEM has much broader applicability to the realm of the social sciences and other disciplines (Gersick, 1991). Gersick compares the PEM to six other domains: "adult, group, organizational development, history of science, biological evolution, and physical science" (p. 10). She suggests that the PEM is not only a model for group development, but has broader applicability as a paradigm for organizational studies.

Similar to the Tuckman model there are several critiques of the PEM. Seers and Woodruff (1997), postulate that the PEM should not be considered as a model for group development. They suggest instead of predicting group behavior, as the PEM was intended, it only depicts the task pacing of groups who have deadlines to meet. An additional critique of Gersick's model is in testing the PEM she used only qualitative methodologies to collect her data. She does this primarily through observation of several groups who were given a task to compete in a specified amount of time. Seers and Woodruff suggest this approach creates at least two problems with the model. First, the groups she studied were formed for a specific task. Once this task was completed they disbanded. This limited interaction with group members could cause concern for the validity of the results as members have not had adequate time to socialize with each other. Second, because Gersick's work is solely qualitative in nature "it has not had to stand up to strong criticism from other authors, examination via alternate research methods, or even the fundamental rigor of hypothesis testing" (p. 169).

Group Systems Theory

Group systems theories are a unique approach to viewing group development because they incorporate ideas of systems theory. The biologist Ludwig von Bertalanffy proposed the idea of a general systems theory in the 1940's (Connors & Caple, 2005). He suggested that all components of life are interconnected. Through these connections, changes in one area could result in changes to an apparently unrelated area. For instance, a cut on an individual's finger could eventually lead to an illness. The illness would emerge because all of the components of the body are interrelated. An ordinary cut would cause a body's immune systems to start to react in order to protect itself from the open wound. Then because the immune system was working to protect itself from the open wound, it would not be able to protect itself from a more life-threatening disease. Thus a simple cut could lead to a serious illness. Then after recovering from this serious illness an individual might recognize what happened; so that the next time they get a cut, they will take extra care to clean it and thus protect themselves. This simple illustration is an example of a system. There are inputs to the system (the cut), throughputs (reaction of immune system), outputs (becoming ill), and feedback (recognition of what happened and adaptation of behavior). Based on von Bertalanffy ideas of a general systems theory the broader multidisciplinary systems theory emerged.

Tubbs (2004) takes these concepts of systems theory and applies them to group development. In the Tubbs model, there are three broad category inputs: relevant background factors, internal influences, and consequences. The model starts with the relevant background factors which are the inputs of the group. The relevant background factors category summarizes the factors that individual members bring with them when they form a group. These factors could range from a members personality to physical characteristics and include an individual's values and attitudes. The background factors category then relates to the internal influences category, as this category is the throughput of the group development process. Internal influences are the behaviors that members exhibit within the

group. Components of this category range from the physical environment the group works in to the communication and conflict between members. The output of the model is the consequences category. Factors to consider in this category range from creating solutions to the interpersonal growth of members. Every part of Tubbs model is related through feedback. Tubbs suggests that as members move through this process, in every group they join; they will continually update their understanding and behaviors within group situations. This concept of members continually updating behavior is in line with the cyclical nature of systems theory.

Suggested Integration

Integrating the Tuckman model, PEM, and a systems approach becomes a process of identifying the strengths and weaknesses of each model and then designing a new model to incorporate those strengths and limit the weaknesses. This proposed model, which will be referred to from now on as the Punctuated-Tuckman, has four proposed phases of group development, looks at the performance in each phase relative to time, and incorporates components of systems theory. Because of the linear nature of the models and emphasis on the group development, combining the three models will provide an updated group development model with a systems theory component. Figure 2 depicts a visual representation of the proposed model and should be consulted throughout this section.

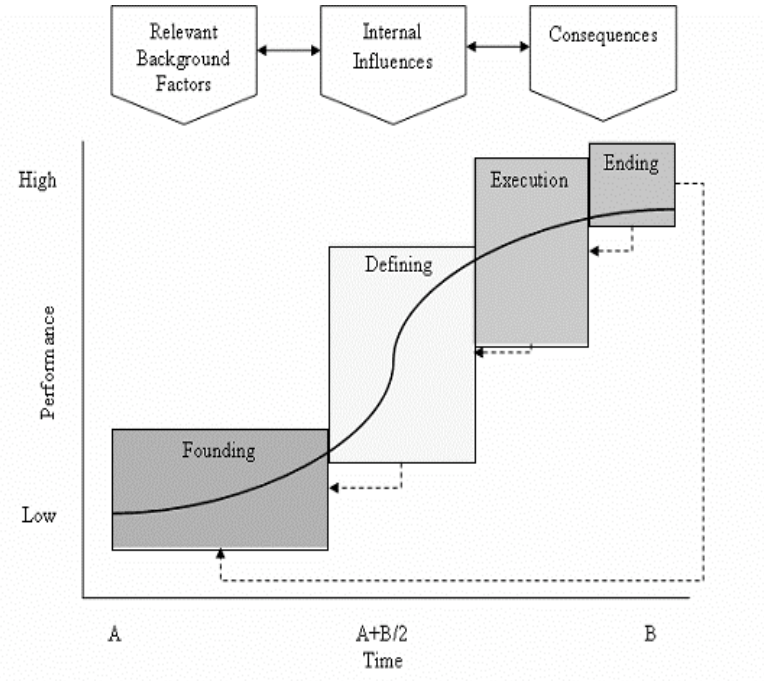

Figure 2. Integrated Tuckman, PEM, and Systems theory

Phases

The first phase, entitled *founding*, entails the initial formation of the group and the individual members' definitions of their respective roles. This phase is characterized by members desire to establish relationships. Relationship establishment in this phase entails two components: a task component and an interpersonal component. In the task component, the group either assigns roles or individual members take on roles, which facilitate the accomplishment of the group's global task. In essence, the group is dividing up the various tasks. Hence, an individual member has a relationship with the task at hand. In the interpersonal component, group members start to build relationships with each other. This is a process of socialization within the group. Members make friendships and start to relate to each other on an interpersonal level regardless of the global task assigned to the group. This stage is an integration of the Tuckman model forming and storming stages and the PEM's first stage.

The second phase, entitled *defining*, is a critical component of the Punctuated-Tuckman model. This phase builds from an integration of the Tuckman model's norming stage and the PEM's mid-life crisis stage. In the defining phase, members go through a process of redefining their goals based on task deadlines and group orientation. As Graham (2003) suggests, most group development theories incorporate some kind of a norming

stage. According to Graham, norming is a critical component of the group development process because it allows members of the group to define themselves and accept patterns of behavior within the group.

The third phase of the Punctuated-Tuckman model is entitled *execution*. In this phase, the group works toward the accomplishment of their task based on the establishment of their norms from the defining stage. This phase is characterized by a high level of productivity as the deadlines are short and the group must work together to accomplish their goals. This phase is an integration of the Tuckman model performing stage and the beginning of the PEM's stage three.

The final phase, entitled *ending*, represents both the final burst of effort toward completion of the task and the ending or as Tuckman would say the adjourning of the group. In this phase, members pull together and put forth the most amount of effort. The phase finalizes with the completion of the task and the disbanding of the group.

Performance vs. Time

Consistent with the PEM, the Punctuated-Tuckman estimates group performance as a function of time. Aligned on the X-axis is the time component. The capital *A* represents the beginning of the group work towards the completion of the task and the *B* is representative of task completion. Aligned on the Y-axis is performance. Similar to the PEM, performance is gauged on a scale from low to high and is based on the performance of the group towards the completion of the task. In the center of the model, at approximately the half-way point of both performance and time, is what Gersick would call the mid-life crisis. Unlike Gersick's model, the Punctuated-Tuckman suggests that this crisis phase is not a single moment in time, but rather a short period of time where performance is dramatically increased. The boxes which depict the four phases that groups progress through (Founding, Defining, Execution, and Ending) are representative of the variation that is inherent from group to group. Thus, the bolded progressive curve is representative of the best fit progression of the group's performance as a function of time.

Systems Thinking

The last component of the model is an application of systems thinking. This systems approach is taken directly from the Tubbs (2004) model of small group interaction. At the top of the model are broad category inputs. The first are relevant background factors and consists of individual characteristics like personality, gender, age, health, values, and attitudes. These factors come into play during the founding phase as they help individual members to interact with the group. The second category is internal influence. These factors influence the defining and execution phases because they depict the constraints of the group. Factors included in the internal influences category include: the physical environment that the group must work in, size, power, leadership, communication, conflict, and group norms. The third category represents the consequences of the interaction of both the previous two categories and the development of the group thus far. In this category factors include: solutions to problems, interpersonal relationship development, information flow, change, and risk taking. This category influences the execution and ending phases.

The output in the model is the progress through each of the four phases. Once a group completes the founding stage their output is the defining stage. If they are unsuccessful in the defining stage the group will revert back to the founding stage. This relationship continues through the model and is depicted by the dashed line which loops back from phase to phase. Finally, at the completion of the ending phase there is a dashed line which loops back to the founding phase. This line represents the entire system's feedback. Once a group completes the task at hand, they will use this information the next time they are faced with a task to complete. Additionally, individual members will carry these experiences into the next group they join. These experiences then become apart of the inputs for the next group experience.

Recommendations

The Tuckman model has been the dominant model used to depict group developmental stages for the last 40 years. During that time, the Tuckman model has seen its share of opponents and proponents and has still managed to be the model most frequently taught by educators of group development theories. However, the time has come for the Tuckman model to be adapted. Gersick's Punctuated-Equilibrium Model is one attempt at viewing group development from a different perspective. Yet like the Tuckman model, the PEM has had its share of criticisms. The true value of these two models can be found through integration. The Punctuated-Tuckman does just this; it combines the Tuckman model, the PEM, and incorporates tenets of a systems approach to group development. In so doing, a new model is created that builds off of the successes and removes the failures of the previous models. However, for the Punctuated-Tuckman to be fully accepted further testing is needed.

This model needs to go through rigorous testing both qualitatively and quantitatively. This is a fledgling model and, as such provides no actual research on the proposed model, thus it must be subjected to the rigorous process of theory development and hypothesis testing. This process would start by conducting a pilot study in order to see if the

Punctuated-Tuckman accurately depicts group development. A pilot study would also help to clarify the four phases, gauge the feedback and systems components, and measure the time vs. performance aspect. A thorough pilot study would prepare the way for a much larger study. A larger more robust study of the Punctuated-Tuckman would have to look at multiple groups in order to gauge the Punctuated-Tuckman's validity and reliability. If the field of HRD and specifically researchers in group development are to accept this model, then it must be shown to be valid and reliable.

Summary

In summation, educators of group development theories are too reliant on the Tuckman five stage model of group development. Two other models provide contrasting views of how groups development. Gersisk's Punctuated-Equilibrium Model and Tubbs's model of group systems theory provide educators with alternate approaches to group development. However, there are problems with all three models and it is only through integration of the three models that new insights on group development can be gleaned. Thus this paper proposed the Punctuated-Tuckman model as a way of assisting the educators of group development theories. The Punctuated-Tuckman model is a way of relating each of these three models together such that the deficiencies of one are counteracted by the strengths of the two others. In so doing, this integration benefits the educator and the field of HRD by developing new theory from proven, yet dated approaches.

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