

Short Communication**Multi-Level Group Selection and its Connection to Empathetic, Community-Driven Pedagogy: A Research Study Framework Proposal**

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Multi-level group selection theory is a presently rejuvenated framework for explaining the empathic tendencies of group culture and behavior as means of beneficial natural selection utility.

Purpose

The purpose here is to simply articulate the ways in which the anthropological theory of multi-level group selection overlaps with the latest psychological research on child conceptualization of equity and empathy so that a focused line of thought can be followed in subsequent research on how childhood psychology interacts with classroom environs moving forward.

Conclusion

The impact these studies stand to have on the broader culture of education would be largely equitable, ensuring that all students from all demographics would be encouraged by like-minded teachers to further propagate their applied learning for mutual advantage and benefit while also exciting each other about what they learn by finding shared relevant experiences and desires to make relevant connections to..

Keywords

Multi-Level; Group selection; Kin selection; Empathy; Pedagogy; Pedagogical practice; Evolution; Natural selection; Classrooms; Education.

INTRODUCTION

Initially thought to be debunked decades past, recent research has suggested that multi-level group selection is the means of natural selection best supported by the evidence when aiming to understand the cultural aspects of empathetic group dynamics as a naturally occurring proclivity. This proposal sets up a workable set of research questions that could translate to applied studies. The proposal found here in fact briefly blueprints three potential study approaches: one survey-based report, one comparative qualitative study, and one longitudinal study focusing on the same group of learners and teachers over an extended period of time. Each of the potential forms the study could take connect to the main goal of the study, which is to determine if applying group selection principles to classroom environs improves the sense of

comradery and testable academic achievement within the classroom. Gathering the report of the previous observational data, combined with the established prior literature on the validity of multi-level group selection as a viable theory for explaining human groups' natural proclivity for empathetic practice as a means of species well-being and propagation, this proposed framework is determined to be a meaningful and impactful project moving forward in applying anthropological data to the cultural and biological context of learning environments, in particular, K-12 classrooms. It stands to aid both applied practice for educators as well as more richly contextualized cultural data for researchers.

As someone with a background in anthropological study, as well as a background as a non-traditional student with very atypical learning approaches, this project seemed best approached in

a way that merged those two worlds, bringing the knowledge and experience the author has from both to bear on the question of emotionally-driven pedagogical practice and/or environments. Research in anthropology regarding the newfound understanding of utility for empathy-focused group interaction, even within the context of aiding individuals in a given goal, pertains first and directly to the question of how to inform more empirically-based rubrics for best practices for teachers in classrooms.

In the case of my specific research project, classroom limitations necessitate a refinement of focus so that the research questions (and the subsequent proposed research projects) can remain focused and manageable.

But what is this anthropological research, and how does it pertain to best pedagogical practices for empathy in classrooms? That information will be forthcoming. For now, let us precisely delineate the practical problem this proposed research project is meant to address.

Studies have shown time and again that one of the biggest contributing factors to lack of student performance in classrooms is a student's feeling isolated, or being invisible to the teacher.¹ This results in lack of engagement, which misapplies the process of transience (i.e. forgetting), which recent studies have shown actually is a useful process for clearing out clutter in the brain,² but can affect more immediate learned information when said process is applied broadly and lacks focus. Two key studies on the topic of classroom-learned information retention have helped us gain an insight into this process. In the first of these two studies, researcher Harry Bahrck examined how well Spanish language students remembered what they had learned after graduation.³ He did this through a longitudinal study that examined the same group of students over a 50-year period to see if there were any common trends of forgetfulness of the material across all the individuals being examined.³ This study resulted in a very interesting find: that contrary to popular belief, it is not simply repetition and application that guarantees long-term retention but rather in fact the way in which the information was first learned to begin with.³ It was Bahrck who famously presented a pithy distillation of what was really going on by describing the common teaching process as pouring water into a "leaky vessel," and that only a more directly engaged form of instruction could shift the needed information into the part of the mind Bahrck called the "permastore," which his study demonstrated could retain complete information intact, even when unrecalled, for 50-years.³

The second key study we will cite here is the more recent longitudinal study by Bacon and Stewart that examined the same task of coursework retention, but in their case pertaining to marketing class knowledge.⁴ This study tracked 90 students' retention of the course material from 8 to 101 weeks after initially learning it, and used the Rasch measurement to place all the students on the same knowledge scale regardless of which iteration of the material they learned (some of the students tested had taken the class many years prior).⁴ This study found the same basic result, that the more interactive and applied learning the students did, the less invisible they felt and the more information from the material ultimately got

filed away into permastore.⁴

What this trend in the research means is that, in order for teachers to ensure their students are engaged and retain the material. They will always need to ensure their students feel directly connected to not just the material, but their peers, as well, for optimum participatory learning.⁵

An example of what this might look like in action comes from the author's own time as a teacher in the classroom, teaching 11th Grade English and requiring students to apply their writing and speaking skills to the task of performative speech for the purposes of learning how to persuade through formal argument formulation. In order to bring the students together in a sense of solidarity so as to impassion them all to this task, the author appealed to a sentiment that the students had already shared in prior class discussions: that their school administrators treated them more like prison inmates than high schoolers, and that the policies in place requiring students to be constantly chaperoned in hallways between classes and during bathroom breaks reflected a sense of antagonism or distrust toward students. It was therefore asked of the students who were willing to write and give a persuasive speech before the whole class with formulating an argument that could be presented to the school administrators and give thoughtful suggestions on alternative policies that would make the students feel heard. Approaching the task in this way helped all of my students in the classroom, even those who did not participate in the speeches themselves, to find common ground amongst themselves, support each other in sentiment, and build trust and a sense of community and culture.

This proposal aims to draw from the aforementioned anthropological knowledge solely in the arena that best points to a means of understanding empathic community practice from a groups-oriented standpoint, while also building upon the author's own experience as a classroom teacher taking steps to build true culture and community in the classroom. The application of our empirically demonstrable patterns of group behavior where empathy is concerned to the question of a more streamlined approach at empathetic pedagogical practice is a venture worthy of undertaking to this end.

GOALS AND PURPOSE

The goal of this research proposal is to cite and pull from both the anthropological data on group empathy behavior that best applies to classroom environments, as well as the psychological data on early childhood attitudes toward concepts such as altruism, empathy, and fairness, and bring both research worlds to bear on the question of what proposed research questions for a hypothetical project moving forward would prove useful.

The purpose of this research proposal is not to conceptualize a literal rubric, as that would be at a stage much later than what these initial research questions would directly address at the outset. Rather, the purpose here is to simply articulate the ways in which the anthropological theory of multi-level group selection overlaps with the latest psychological research on child conceptu-

alization of equity and empathy so that a focused line of thought can be followed in subsequent research on how childhood psychology interacts with classroom environs moving forward. From there, the pedagogical practice this proposal hopes to aid is not literal creation of curriculum or lesson plans but rather a more empirically-grounded rationale for how and why to run an elementary school classroom itself like a close-knit community through teacher mindfulness of this empirical grounding for social-emotional learning (SEL).

In summary, the author wants to propose research that will take the existing literature on empathetic benefits of group/social interaction and apply it to a narrower, more focused context of the elementary school classroom. Elementary age was chosen to be the focus of our research questions because it is that age range that the most current research suggests children solidify their understanding of social emotion and fairness of benefit,¹¹ and the classroom is the setting of choice for application of community philosophy because that setting brings with it special limitations in relationship dynamics, physical environment, and interaction time that requires a refinement of focus from the existing group selection theory models in order to successfully apply multi-level group selection theory to fair and empathetic pedagogical practice.

RATIONALE

“Selfishness is almost the definition of vice ... Virtue is, almost by definition, the greater good of the group” - Science writer Matt Ridley.⁷

Multi-Level Group Selection Theory in anthropology has given great insight into how empathetic practice within social groups is advantageous to species propagation. The author submits that something demonstrated to be so naturally occurring and an evolutionary remnant that is innate to humans should also prove useful for building a foundation for further research aimed at helping inform empathetic and community-driven pedagogical practice in the classroom. The aim here is to help the teacher best communicate and collaborate with students, but the rationale is more student- and community-driven.

The anthropological work done already on the social applications of multi-level group selection theory as a means of explaining the more culturally anomalous elements of natural selection in humans shows promising insights into how to go about interaction practice in many realms where interpersonal communication is in play. For us, the classroom is an area yet underdeveloped with this lens in mind.

UNDERSTANDING GROUP SELECTION THEORY AND ITS HISTORY

To best understand what multi-level group selection is and how it connects to our question of empathy in the classroom, we need to start by clearly delineating the key terms we will be using in our description of the group selection process. There are two competing proposed mechanisms for how natural selection moves traits forward in groups:

1. Kin Selection: a proposed mechanism of natural selection in favor of behavior by individuals that may increase the survival of their own bloodline.⁸
2. Group Selection: a proposed mechanism of evolution in which natural selection acts at the level of the group, instead of at the more conventionally-assumed level of the individual.⁹

The 1960s and 1970s had brought the evolutionary biology community the work of biologists George Williams and William Hamilton that, at the time, had been considered the nail in the coffin of group selection theory.⁸ However, in more recent years the theory's viability has been revisited and bolstered. While a hinderance at the individual level altruism is shown in the latest literature to actually advantageous at the level of groups.

THE DEBATE BETWEEN KIN AND GROUP SELECTION

If a giving and pacifistic person is pitted against another individual who is an aggressor, the aggressor is much more likely to win and therefore pass on his or her genes to subsequent generations.⁸ Furthermore, if we graduate to the level of groups and the giving and pacifistic person exists within a community of selfish aggressors, then that person once again loses—taken advantage of and exploited by others.⁸

If we stay at the group level but flip that dynamic, and a selfish person is dropped into a group of altruists, then we still see selfishness win out (the free rider problem).⁸ Group cooperation should hypothetically help human propagation especially, but that force is weaker than anticipated under these aforementioned conditions.⁸

THE NEW FORMULATION OF MULTI-LEVEL GROUP SELECTION THEORY

However, there is still yet one other dynamic that needs to be considered: homogeneous group comparison. What happens when an entire group of exclusively altruistic actors is compared against an entire group of exclusively aggressive and self-centered actors? This should hypothetically demonstrate the advantageous or disadvantageous qualities of self-interest vs. group cooperation in their purest and most innate forms when operating at the community level. Individuals interact within groups almost always, meaning communities and groups must be acknowledged as the most common backdrop upon which natural selection takes place. This fact must be taken into account in order to truly demonstrate which force, group selection or kin selection, truly gives the advantage for propagation.

Pitting homogeneously altruistic groups against clusters of homogeneously self-interested individuals, we see the following result: with no altruistic stragglers within the selfish group to feed off of, the selfish group eats its own in a dog-eat-dog existence and ultimately dwindles its numbers by adding stress, anxiety, cutthroat competition, and more violence into the mix.¹⁰ Contrarywise, the purely altruistic groups induce more fertility, more happiness, less stress, and ultimately greater numbers of offspring.¹⁰ And this occurs with or without the so-called free riders identified by Hamil-

ton and Williams being part of the mix. This suggests that even when selfish individuals take advantage of altruistic groups, said groups still provide the greater net benefit to everyone and are therefore the most effective for further propagation of the species. And of course, if everyone in the group is altruistic, it is much the same outcome. What evolution functioning more effectively at the level of groups would suggest, then, is that altruism is the more advantageous trait, and that the level of groups is indeed the more affecting level at which natural selection operates.

The Stanford Neuroendocrinology, Robert Sapolsky has laid it out as follows: yes, $A > B$, but also, $AA < BB$. While individual A might have a trait that dominates the trait of individual B, groups of people possessing the trait of A can be demonstrated as being dominated by the trait of B when B is also operating at the group level.¹⁰ Since creatures interact with each other at the group and community level the vast majority of the time, it is that group level that ultimately ends up dictating a great deal of circumstances that affect the natural selection process. As leading group selection theory, David Sloan Wilson once stated, “*selfishness beats altruism within groups. Altruistic groups beat selfish groups. Everything else is commentary*”.⁹

HOW MULTI-LEVEL GROUP SELECTION THEORY CONNECTS TO CLASSROOM EMPATHY

In order to better understand the interactions within the classroom from a multi-level group selection perspective, we need to better understand at what age a child’s grasp and command of social emotions fully develops so that we can aim our further research questions at the proper age range and grade level.

Work led by social development psychology, Dr. Peter Blake of Boston University has already helped lay these foundations by establishing that children begin applying social-emotional interaction between the ages of 4 and 9,⁶ and that as early as age 6, these children are able to hold fast to a sense of equity—even outside of their own groups in which they could take more resources for themselves and disadvantage others in the outgroup.¹¹

What this amounts to in application is that children of this age already demonstrate a knowledge of right and wrong, and even if and when they do something unjust or unfair to a fellow student, they realize what they’ve done is wrong and that they will be held accountable for the act if found out. This means that elementary school children, even from the earliest age, are primed to respond positively when practices like pro-social classroom structure and SEL are implemented. Despite SEL not yet being ubiquitous, the evidence of its successful adoption is plentiful.¹² The corroborating evidence that children are already at an age to be receptive to SEL at the beginning of elementary school is mounting.¹¹

As a result, it is this paper’s determination that the proposed research questions here should narrow their focus down to this same age group, and therefore focus on elementary school classrooms when contextualized in pedagogical SEL practice while taking into account what we know about the human need for empathy within groups on an evolutionary level.

HOW CHILD EMPATHY AND AN UNDERSTANDING OF MULTI-LEVEL GROUP SELECTION INFORM SEL

As we have seen through the information we have gathered thus far, the needs of the classroom are social, while SEL is a framework that aims to apply social and empathetic principles to day-to-day classroom learning. We also have seen that there is empirically grounded data that demonstrates an evolutionary aspect of our species’ need to practice empathy within groups as a means of mutual benefit and propagation.

While pro-social teaching and SEL practices are continually proposed as the new norms in pedagogical practice and classroom culture, they often get pushback from parents and policy makers alike. Just as recently as February of 2020, an Idaho state education leaders hearing devolved into uproar and walk-outs when SEL was put forth as part of a new policy proposal for teacher training and best practices in the state.¹³ Among the reasons often given by those opposed to SEL implementation are that they see SEL as some cult-like movement that is trying to force its way into classrooms,¹³ or that the fact that it is gaining national support makes it “problematic”.¹³

The elements of SEL, including self-awareness, responsibility, self-management, relationship building, and social awareness, all tether organically to those same needs as manifested in multi-level group selection theory’s understanding of empathetic group practice for evolutionary advantage.¹² These elements are key components not just in social-emotional learning, but in advantageous interaction within groups of various types. The literature on the matter of empathic group selection thus far, however, has not brought the focus down to the classroom space, but it is my position that the classroom can itself be seen as a community, and that research aimed at considering a classroom to be a group, much like a kin group or a residential cluster, primed for natural selection to take place at the micro scale can help connect the evolutionary aspects of mutual aid and the more surface-level observations of the benefit of SEL practice in the classroom.

PROPOSAL

What further research to these aforementioned ends should materialize as, in this researcher’s opinion, is a small collection of inter-related research projects focusing on different aspects of the project of tethering SEL practice to the empirical bedrock of multi-level group selection theory. By doing this, the naysays toward empathetic classroom practice will have a much harder time at succeeding on the policy implementation level. More white papers put forth in favor of empathetic classroom practice, grounded in empiricism from both the neuroscience and anthropological worlds, stand to further bolster the shift away from what Paulo Freire called the “banking model” of education and towards a more communal concept of what it means to be a learner and a teacher.¹⁴

For these handful of proposed projects to form, we need to determine what specific research questions could drive each of

them. We also need to make sure that these research questions will inform projects that will have tangible connectivity with practice, and not just theory. For the sake of succinct Ness, we shall limit the number of proposed research questions to three:

1. Are teachers who are predisposed to take a kin selective worldview in other aspects of their lives more or less likely to be receptive to SEL in their classroom practices?
2. Is a classroom organized like a social community for a period of one school year able to reap more positive results when it comes to classroom morale (teacher-student relationships and student-student relationships)?
3. Is a classroom organized like a social community for a period of one school year able to reap a measurable rise in class material retention on average?

In the case of the first research question, the resulting study would be straightforward enough. It would be likely comprised of survey elements on the teacher's end of things, whose results would then be compared against those same teachers' classroom practices, gathered as video data as well as performance reports, to see how many teachers with a more kin selection-aligned worldview also run classrooms more along the banking model than what we would describe as SEL.¹⁴

The second question would likely be a comparative study between two classes of the same subject and grade level, but with one maintaining the more traditional class structure and the other restructuring to make the classroom run more like a co-op in which mutual aid and more partner-oriented teacher-student interaction would guide the class days.¹⁴ What the study would compare in this case would first be a self-reported final survey at year's end by students stating whether or not they felt a sense of trust and community with their fellow classmates and teacher. At that point, a subsequent comparison would be made between classes regarding average class subject retention *via* respective final exams.

For the third question, there would likely need to be more involved, as it could take one of two forms: 1) either a longitudinal study following the same classroom(s) over the course of two academic years—one year without classroom restructuring, and then a second year where the classroom environment would be remodeled to resemble more of a communal, mutual-benefit model, and then compare the academic retention (likely *via* a cumulative test result) of both years, and 2) as a comparative study much like study two where two classrooms of the same subject are structured differently and then their retention results are compared side-by-side at year's end.

The complications of the first model would come when not all of the same students would remain in the same class the following year, as well as whether or not a school would be willing to utilize the same teacher to teach the same subject two years in a row, one grade up. It's also arguable that the higher grade the following year would necessitate too drastic a class content shift for the longitudinal comparisons to be representative. This leads me to believe that if such a research question were to find funding, the study would likely take the form of the comparative model rather

than the longitudinal, which still isn't perfect but stands to be more financially feasible and time-efficient. However, the main point is that whichever form it takes, this study (and the other studies along with it) feasibly could be conducted, which means that our proposed research questions are sound starting points for potential research projects to get off the ground.

The data gathered from these studies could then provide us with better insight on the benefits of applying communal practice and social-emotional learning to classrooms, not just from a standpoint of surface-level measurements of class performance but also from a deeper, more innate perspective of emotional well-being, with these studies backed by anthropological data and justified by the latest data on child psychological understanding of empathy and fairness, all coming back into the fold to further support SEL and pro-social classrooms as not only inevitable, but necessary.

CONCLUSION

The impact these studies stand to have on the broader culture of education would be largely equitable, ensuring that all students from all demographics would be encouraged by like-minded teachers to further propagate their applied learning for mutual advantage and benefit while also exciting each other about what they learn by finding shared relevant experiences and desires to make relevant connections to. The tasks in the classroom can be customized to the organic classroom culture that forms from these connections. This practice stands to become normalized and ubiquitous across locations and economic brackets when and if empirical studies like those suggested above demonstrate the soundness of its application.

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