AN EARLY-EMERGING EXPLANATORY HEURISTIC UNDERLIES
THE TENDENCY TO DEFEND THE STATUS QUO

BY

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THESIS

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Abstract

People often view their sociopolitical systems as fair and natural despite glaring biases in their structure. Current theories of this striking phenomenon trace its roots to a motivation to alleviate anxiety and uncertainty. Here, we propose an alternative origin for these system-endorsing attitudes. Specifically, we propose that many such attitudes emerge as a non-motivated byproduct of the fundamental cognitive processes by which people seek to understand the world. These explanatory processes are inadvertently biased to yield highly-accessible, inherent facts as explanations for a wide variety of social and natural phenomena, including—we claim—sociopolitical patterns (e.g., why are some people rich? because they are really smart). In turn, this "inherence" bias makes it seem that the observations being explained (such as the societal status quo) are legitimate and thus worthy of support. Four studies with participants as young as 4 provided correlational and experimental evidence for the hypothesized link between explanatory processes and support for the status quo. These findings suggest that the tendency to endorse existing sociopolitical arrangements emerges partly on a foundation laid early in life by a basic component of human cognition.

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Chapter 1

Introduction

1.1 Defense of the Status Quo

After escaping from a North Korean prison camp in which he spent the first 23 years of his life, Shin Dong-hyuk revealed in an episode of *60 Minutes* that, for the vast majority of his internment, he never questioned his place in the camp. Instead, he believed that "those people who carry guns were born to carry guns. And prisoners … were born as prisoners" (Cooper, 2012). In other words, the social hierarchy in which he was embedded seemed to him to be exactly as it should be, with each person occupying the position they were born to occupy. Although Shin's experiences are unique in many respects, his attitude regarding the legitimacy of his social setting is surprisingly common. A robust tendency to uphold existing sociopolitical structures—even those that may be harmful to one's own welfare—has been documented in a variety of contexts and participant populations (e.g., Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Jost, Pelham, Sheldon, & Sullivan, 2003; Newheiser, Dunham, Merrill, Hoosain, & Olson, 2014; Nosek et al., 2007; Olson, Dweck, Spelke, & Banaji, 2011; cf. Brandt, 2013; Sengupta, Osborne, & Sibley, 2014). This support of the status quo takes many forms. People sometimes develop implicit (or even explicit) preferences toward high-status groups, preferences that legitimize the privileged position of these groups in society (Newheiser et al., 2014; Nosek et al, 2007). People also tend to rationalize inequalities by appealing to stereotypes (e.g., negative stereotypes about low-status groups; Jost & Banaji, 1994) or by subscribing to ideologies that make such inequalities appear inevitable (e.g., meritocratic beliefs; LeVine & Campbell, 1972; Sidanius & Pratto, 1999). Whatever its precise form, the general tendency to imbue current sociopolitical systems with legitimacy seems to be widespread.

On reflection, it's rather remarkable that beliefs about the legitimacy of the status quo are as common as they are. Research across the academic spectrum suggests that—contrary to these beliefs—most sociopolitical systems exhibit more than a fair amount of arbitrariness and bias (e.g., Diamond, 1998; Foucault, 1978; Sidanius & Pratto, 1999; Unger, 1983; Watts, 2011). Also puzzling is the fact that attitudes that endorse the status quo emerge early in development: Even preschool children seem prone to perpetuate existing inequalities by, for example, preferentially distributing resources to advantaged rather than disadvantaged groups (Olson et al., 2011). These considerations raise an obvious question: Why would people so often, and from such a young age, endorse beliefs that are probably false?

Here, we propose that these system-legitimizing beliefs emerge in part as a byproduct of the basic cognitive mechanism people rely on to explain the world around them. More specifically, our claim is that the explanatory process people typically employ embodies certain quirks that—when this process is used to explain broad societal patterns—bias its output toward system-supporting intuitions. This view stands in contrast to the dominant view of the origin of such intuitions, which we describe next.

The Palliative Account of System Justification

According to current theorizing on this topic (e.g., Jost et al., 2003, 2004; Jost & Banaji, 1994; Jost & Hunyady, 2005), people endorse the status quo because doing so makes them "feel better about their situation regardless of what this situation may be" (Jost & Hunyady, 2002, p. 146; see also Cichocka & Jost, 2014). From this perspective, the tendency to support current societal arrangements is essentially a sophisticated form of emotion regulation whereby people alleviate the unpleasant feelings that may arise when contemplating the structures of one's society and one's position in these structures (e.g., feelings of uncertainty and uncontrollability,

of threat and anxiety, of discontent) by endorsing the belief that society is fair and just, and thus that one's position in it is warranted. In other words, upholding the status quo serves a fundamental "palliative function," making people "feel happier and more satisfied" (Cichocka & Jost, 2014, p. 9).

This palliative account is supported by a wealth of evidence. For example, the defense of the status quo is most vigorous among those individuals who are most motivated to avoid the affective consequences of contemplating an unfair society (Jost & Hunyady, 2005). Even more convincingly, experimental manipulations that heighten these affective consequences (e.g., by making people feel dependent on their social systems) lead to corresponding increases in endorsement of palliative, system-endorsing beliefs (Kay et al., 2009; see also Jost & Hunyady, 2005; Jost, Kivetz, Rubini, Guermandi, & Mosso, 2005). Thus, it seems clear that status quo defense is, at least in part, driven by palliative needs.

Nevertheless, our central claim is that this theory overlooks a significant source of system-supporting cognitions—a source that may in fact be present in early childhood, arguably well before the emergence of a need to make oneself feel better by endorsing current sociopolitical arrangements. We propose instead that many such system-supporting intuitions arise simply due to the structure of a primitive heuristic process by which people seek to understand the world around them.

1.2 Our Proposal

From a young age, people routinely generate explanations in order to understand what they observe (e.g., Anderson, Krull, & Weiner, 1996; Gopnik, 1998; Keil, 2006; Lombrozo, 2012; Ross, 1977). How are these judgments generated? Although there is no consensus yet on this topic (Anderson et al., 1996; Lombrozo, 2012), a recent theoretical perspective suggests that,

in many circumstances, explaining proceeds *heuristically* (Cimpian, in press; Cimpian &
Salomon, 2014a, 2014b; Salomon & Cimpian, 2014; see also Anderson et al., 1996). That is, the
general process by which people generate explanations relies on information that is easily
accessible in memory rather than on effortful searches through the space of possible judgments
to identify the optimal explanation. In this respect, explanations are similar to numerous other
heuristic judgments that are generated during ordinary cognitive activity (e.g., when making
decisions) (Epley & Gilovich, 2006; Evans, 2006, 2008; Kahneman, 2011; Stanovich, 1999;
Stanovich & West, 2000). Importantly, the fact that the process of explaining relies on
information that is easily retrieved from memory gives rise to certain commonalities in the
content of the explanations generated. Specifically, memory is organized such that, when
explaining an observation involving entity X, the information that is most easily activated usually
consists of *inherent*, or constitutive, facts about X (e.g., Higgins, 1996; Lewis, 1983; McRae,
Cree, Seidenberg, & McNorgan, 2005; Weatherson & Marshall, 2013). For instance, a quick
heuristic explanation for why the *Mona Lisa* is so popular might appeal exclusively to the
inherent artistic qualities of the painting itself (e.g., the subject's captivating smile). Such an
explanation overlooks the possibility that other, non-inherent factors contributed to Mona Lisa's
popularity, even though these factors are often a crucial part of an *accurate* explanation. In Mona
Lisa's case, for example, it was its 1911 theft from the Louvre museum which propelled it to
international fame (Watts, 2011). In sum, the heuristic process that generates explanations for a
wide range of observations is likely to bias the content of these explanations toward an
overreliance on inherent facts, and is thus termed the *inherence heuristic* (Cimpian, in press;
Cimpian & Salomon, 2014a, 2014b).

   While there is considerable evidence for a heuristic tendency to explain via inherent facts

(e.g., Cimpian & Markman, 2009, 2011; Cimpian & Salomon 2014a, 2014b; Cimpian & Steinberg, 2014; Gilbert & Malone, 1995; Jones & Harris, 1967; Ross, Amabile, & Steinmetz, 1977; Salomon & Cimpian, 2014; Watts, 2011), it is also important to note that the pull of inherent explanations is not inescapable. Because the explanations generated by the inherence heuristic are not driven by motivations to assuage anxiety (Jost & Hunyady, 2005), enhance the predictability of one's environment (Kay, Jimenez, & Jost, 2002), or reinforce the legitimacy of one's ideological convictions (Reyna, Henry, Korfmacher, & Tucker, 2006), the outputs generated by this heuristic process can vary systematically based on what is easily accessible in memory. For instance, the operation of the inherence heuristic can be influenced by contextual and cultural factors, which can increase the memory accessibility of various non-inherent facts, and thus their prevalence in explanations (Cimpian & Salomon, 2014a; Morris & Peng, 1994). However, we argue that, in its basic form, the process by which many everyday explanations are generated introduces a degree of bias in their content, leading them to appeal to inherent facts more often than might be warranted.

Explanations generated via this process are used to interpret diverse aspects of experience, including aspects of the social world (e.g., Salomon & Cimpian, 2014). Of particular interest to us here are the implications of generating such explanations in the sociopolitical sphere. Consider status differences, for example: What explains a status disparity between Group *A* and Group *B*? Because inherent facts about Groups *A* and *B* (or about groups more generally, if specific knowledge of *A* and *B* is sparse) are easily activated from memory (e.g., Bargh, Chen, & Burrows, 1996; McRae et al., 2005), it is often these facts that the heuristic process ultimately uses to stitch together a plausible-sounding explanation (e.g., members of Group *A* are more hard-working). This inherence bias in heuristic explanations makes them relevant to the tendency

to support the existing social conditions: Any sociopolitical arrangement that is explained in inherent terms is consequently likely to be seen as reasonable and fair. If members of Group *A* (supposedly) possess a stronger work ethic than members of Group *B*, for example, then it seems unobjectionable that they should have higher education levels, better-paying jobs, and so on— just as it seems unobjectionable that, given its (supposedly) unmatched artistic qualities, Mona Lisa should be the most famous painting in the world. In effect, the typical output of the inherence heuristic legitimizes the observations it is explaining, casting them as natural byproducts of how the relevant entities are constituted.

It is worth noting that, although this explanatory output may resemble some elements of the palliative account (e.g., the use of stereotypes and internal attributions to rationalize status differences; Jost & Hunyady, 2002), its origins are fundamentally distinct. The explanations generated by the inherence heuristic arise without any prompting from palliative needs. Thus, the support they provide for the status quo is a *consequence* of, rather than the very reason for, their generation.

Predictions

Based on our proposal of a link between the inherence heuristic and support for the status quo, we formulated three specific predictions.

Prediction 1: People should explain sociopolitical patterns such as status disparities predominantly in terms the inherent features of their constituents rather than by appealing to non-inherent (e.g., extrinsic, historical) facts (Studies 1–3).

Prediction 2: The extent of participants' reliance on inherent explanations for status disparities should be predictive of their tendency to view these disparities as fair and just (Studies 1 and 2).

Prediction 3: An experimental manipulation of participants' explanations for status

disparities should have a downstream effect on the extent to which participants view

these disparities as legitimate (Study 4).

To be able to draw conclusions about a non-palliative, explanatory source for our

participants' system-supporting responses, we needed to ensure that palliative motivations were

not at play in the present research. We took two steps to block such motivations. First, we told

participants about status disparities on alien planets (e.g., the Blarks and the Orps on planet

Teeku; Studies 1–4). This feature of the design was intended to minimize the personal

involvement of the participants in the sociopolitical patterns considered, which should in turn

minimize the possibility that these patterns would evoke negative emotions to be assuaged via

endorsement of the alien status quo. Second, we tested young children (Studies 2–4), whose

affect-regulation abilities are notoriously poor (e.g., Stegge & Terwogt, 2007). Thus, even if

thinking about Blarks, Orps, and the like did for some reason evoke negative emotions in

children, it is unlikely that they would use a sophisticated system-justifying strategy in order to

regulate these emotions. Yet, children explain via inherent facts at least as often as adults do

(Cimpian & Markman, 2009, 2011; Cimpian & Salomon 2014a, 2014b; Cimpian & Steinberg,

2014), so the mechanism we hypothesize here should operate as robustly in children as it does in

adults. In sum, we chose our stimuli and participants so as to block palliative motivations from

coming into play. Owing to these design choices, any system-endorsing attitudes adopted by the

participants in our studies can plausibly be attributed to a non-motivated mechanism such as that

proposed here—namely, the early-emerging cognitive mechanism by which people explain the

world.

Chapter 2

Study 1

Study 1 provided a test of our first two predictions in a sample of adult participants. That is, we tested (1) whether participants would explain unfamiliar status disparities in inherent terms and (2) whether this preference would in turn predict the degree to which they endorse these disparities.

2.1 Method

Participants. We recruited 101 adult participants (41 males, 60 females; $M_{age} = 34.16$ years, $SD = 12.16$) from Amazon's Mechanical Turk service. Participants completed all tasks online in a single session and were paid $0.75. Five additional participants were tested but excluded from the final sample because they had IP addresses outside of the US ($n = 1$), failed the catch questions in the Inherence Heuristic Scale ($n = 3$; see below), or indicated during debriefing that they had not paid attention during the study ($n = 1$).

Materials and Procedure. Four vignettes describing status disparities on alien planets (e.g., on planet Teeku, "the Blarks have a lot more money than the Orps") were created. They included four pictures of unfamiliar planets (one for each disparity) and eight pictures of people to represent the two groups on each of the four planets (e.g., the Blarks and the Orps). The two individuals representing the groups on a certain planet were matched in terms of age, race, and gender, and differed only in their costume (see the complete set of stimuli in the Supplemental Materials). Moreover, the assignment of each picture to the high- and the low-status group was counterbalanced across subjects, so that no perceptual cues consistently co-occurred with social status. The group's name was printed beneath each picture, and the high-status group always appeared on the left.

Two explanations were provided for each disparity, in random order: an explanation that appealed to inherent features (e.g., "Maybe the Blarks are smarter, or are better workers than the Orps are, or there's something else about them") and an explanation that appealed to extrinsic or historical facts (e.g., "Maybe the Blarks won a war, or found gold, or something else happened a long time ago"; see Table 1 and the Supplemental Materials). The inherent and extrinsic explanations were carefully formulated to meet several criteria: First, they were relatively broad, so as to capture a range of inherent ("there's something about them") and extrinsic ("something happened a long time ago") intuitions. Second, they were matched on length and believability (see *Norming of Explanations* section below). Third, they were worded simply, so that they could be used with children as well (Study 2). Participants read the inherent and extrinsic explanation for each disparity and indicated their agreement with each explanation on a 4-point scale (1 = "really not right" to 4 = "really right").

We also assessed whether our adult participants had a preference for the high-status over the low-status groups (e.g., "How favorable is your impression of the Blarks [Orps]?") and whether they thought the disparity between the groups was fair (e.g., "How fair do you think it is that the Blarks have a lot more money than the Orps?"), each on 9-point scales. These questions were combined into a single composite measure of system support (α = .71).

Finally, participants completed three individual difference measures: the General System Justification Scale (Kay & Jost, 2003), the Need for Cognition Scale (Cacioppo, Petty, & Kao, 1984), and the Inherence Heuristic Scale (Salomon & Cimpian, 2014). The General System Justification Scale is composed of seven statements that measure the extent to which people see their own social systems as fair and just (e.g., "In general, you find society to be fair"). This scale served as a control in our analyses, allowing us to further investigate whether participants'

explanatory tendencies predict their support for unfamiliar status disparities above and beyond their (potentially motivated) tendency to view their own sociopolitical systems in a positive light. The Need for Cognition Scale (Cacioppo, Petty, & Kao, 1984) is an 18-item measure that assesses participants' attitudes regarding effortful thinking (e.g., "The notion of thinking abstractly appeals to me"). This scale was also included as a control: Our proposal is of a unique link between heuristic *explanations* and system support—a link that should not boil down to a link between heuristic thinking in general and system support. Thus, we expected to find a relationship between participants' explanatory preferences and their tendency to endorse the alien status disparities even when statistically adjusting for their preference for effortful thinking. The Inherence Heuristic Scale (Salomon & Cimpian, 2014) contains 15 statements designed to capture participants' reliance on heuristic, inherence-based explanations (e.g., "It seems natural to use red in a traffic light to mean 'stop'"). We included this scale in order to explore the relationship between participants' broader tendencies to explain inherently (as measured with this scale) and their explanatory preferences for the status-relevant stimuli in the present task. Four catch items, designed to elicit either strong disagreement (e.g., "It seems right to kill other people for fun") or strong agreement (e.g., "It seems ideal for hotel rooms to have bathrooms"), were included in the Inherence Heuristic Scale in order identify participants who were not paying attention or who adopted a fixed response pattern (e.g., high agreement). Participants who provided unexpected answers (e.g., agreeing that it is right to kill people for fun) on two or more of these catch items were excluded from further analyses (as in Salomon & Cimpian, 2014). Item order was randomized for all scales, as was the order of the scales themselves. Participants used 9-point scales to indicate their agreement with the scale items.

Norming of Explanations. Two separate samples of adults (both Ns = 30) were recruited

for norming purposes. The first norming study was conducted in order to verify that the inherent explanations used in the main task were, in fact, more inherent than the extrinsic ones. Participants were first given information about the difference between inherent explanations (e.g., "An inherent explanation is one that explains something using intrinsic, internal, or person-specific reasons") and extrinsic explanations (e.g., "An extrinsic explanation is one that explains something using environmental, external, or historical reasons"). Then, participants were presented with the explanations from the main task and asked to rate them on a 9-point scale in terms of how inherence-based they were. As expected, participants rated our inherent explanations ($M = 7.47$) as significantly more inherent than our extrinsic explanations ($M = 2.76$), $t(29) = 9.76$, $p < .001$.

The second norming study was conducted in order to rule out the possibility that differences in explanation ratings on the main task could simply be due to surface-level differences in how believable the explanations sounded (e.g., perhaps an explanation that relies on inherent information seems in principle more likely than one that relies on extrinsic information). We asked adults to rate the believability of each explanation (e.g., "Imagine that Group A have a lot more money than Group B. In principle, could the following fact adequately explain this difference? Group A are a lot smarter and are a lot better workers than Group B"). Responses were recorded on a 4-point scale (1 = "definitely no" to 4 = "definitely yes"). Participants rated the inherent and extrinsic explanations as equivalent in believability (Ms = 3.1 and 3.3, respectively), $t(28) = 1.09$, $p = .28$. These results suggest that any differences in ratings on the main task cannot be attributed to surface-level differences in the believability of the inherent and extrinsic explanations provided to participants.

2.2 Results and Discussion

To test Prediction 1 (that of a tendency to explain sociopolitical patterns in inherent terms), we compared participants' evaluations of the inherent and extrinsic explanations. As predicted, the inherent explanations ($M = 2.74$, $SD = .72$) were rated significantly higher than the extrinsic ones ($M = 2.50$, $SD = .64$), despite their equal believability, $t(100) = 2.52$, $p = .013$, $d = .35$[1] (see Figure 1 and Table 2). These results suggest that people may indeed have a tendency to explain sociopolitical patterns (even ones in which they have no personal stake) in terms of inherent facts about the entities that make up these patterns.

To test Prediction 2 (that of a link between inherent explanations and support for the status quo), we examined whether participants' preference for inherent (vs. extrinsic) explanations of status disparities, calculated as a difference score, was related to their beliefs that such disparities were fair and defensible. Consistent with our argument, participants' preference for inherent explanations of novel sociopolitical patterns significantly predicted their tendency to uphold these patterns, $r(99) = .51$, $p < .001$ (see Figure 2). Moreover, this relationship remained significant even when statistically adjusting for participants' (potentially motivated) tendency to uphold the structure of their *own* society (assessed with the General System Justification Scale), $r(98) = .47$, $p < .001$ (see Table 3 for the full correlation matrix). This result provides further evidence that the process of explaining may, in and of itself, be a source of system-legitimizing cognitions that is independent of any palliative motivation to support the status quo. Similarly, controlling for the habitual tendency to engage in effortful thinking (as measured with the Need for Cognition Scale) had no effect on the relationship between participants' explanations and their support for the status quo, $r(98) = .51$, $p < .001$. Thus, this relationship is not simply parasitic on a relationship between general heuristic thinking and system support; rather,

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[1] For this and all future pairwise comparisons, we report Cohen's *d* as a measure of effect size

heuristic *explanations* are uniquely predictive of people's endorsement of the status quo. Notably, the hypothesized relationship also remained significant when adjusting for both control scales simultaneously, $r(97) = .46$, $p < .001$.

Finally, we examined whether participants' *habitual* tendency to rely on the inherence heuristic (assessed with the Inherence Heuristic Scale) may have enhanced their support the disparities in Study 1 by increasing the likelihood that they explained these particular disparities in inherent terms. Indeed, a bootstrapped product-of-coefficients mediation analysis (10,000 replications) revealed a significant indirect path linking participants' scores on the Inherence Heuristic Scale with their support for the novel disparities via their explanations (specifically, the extent to which they preferred inherent explanations) for these disparities, $ab = .08$ [.02, .17]. This path remained significant even when adjusting for participants' views about the fairness of their own sociopolitical systems, $ab = .07$ [.02, .16]. Likewise, the indirect path remained significant when Need for Cognition was used as a control variable, $ab = .08$ [.02, .17], and when both control variables were included simultaneously, $ab = .06$ [.00, .14]. These results bolster our claim of a link between the cognitive process of explanation and the tendency to support the status quo.

Chapter 3

Studies 2a and 2b

The goal of Study 2 was to provide a stronger test of our proposal by investigating whether the hypothesized link between heuristic explanations and system support is present in childhood.

3.1 Method

Participants. Participants in Study 2a were 30 seven- and eight-year-old children (M_{age} = 8.34 years, SD = 0.48). Participants in Study 2b were 60 seven- and eight-year-old children (M_{age} = 8.19 years, SD = 0.47). Participants were recruited from a small city in the Midwestern U.S. and were tested either in a university lab (n = 42) or in a quiet room at their school (n = 48). Five additional children were tested but excluded from the final sample because they refused to complete the study.

Materials and Procedure. Participants in Studies 2a and 2b received the same vignettes as in Study 1 and rated the same inherent and extrinsic explanations. Children's agreement with the explanations was measured with a visual 4-point "thumbs down" vs. "thumbs up" scale (1 = "really not right" to 4 = "really right"). The only difference between Studies 2a and 2b was that only the latter study measured children's support for the novel disparities. Specifically, a 6-point scale was used in Study 2b to assess children's ideas about the fairness of each disparity (e.g., "Is it fair that the Blarks have a lot more money than the Orps?"; "Is it okay that the Blarks have a lot more money than the Orps?") and their liking of each group (e.g., "Do you like the Blarks [Orps]?") (α = .78).

3.2 Results and Discussion

Study 2a tested only the first prediction of our account—that concerning the content of

children's explanations. Like the adults in Study 1, children evaluated the inherent explanations for status disparities ($M = 2.87$, $SD = .75$) more positively than the extrinsic ones ($M = 2.28$, $SD = .57$), $t(29) = 2.92$, $p = .007$, $d = .89$ (see Figure 1 and Table 2). Thus, even children seem prone to view status differences as due to the inherent traits of the relevant groups, not as emerging from extrinsic circumstances or historical events.

In Study 2b, we replicated this advantage for inherent explanations ($M = 2.86$, $SD = .65$) over extrinsic explanations ($M = 2.43$, $SD = .65$), $t(59) = 4.05$, $p < .001$, $d = .66$ (see Figure 1) but also assessed children's attitudes regarding the status quo (see Table 2). The results revealed again that higher endorsement of inherent over extrinsic explanations predicted stronger system support, $r(58) = .27$, $p = .039$ (see Figure 2). For children as well, then, the process of explaining is linked with their attitudes toward sociopolitical patterns.

Chapter 4

Studies 3a and 3b

In Study 3, we explored whether explanations for status disparities display an inherence skew even (1) in *younger* children (specifically, four- and five-year-olds) and (2) when children *generate* their own explanations as opposed to evaluating experimenter-provided ones. The younger the children, the less plausible it is to suppose that they would experience negative feelings when prompted to think about alien societies and, additionally, that they would devise a status-quo-supporting ideology as a means of relieving these feelings. As a result, recruiting these younger participants afforded an even stronger test of our proposal. Eliciting children's spontaneous explanations served the same purpose: Because our claims concern the link between the explanations that people themselves generate and their subsequent endorsement of system-endorsing attitudes, it is important to show that the hypothesized bias toward inherence is found in participants' spontaneous production as well.

4.1 Method

Participants. Participants in Study 3a were 20 four- and five-year-old children (M_{age} = 5.10 years, SD = .52) and 20 seven- and eight-year-old children (M_{age} = 8.05 years, SD = .40). Participants in Study 3b were 20 four- to eight-year-old children (M_{age} = 6.66 years, SD = 1.34). Participants were recruited from a small city in the Midwestern U.S. and were tested either in a university lab (n = 24) or in a quiet room at their school (n = 36). Three additional children were tested but excluded from the final sample because they refused to complete the study (n = 2) or failed to provide any explanations (n = 1).

Materials and Procedure. Participants in Study 3a heard the same disparity vignettes as were in Studies 1 and 2, but were prompted to provide their own explanations for the disparities

(e.g., "Why do you think the Blarks have a lot more money than the Orps?"). The procedure in Study 3b was identical, except that children were told about two individuals (instead of groups) who lived on each planet (e.g., Blark and Orp).

Coding. Children's explanations were coded into three categories: inherent (e.g., "Because they work harder"), extrinsic (e.g., "Maybe the Blarks have a lot more places they can go and work, and the Orps don't have as many buildings to work at"), or nonsensical (e.g., "They get more"). To assess reliability, all explanations were coded independently by a second, hypothesis-blind researcher. The average agreement for the inherent and extrinsic explanations was 91.3% for Study 3a and 86.3% for Study 3b (kappas = .81 and .72, respectively). Disagreements were resolved via discussion.

4.2 Results and Discussion

In Study 3a, the data were analyzed with a 2 (explanation: inherent vs. extrinsic) × 2 (age: five- vs. eight-year-olds) analysis of variance (ANOVA). Consistent with our proposal, children generated significantly more inherent ($M = .53$, $SD = .27$) than extrinsic ($M = .31$, $SD = .27$) explanations for the novel status disparities, $F(1, 38) = 9.66$, $p = .004$, $\eta^2 = .20$ (see Table 4). This effect did not differ by age group, $F(1, 38) = .03$, $p = .864$. In fact, inherent explanations were more prevalent than extrinsic ones for both the five-year-olds ($M_{inherent} = .45$, $SD_{inherent} = .28$ vs. $M_{extrinsic} = .24$, $SD_{extrinsic} = .25$; $t[19] = 2.17$, $p = .043$, $d = .79$) and the eight-year-olds ($M_{inherent} = .62$, $SD_{inherent} = .24$ vs. $M_{extrinsic} = .38$, $SD_{extrinsic} = .29$; $t[19] = 2.23$, $p = .038$, $d = .90$; see Figure 3).

Study 3b was a control study conducted to ensure that the inherence bias in Study 3a was a genuine reflection of how children typically make sense of large-scale sociopolitical patterns, and not the result of any surface features of the stimuli or shallow affective associations with

high vs. low status. In this study, we asked children to explain status disparities between particular *individuals* (e.g., "Blark has a lot more money than Orp"). We expected that these items would not elicit as strong an inherence bias as the disparities between groups did (Study 3a), potentially because extrinsic information (e.g., past events, external circumstances) has been shown to be more readily accessible when reasoning about specific individuals than about broad patterns—and thus more easily incorporated into quick heuristic explanations (e.g., Cimpian & Markman, 2009, 2011). In this task, children's spontaneous explanations no longer appealed to inherent ($M = .54$, $SD = .28$) more than extrinsic ($M = .49$, $SD = .27$) factors, $t(19) = .55$, $p = .59$, $d = .18$ (see Table 4). The fact that children tailored their explanations to the nature of the observations to be explained (status disparities between groups vs. individuals) suggests that our experimental paradigm successfully taps into the cognitive processes by which children make sense of the world. Together, Studies 3a and 3b reinforce our claims of a non-palliative, early-emerging inherence bias in people's explanations for sociopolitical patterns.

Chapter 5

Study 4

In Study 4, we tested our claim of a causal link between explanations and system support (Prediction 3). Would manipulating how children explain sociopolitical patterns also affect their tendency to uphold these patterns? More precisely, would providing children with inherent explanations for a certain status disparity lead them see it as more legitimate and fair than if the same disparity had been explained in extrinsic terms?

5.1 Method

Participants. Participants were 20 four- and five-year-old children (M_{age} = 5.29 years, SD = .50) and 20 seven- and eight-year-old children (M_{age} = 8.27 years, SD = .44). Participants were recruited from a small city in the Midwestern U.S. and were tested either in a university lab (n = 16) or in a quiet room at their school (n = 24). Ten additional children were tested but excluded from the final sample because they refused to complete the task (n = 6) or answered two or more manipulation check questions incorrectly (n = 4; see below).

Materials and Procedure. We introduced participants to the status disparities used in Studies 1–3a. For two of the disparities, children were provided with an inherent explanation (e.g., the Blarks "are smarter and better workers"); for the other two disparities, children heard an extrinsic explanation (e.g., the Blarks "live in a town with better jobs and a lot more banks"; see Table 1 and the Supplemental Materials). Each disparity received an inherent explanation for half of the participants and an extrinsic explanation for the other half. After children heard each explanation, they were asked to repeat it to the experimenter as a comprehension check. If children were unable to repeat the explanation (either fully or partially), the experimenter re-read it and asked again. If children could not repeat the explanation after three attempts, the

experimenter moved on to the next trial.

After passing the comprehension check, children were asked how much they liked each group, whether they thought the disparity between them was fair (6-point scales), and whether they thought the high-status group deserved their advantage (yes/no). Responses to these questions about status quo endorsement were combined into a standardized composite score (α = .72). Question order was counterbalanced.

As a manipulation check, at the end of each trial we asked children to recall the explanation provided on that trial. The experimenter provided no feedback at this point and simply proceeded with the study. However, any trials for which children failed to answer this question correctly were excluded from the analyses (6.9% of all trials).

Norming of Explanations. The inherent and extrinsic explanations were normed for believability, using the same method as in Study 1. Adults (N = 30) were recruited and asked to rate the explanations in terms of their surface plausibility on a 4-point scale. The inherent and extrinsic explanations were judged to be equally believable (Ms = 3.0 and 3.2, respectively), $t(28)$ = .53, p = .60.

5.2 Results and Discussion

The data were analyzed with a 2 (explanation: inherent vs. extrinsic) × 2 (age: five- vs. eight-year-olds) ANOVA. As predicted, exposure to inherent (vs. extrinsic) explanations for status disparities resulted in greater support for these disparities, $M_{inherent}$ = .30, $SD_{inherent}$ = 1.18 vs. $M_{extrinsic}$ = −.23, $SD_{extrinsic}$ = 1.05, $F(1, 38)$ = 22.62, p < .001, η^2 = .37 (see Table 5). This difference did not vary by age, $F(1, 38)$ = .01, p = .91: Both the five-year-olds ($M_{inherent}$ = .49, $SD_{inherent}$ = .83 vs. $M_{extrinsic}$ = −.02, $SD_{extrinsic}$ = .73) and the eight-year-olds ($M_{inherent}$ = .10, $SD_{inherent}$ = .81 vs. $M_{extrinsic}$ = −.43, $SD_{extrinsic}$ = .62) were significantly more likely to endorse

status disparities for which they heard inherent explanations, $t(19) = 3.15$, $p = .005$, $d = .65$, for the five-year-olds, and $t(19) = 3.60$, $p = .002$, $d = .73$, for the eight-year-olds (see Figure 4).

Interestingly, the five-year-olds were somewhat more likely than the eight-year-olds to endorse system-supporting attitudes overall ($M_{fives} = .24$, $SD_{fives} = .69$ vs. $M_{eights} = .16$, $SD_{eights} = .64$), $F(1, 38) = 3.56$, $p = .067$, $\eta^2 = .09$. This developmental trend is compatible with our account, insofar as the inherence heuristic—and heuristic reasoning in general—has a more pervasive influence earlier in development (Cimpian & Salomon, 2014a; Cimpian & Steinberg, 2014). This claim should be interpreted with caution, however, since in Study 3a the younger children did not generate more inherent explanations for status disparities than the older children.

These results suggest that, even for young children, understanding a sociopolitical pattern as being due to some feature of the groups that comprise it leads to greater endorsement of this pattern relative to understanding it as the product of extrinsic forces. Together with the evidence that inherent explanations are common in people's understanding of macro-societal features (Studies 1–3), these findings support the claim that explanation-generating processes facilitate the development of attitudes that uphold the status quo.

Chapter 6

General Discussion

Political thought is characterized by a prevailing tendency to view the status quo as fair and natural. The present work marks a significant advance in our scientific understanding of the origins of system-defending tendencies: We found consistent evidence that system-supporting attitudes are shaped by the output of the developmentally primitive processes people rely on to explain the world—output that legitimizes what is being explained simply by virtue of its inherence-skewed content (Cimpian, in press; Cimpian & Salomon, 2014a, 2014b; Salomon & Cimpian, 2014). Our theoretical perspective presents an alternative to current accounts, which propose that system-legitimizing cognitions arise exclusively because they serve the palliative function of reducing "anxiety, guilt, dissonance, discomfort, and uncertainty" about one's station in life (Jost & Hunyady, 2002, p. 111; see also Jost et al., 2003, 2004; Jost & Banaji, 1994; Jost & Hunyady, 2005).

Our proposal received consistent support across four studies. First, we found a marked tendency to explain large-scale social disparities in inherent terms (Studies 1, 2, and 3a). Second, this tendency was predictive of participants' support for the status quo (Studies 1 and 2b). Third, manipulating this explanatory skew toward inherence led to subsequent changes in the extent to which people endorsed the status quo (Study 4). Importantly, our studies were designed to minimize the presence of palliative motives. Participants were asked about unfamiliar disparities on alien planets—stimuli that lower participants' personal involvement and thus the possibility of self-relevant negative emotions. Moreover, the link between explanation and support for the status quo was present in preschool-age children. At this age, it seems unlikely that children would experience unease about the structure of alien societies. Even if they did, however, it is

unlikely that they would be able to regulate such unease by devising a system-justifying ideology. In sum, our findings provide strong evidence that the cognitive processes underlying explanation are a prolific source of support for the status quo that is independent of, and may arise before, palliative needs.

Could our results be due simply to a primitive, and non-palliative, motivation to view the status quo in a positive light—a motivation that might operate even in children (Newheiser et al., 2014; Olson et al., 2011)? Given that the present findings can be fully explained by well-established cognitive mechanisms whose psychological reality has been documented across development (Cimpian & Salomon, 2014a, 2014b; Higgins, 1996; McRae et al., 2005; Salomon & Cimpian, 2014), it seems unparsimonious to invoke an additional motivation for this purpose, especially since there is no independent evidence for such a general motivation in early childhood: The few other findings of status-quo support in children can themselves be accounted for by cognitive rather than motivated mechanisms. For example, the absence of an ingroup bias among children in low-status groups (e.g., Newheiser et al., 2014) could be the result of low-level processes that associate, via repeated exposure, high-status groups with positively-valenced markers of wealth and prestige (Newheiser & Olson, 2014). Finally, it is worth noting that claims of a broad, primitive motivation to support existing conditions are incompatible with our finding that children's support for the status quo was directly contingent on the explanations provided for that status quo (Study 4) Therefore, the support for the status quo observed across our four studies is most plausibly interpreted as a downstream consequence of the heuristic processes by which people generate explanations.

It is important to note that, although palliative motivations are unlikely to have driven participants' responses in our tasks, such motivations could in principle influence individuals'

(especially adults') heuristic explanations on a day-to-day basis. According to the inherence heuristic account, affective or motivational factors may, at times, modulate the operation of the heuristic processes identified here (Cimpian & Salomon, 2014a, 2014b). For example, any anxiety or discomfort that is evoked by one's societal rank could erode the amount of cognitive resources (such as working memory) available to the reasoner (e.g., Schmader, Johns, & Forbes, 2008). Lower cognitive resources would in turn translate into looser supervision of heuristic processes by analytic, working-memory-dependent processes (e.g., Epley & Gilovich, 2006). In the case of the inherence heuristic, this could result in a stronger inherence bias in the explanations people adopt for observed sociopolitical patterns, and thus stronger intuitions about the legitimacy of the status quo. In this manner, palliative motivations and heuristic processes could in fact interact to promote status quo endorsement. To reiterate, however, the present data suggest that the explanatory heuristic mechanism proposed here is *sufficient*, on its own, to elicit attitudes and beliefs that support the status quo.

While the tendency to uphold the status quo may provide relief from tension and uncertainty, it also reinforces harmful stereotypes of the disadvantaged; it reproduces long-standing inequalities; and it propagates the belief that unfair policies and practices are just. It is worrying to think that this tendency is present even in 4-year-old children (as our own data suggest). By revealing how an early-emerging heuristic shortcut contributes to this tendency, the present research also suggests how one could instill a more balanced, open-minded stance toward the sociopolitical status quo. The heuristic tendencies of the human mind do not impose a hard limit on its output: Facile intuitions (which usually disguise themselves as common sense) can indeed be revised, and prior research has identified many meta-cognitive strategies whose adoption promotes analytic, rational thought (e.g., Baron, 1994; Stanovich, 2009). By learning to

scrutinize one's heuristic intuitions, one gains the ability to recognize potential shortcomings in the structure of society, and thus to avoid the pitfalls of an unquestioning endorsement of the status quo.

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Tables and Figures

Table 1

Study	Inherent Explanations	Extrinsic Explanations
1 and 2	…maybe the Blarks have a lot more money than the Orps because the Blarks are smarter, or are better workers than the Orps are, or there's something else about them that made them get a lot of money.	…maybe the Blarks have a lot more money than the Orps because of things that happened a long time ago, like maybe the Blarks won a war, or they found gold, or something else happened that made them get a lot of money.
4	There are a lot of things that are the same about the Blarks and the Orps. They live in the same neighborhoods, go to the same schools, and are both very friendly. But, there's one really important thing that's different about the Blarks and the Orps. The Blarks are really really smart, and are much better workers than the Orps are. They are a lot smarter, and are much better workers than the Orps. Because of this, the Blarks have a lot more money than the Orps. They have a lot more money because they're smarter and are better workers.	There are a lot of things that are the same about the Blarks and the Orps. They are both very smart, they like the same sorts of things, and are both very friendly. But there's one really important thing that's different about the Blarks and the Orps. The Blarks happen to live in a town that has much better jobs, and a lot more banks. The town where the Blarks live happens to have much better jobs and a lot more banks. Because of this, the Blarks have a lot more money than the Orps. They have a lot more money because they happen to live in a town with better jobs and a lot more banks.

Sample inherent and extrinsic explanations presented for the disparities in Studies 1, 2, and 4

Table 2

Mean endorsement of explanations and system-supporting beliefs in Studies 1 and 2

	Inherent Explanation Endorsement	Extrinsic Explanation Endorsement	Disparity Fairness Rating	High-Status Group Preference
Adults (Study 1)	2.74 (0.72)	2.50 (0.64)	4.10 (1.56)	−0.11 (1.70)
8-year-olds (Study 2a)	2.87 (0.75)	2.28 (0.57)	—	—
8-year-olds (Study 2b)	2.86 (0.65)	2.43 (0.65)	2.93 (0.99)	−0.26 (1.53)

Note. For adults (Study 1), disparity fairness and group liking were assessed using 9-point scales. For children (Study 2b), we used 6-point scales. High-status group preference was calculated by subtracting low-status group liking from high-status group liking. Standard deviations are indicated in parentheses.

Table 3
Correlations between the measures in Study 1

	1	2	3	4	5
1. Preference for Inherent Explanations	1	.51**	.28**	.25*	−.11
2. System Support Composite		1	.30**	.34**	−.11
3. Inherence Heuristic Scale			1	.33**	−.35**
4. General System Justification Scale				1	−.04
5. Need for Cognition Scale					1

Note. * $p < .05$. ** $p < .01$.

Table 4
Proportion of explanations generated in Study 3

	Inherent	Extrinsic	Nonsensical
Study 3a			
5-year-olds	.45 (.28)	.24 (.25)	.39 (.25)
8-year-olds	.62 (.24)	.38 (.29)	.11 (.15)
Study 3b			
4–8-year-olds	.54 (.28)	.49 (.27)	.06 (.18)

Note. The values in this table represent the proportion of trials on which an explanation was coded as being inherent, extrinsic, or nonsensical. Because explanation codes were assigned independently (i.e., an explanation could be coded as containing both inherent and extrinsic components), the proportions do not necessarily add up to 1. Standard deviations are indicated in parentheses.

Table 5

Mean endorsement of system-supporting beliefs following inherent and extrinsic explanations in Study 4

	Disparity Fairness ("Is it fair…?")	Disparity Fairness ("Is it ok…?")	High-Status Group Deservingness	High-Status Group Preference	System Support Composite
Inherent					
5-year-olds	3.52 (1.88)	4.25 (1.77)	0.73 (0.41)	0.83 (2.82)	0.49 (0.83)
8-year-olds	2.85 (1.72)	3.33 (1.69)	0.56 (0.41)	0.43 (2.08)	0.10 (0.81)
Extrinsic					
5-year-olds	2.23 (1.48)	2.75 (1.76)	0.53 (0.47)	0.93 (2.07)	−0.02 (0.73)
8-year-olds	2.33 (1.23)	2.98 (1.45)	0.35 (0.37)	−1.28 (1.67)	−0.43 (0.62)

Note. Disparity fairness ratings were assessed using a 6-point scale. High-status group deservingness was assessed with a dichotomous yes/no question. High-status group preference was calculated as the difference score between liking for the high- and the low-status groups (each assessed using a 6-point scale). The system support composite was calculated by (1) standardizing the relevant measures (e.g., participants' average rating of the fairness of the disparities) and then (2) averaging each participant's standardized scores across these measures. Standard deviations are indicated in parentheses.
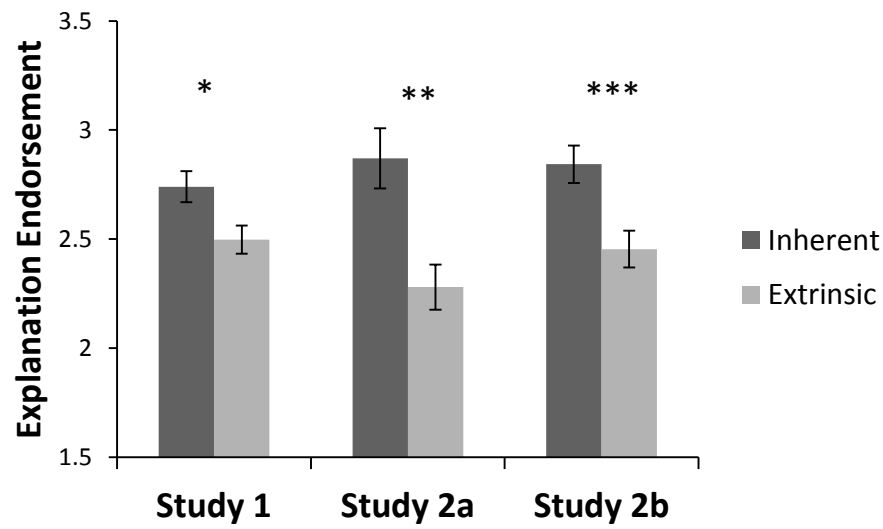
Figure 1. Adults' (Study 1) and 8-year-olds' (Studies 2a and 2b) endorsement of inherent and extrinsic explanations for social disparities (1 = "really not right" to 4 = "really right"). Error bars represent ± 1 SE. * p < .05. ** p < .01. *** p < .001.
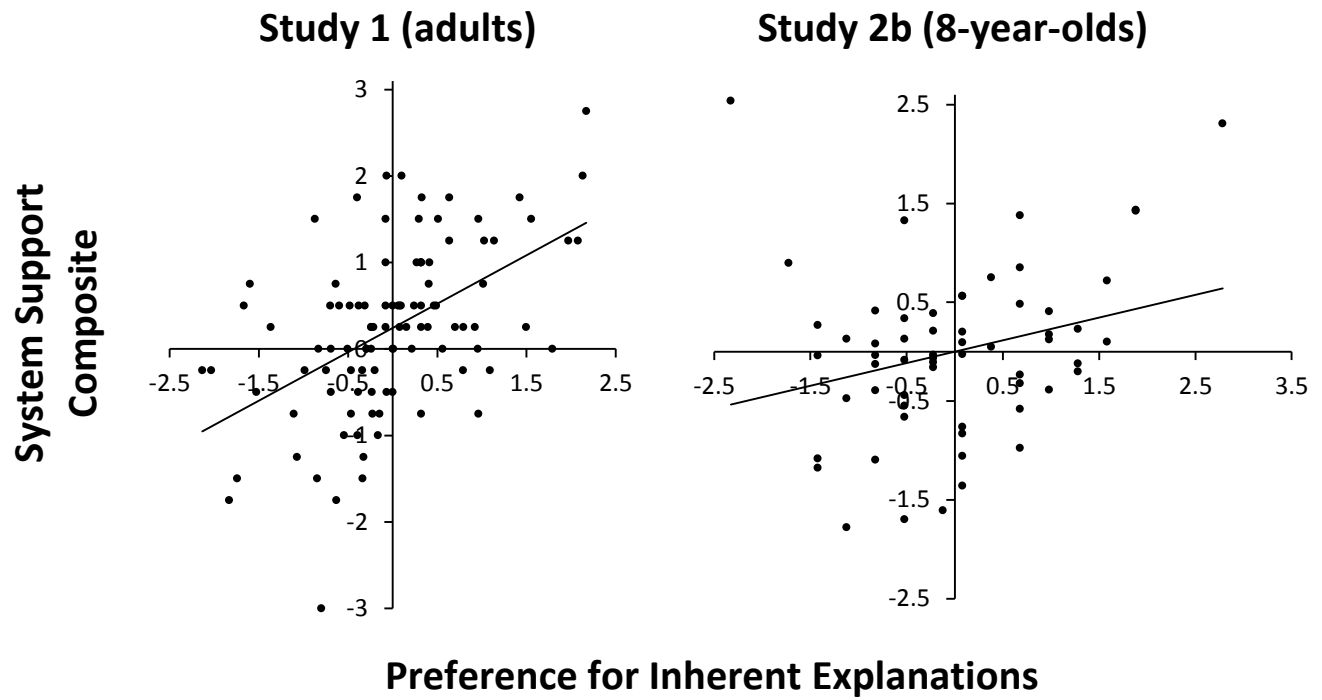
Study 1 (adults)   Study 2b (8-year-olds)

Preference for Inherent Explanations

Figure 2. Participants' system support as a function of their preference for inherent explanations of social disparities in Studies 1 and 2b.
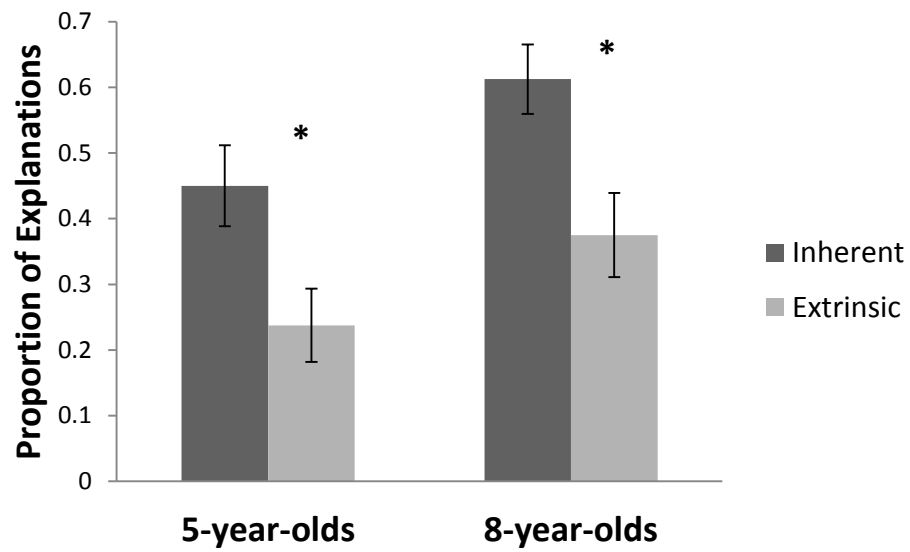
Figure 3. The proportion of trials on which children generated inherent and extrinsic explanations of social disparities in Study 3a. (Both bars are lower for the 5-year-olds than for the 8-year-olds because the younger children generated more nonsensical explanations [see Table 4 for exact means].) Error bars represent ± 1 SE. * p < .05.
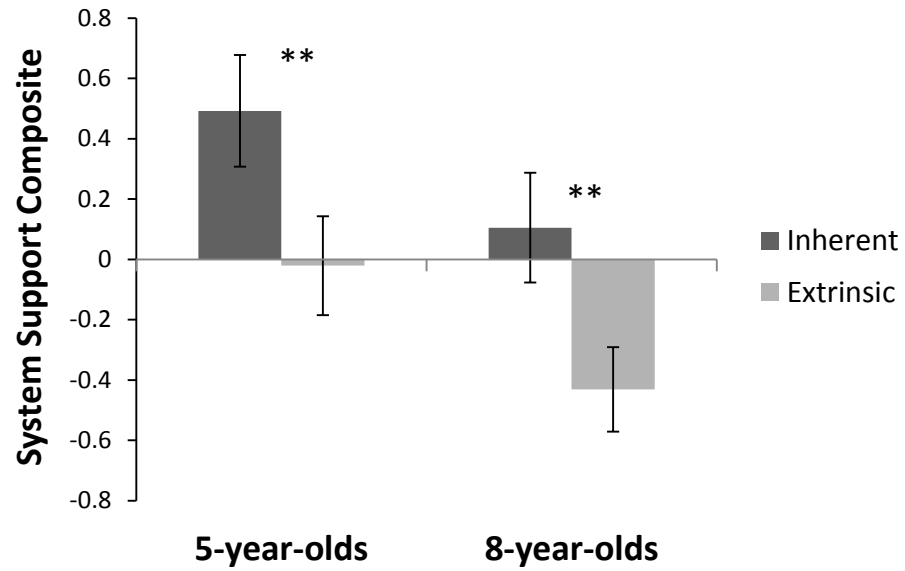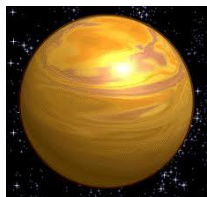
Figure 4. Five- and 8-year-olds' system support following inherent and extrinsic explanations in Study 4. Error bars represent ± 1 *SE*. ** *p* < .01.

Appendix

Stimuli and Materials

Studies 1–4: The Pictures

<u>**Planets:**</u>

<u>**Groups:**</u>

Blarks/Orps   Joops/Frips

Deegs/Vilps   Mapers/Kyders

Studies 1- 3a[2]: The Novel Disparities

a. Now I want to tell you about a planet far far away called Teeku. There are two kinds of people that live on Planet Teeku, the Blarks and the Orps. And you know what? On planet Teeku, the Blarks have a lot more money than the Orps. The Blarks have a lot more money than the Orps.

b. Now I want to tell you about a planet far far away called Grag. There are two kinds of people that live on Planet Grag, the Joops and the Frips. And you know what? On planet Grag, the Joops always get better grades in school than the Frips. The Joops always get better grades in school than the Frips.

c. Now I want to tell you about a planet far far away called Flirb. There are two kinds of people that live on Planet Flirb, the Mapers and the Kyders. And you know what? On planet Flirb, the Mapers are always the bosses at their jobs and the Kyders are never the bosses. The Mapers are always the bosses and the Kyders are never the bosses.

d. Now I want to tell you about a planet far far away called Zilky. There are two kinds of people that live on Planet Zilky, the Deegs and the Vilps. And you know what? On planet Zilky, the Deegs always work in offices and the Vilps always work on farms. The Deegs always work in offices and the Vilps always work on farms.

Studies 1 and 2: The <u>Inherent</u> Explanations

a. … maybe the Blarks have a lot more money because the Blarks are smarter, or are better workers than the Orps are, or there's something else about them that makes them get a lot of money.

b. … maybe the Joops get better grades in school because the Joops work harder, or ask better questions than the Frips do, or there's something else about them that makes them get better grades.

c. … maybe the Mapers are always the bosses because they're better at making big decisions, or better at being in charge than the Kyders are, or there's something else about them that helps them be the bosses.

d. … maybe the Deegs always work in offices because they're better at working with numbers, or better at computers than the Vilps are, or there's something else about them that makes them work in offices.

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[2] For Study 3b, the groups were replaced with individuals (e.g., "Here are two people that live on Planet Teeku, Blark and Orp").

Studies 1 and 2: The <u>Extrinsic</u> Explanations

a. … maybe the Blarks have a lot more money than the Orps because of things that happened a long time ago, like maybe the Blarks won a war, or they found gold, or something else happened that made them get a lot of money.

b. … maybe the Joops get better grades than the Frips because their families have more school supplies, like textbooks and computers and other things that help the Joops get better grades.

c. … maybe the Mapers are always the bosses because their families have more things, like computers and nice clothes and other stuff that helps them be the bosses.

d. … maybe the Deegs always work in offices because of something that happened a long time ago, like an earthquake, or a big storm, or something else that made the Deegs work in offices.

Study 4: The <u>Inherent</u> Stimuli

a. Now I want to tell you about a planet far far away called Teeku. There are two kinds of people that live on Planet Teeku, the Blarks and the Orps. There are a lot of things that are the same about the Blarks and the Orps. They live in the same neighborhoods, go to the same schools, and are both very friendly. But, there's one really important thing that's different about the Blarks and the Orps. The Blarks are really really smart, and are much better workers than the Orps are. They are a lot smarter, and are much better workers than the Orps. Because of this, the Blarks have a lot more money than the Orps. They have a lot more money because they're smarter and are better workers.

b. Now I want to tell you about a planet far far away called Grag. There are two kinds of people that live on Planet Grag, the Joops and the Frips. There are lots of things that are the same about the Joops and the Frips. They live in the same neighborhoods, go to the same jobs, and are both very friendly. But, there's one really important thing that's different about the Joops and the Frips. The Joops remember things really well, and spend a lot more time on their homework than the Frips do. They remember things a lot better, and spend a lot more time on their homework than the Frips. Because of this, the Joops get a lot better grades in school than the Frips. They get a lot better grades because they remember things much better and spend a lot more time on their homework.

c. Now I want to tell you about a planet far far away called Flirb There are two kinds of people that live on Planet Flirb, the Mapers and the Kyders. There are lots of things that are the same about the Mapers and the Kyders. They live in the same neighborhoods, go to the same schools, and are both very friendly. But there's one really important thing that's different about the Mapers and the Kyders. The Mapers are much better at making decisions and are much better at being in charge than the Kyders are. The Mapers are

much better decision-makers and are much better at being in charge than the Kyders are. Because of this, the Mapers are always the bosses at their jobs, and the Kyders are never the bosses. The Mapers are always the bosses because they're much better at making decisions and are better at being in charge.

d. Now I want to tell you about a planet far far away called Zilky. There are two kinds of people that live on Planet Zilky, the Deegs and the Vilps. There are lots of things that are the same about the Deegs and the Vilps. They live in the same neighborhoods, go to the same schools, and are both very friendly. But there's one really important thing that's different about the Deegs and the Vilps. The Deegs are much better with numbers and are much better at working with computers than the Vilps are. The Deegs are much better with numbers, and much better at computers than the Vilps are. Because of this, the Deegs always work in offices and the Vilps always work on farms. The Deegs always work in offices because their much better with numbers and at working with computers.

Study 4: The <u>Extrinsic</u> Stimuli

a. Now I want to tell you about a planet far far away called Teeku. There are two kinds of people that live on Planet Teeku, the Blarks and the Orps. There are a lot of things that are the same about the Blarks and the Orps. They are both very smart, they like the same sorts of things, and are both very friendly. But there's one really important thing that's different about the Blarks and the Orps. The Blarks happen to live in a town that has much better jobs, and a lot more banks. The town where the Blarks live happens to have much better jobs and a lot more banks. Because of this, the Blarks have a lot more money than the Orps. They have a lot more money because they happen to live in a town with better jobs and a lot more banks.

b. Now I want to tell you about a planet far far away called Grag. There are two kinds of people that live on Planet Grag, the Joops and the Frips. There are lots of things that are the same about the Joops and the Frips. They are both very smart, they like the same sorts of things, and are both friendly. But, there's one really important thing that's different about the Joops and the Frips. The Joops happen to live in a town that has a lot more schools, and those schools have a lot more computers and school supplies. The town where the Joops live happens to have a lot more schools, with a lot more computers and school supplies. Because of this, the Joops get a lot better grades in school than the Frips. They get a lot better grades because they happen to live in a town with a lot more schools, with computers and school supplies.

c. Now I want to tell you about a planet far far away called Flirb. There are two kinds of people that live on Planet Flirb, the Mapers and the Kyders. There are lots of things that are the same about the Mapers and the Kyders. They are both very smart, they like the same sorts of things, and are both very friendly. But there's one really important thing that's different about the Mapers and the Kyders. The Mapers happen to live in a town that has a lot more office buildings, and a lot more jobs for bosses. The town where the Mapers live happens to have a lot more office buildings and a lot more jobs for bosses.

Because of this, the Mapers are always the bosses at their jobs, and the Kyders are never the bosses. The Mapers are always the bosses because they happen to live in a town with a lot more office buildings and a lot more jobs for bosses.

d. Now I want to tell you about a planet far far away called Zilky. There are two kinds of people that live on Planet Zilky, the Deegs and the Vilps. There are lots of things that are the same about the Deegs and the Vilps. They are both very smart, they like the same sorts of things, and are both very friendly. But there's one really important thing that's different about the Deegs and the Vilps. The Deegs happen to live in a town that doesn't have any farmland and only has office jobs available. The town where the Deegs live happens to not have any farmland, and only has office jobs available. Because of this, the Deegs always work in offices and the Vilps always work on farms. The Deegs always work in offices because they happen to live in a town with no farmland and only office jobs available.