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THE SENSE OF DISTRIBUTIVE JUSTICE IN CHILDREN FROM 6 TO 10

EQUALITY PREDOMINATES BUT SHARING NORMS ARE DIFFERENT DEPENDING ON SCHOOL PERFORMANCE

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Abstract. In order to learn what principles of distributive justice children privilege, we conducted in 2013 a study of 169 children aged from 6 to 10 attending four primary schools in four different Parisian suburbs. Overall there emerged a strong consensus in favor of the equality principle. Among the other distribution principles envisaged, need came in first. These results are little affected by social or demographic differences, or by self-interest. Only the children's school performance plays a significant role in their choice of a justice principle.

Keywords: children, distributive justice, equality, representations, sharing.

Résumé. Afin de savoir quels principes de justice distributive les enfants privilégient, nous avons réalisé en 2013 une enquête auprès de 169 enfants âgés de 6 à 10 ans de quatre écoles primaires situés dans quatre communes de la banlieue parisienne. Il apparaît qu'un fort consensus se dégage en faveur du principe d'égalité. Parmi les autres principes de partage présentés dans cette enquête, celui lié au besoin arrive en tête. Ces résultats ne sont que très marginalement affectés par les différences socio-démographiques ou par la simple défense d'un intérêt personnel. Il n'y a guère que le niveau de réussite scolaire qui influence significativement le choix d'un principe de justice.

Mots-clés: égalité, enfants, justice distributive, partage, représentations.

What principles do children mobilize to arrive at a fair distribution? Development of the sense of distributive justice in children has been the focus of numerous studies since the pioneering work of Piaget (1932). According to Piaget and, subsequently, Selman and Damon (1975), or Enright *et al.* (1984), moral judgment develops gradually in the child following a certain number of stages: justice is first (before the age of 6) defined with respect to self or based on physical attributes or in terms of obedience to a recognized authority such as parents; then it refers to a notion of strict equality (6-10 year olds) and finally to notions of equity (around 10 and older); equity consists notably in giving more to those who deserve more or to those who have more need. This outlook dominated the field of research in psychology until the 1990s, a decade that saw the development of models attributing a central role to the child's socialization (Grusec *et al.*, 2000; Hoffman, 2001; Kuczynski and Navara, 2006) and those that held human beings are naturally predisposed to justice, a predisposition acquired over the course of the species' evolution (Haidt, 2008; Lapsley and Carlo, 2014).

The latter perspective considers that human beings are innately disposed to favor merit (Liénard *et al.*, 2013). However this does not explain why very young children often prefer to opt for equal distribution among the different contributors (Baumard *et al.*, 2012). Nor does it consider the representation children have of the distribution situations (Bosisio, 2008); yet, as we shall see, children endorse certain principles of justice for fairly different reasons.

With these questions in mind, the present study aims at looking at the way children understand sharing situations after performing a task together; to do this, it adopts the postulate that children choose a distribution principle for good reasons (Boudon, 2003), which we will attempt to elucidate, but also on the basis of the representations they have of this principle (Emler, Ohana and Dickinson, 1990; Duveen and Lloyd, 1990; Duveen and De Rosa, 1992), which we will also attempt to clarify. We will therefore ask ourselves how children conceive of "equality", "merit" or "need".

Some studies have shown that these justice norms are far from univocal (Barreiro, 2013; Kellerhals et al., 1991; Nisan, 1984, 1989) and that children are socialized to these principles differently depending on the values found in their community as well as the more or less collective practices adopted there. Other research shows that children may adopt the same principle of justice, for example equality, but for very different reasons: because their performances were all comparable or because a different distribution of resources could have consequences for group harmony (Carson and Banuazizi, 2008). In our work we look at these plural conceptions of justice called upon by children.

The way children perceive the situation also depends on the image they have of themselves and of others as well as social expectations placed on them. Are girls more willing to share than boys, in accordance with gendered social expectations which associate feminine behavior with “prosociality”? The literature yields relatively contrasting findings on this question (Gummerum, et al., 2008, 2010; Benenson et al., 2007; Pilgrim and Rueda-Riedle, 2002). In turn, does the sex of the beneficiary influence the child’s generosity to him/her? Very few studies have tackled this question. One study by Barnett and Andrews (1977) finds no difference, while others show that adolescents give more to a deserving boy than to a deserving girl (Olejnik et al., 1982). The present experimental study will also address this question.

Context *as well* comes into the way children define the distributive situation. Certain studies show they opt for equality over merit in situations where they are sharing with their friends, while they prefer merit when it comes to simple acquaintances or strangers (Frederickson and Simmonds, 2008; Pilgrim and Rueda-Riedle, 2002; McGillicuddy-De Lisi and Watkins, 1994). Still, numerous studies show that children under the age of 9 show little sensitivity to context and share equally whatever the situation (Frederickson and Simmonds, 2008; McGillicuddy-De Lisi and Watkins, 1994; Pataki et al., 1994). But do they opt for equality because they consider it to be the fairest principle, or is this the only norm of justice they are acquainted with and know how to practice? The previous experimental set-ups used do not allow us to answer this question.

That is why, in our study, we honed the investigation by inciting the children to rank the different distributive justice principles.

In this regard, it seems that it is especially in experimental contexts where children are asked to have objects distributed by another instance (a doll, for instance), that they opt for egalitarian distribution whereas, when sharing has a personal cost, they instead tend, before the age of 7-8, to favor themselves (Fehr *et al.*, 2008; Smith *et al.*, 2013). It thus seems that they adopt a very different viewpoint depending on their personal involvement in the distribution game, but there is, to our knowledge, no study that consists in having them vary their position, sometimes taking the role of the third party, sometimes that of beneficiary, to explore how the change of position may have affected the children's representation of the situation. This will therefore be another aim of our research.

Since children rarely elaborate their judgments in complete social isolation, it seemed important to include peer judgment in our study. To what extent may friends influence the child's point of view on the situation? Can they lead the youngest children to envisage distribution principles other than strict equality? If certain studies have looked into the way social environment can affect distributive behaviors (Leimgruber *et al.*, 2012; Piazza and Bering, 2008), none, to our knowledge, have sought to analyze the effects of the explicit opinions of friends on the stability of children's distributive judgment.

Last of all, very few experiments have taken into account the effect of social background on sharing behaviors. Most simply mention that the participants are from "middle-class" backgrounds and pay little attention to the possible effects of these children being from one background or another on sharing situations. As for the rare studies that take into account social origin, they come up with contrasting findings (Benenson *et al.*, 2007; Chen *et al.*, 2013). We are therefore seeking to fill this gap by studying how family socialization (broken down by parents' occupation) can influence choice of a justice principle.

Furthermore, we will be looking at a variable neglected in earlier research: the child's position in the school environment (good, average or poor pupil). We posit that school performance has an impact not only on the way children understand and make use of their knowledge in the situation they are presented with but also on the way they value some criteria of fairness rather than others. From this standpoint, it can be expected that children perceive fair compensation differently depending on the way they themselves are compensated at school.

I. METHODOLOGY

Between December 2012 and June 2013 we carried out a study of 169 French children between the ages of 6 and 10 years (the sample is described in the Annexes), attending four primary schools in four Parisian suburbs which had the following characteristics:

- a) a state-funded private primary school in which the upper class and, to a lesser extent, the middle class are over-represented;
- b) a state school where the working-class categories are over-represented but with numerous middle-class categories as well;
- c) a state school where working-class categories are over-represented;
- d) a state school where social categories are mixed with none being clearly over-represented.

Short individual interviews (9 minutes on average) were conducted with the children at school, during class time or recess. The child was first shown a drawing of four children (see Annexes for an example) with cookies in front of them and a sac with biscuits or fruit for the afternoon snack. It was explained that these children together had made twelve cookies and now they were to share them among the four children, each of whom had a characteristic clearly commented on by the interviewer as follows:

The first (A) is the strongest.

The second (B) is fondest of food.

The third (C) made the most cakes.

The fourth (D), unlike the others, has nothing in his sack for the afternoon snack and therefore will have nothing to eat but the cookies made with the other children.

We see that A corresponds to what most theories of justice consider to be an arbitrary principle, such as strength or size, B to a utility principle, C to a principle of merit, and D to a principle of need.

In addition, the sex of the children in the drawing varied, half of the children interviewed being presented with drawings of children in a single-sex group of the same sex as the interviewee (group of girls for the girls / group of boys for the boys), the other half being presented with drawings of a mixed group of children (2 boys [A and C] and 2 girls [B and D] for the boys interviewed; and 2 girls [A and C] and 2 boys [B and D] for the girls interviewed). The task was of course to evaluate the way gender intervened in the perception of sharing situations.

The interviewer would then give the child 12 identical tokens and ask him or her to imagine these were the cookies made by the children, and tell the child to distribute the tokens, as he or she wished, among the children in the drawing (the child was to place the tokens directly on the figures in the drawing). The child was also asked to explain [as he/she went\[?\]](#) the reason for this distribution.

Each time the child's distribution did not yield an overall ranking of the children in the drawing (therefore partial or total equality among them), the interviewer would provide an additional token so as to prompt the child to rank the different justice principles.

When this task was completed, the child was asked once again to share out the 12 tokens among the four children in the drawing, but this time changing the child's position with regard to the distribution situation. This time the interviewer would tell the child he/she was one of the beneficiaries of the distribution. He was now the little boy (versus the little girl) in the drawing who had been given the fewest cookies (but without telling him/her this was the reason). In the event of equal distribution, [the interviewer](#) randomly gave the child the place of one of the children in the drawing. Again the child would be asked

first to share out the 12 cookies among the four children in the drawing and, if there was partial or total equality, the child would be given additional cookies to distribute (one at a time until an overall ranking was achieved).

Finally, the possible influence of peer judgment on the stability of the child's choices was investigated by asking the child if he/she would distribute the cookies in the same way if his/her best friend told him/her that the distribution was questionable (saying, when the choice was for unequal distribution, that equality was preferable or, on the contrary, when the choice had been equal distribution that it was preferable to favor one or another of the characters, rotating the four possible options). The interviewer would then ask the child if he/she thought his/her best friend was right, and gave the child the choice of making a new distribution, if he/she wished, of the cookies previously attributed to the four children in the drawing so as to be in line with the eventual change of mind.

In the last part of the interview, the interviewer would talk with the child to find out how he/she perceived this distributive situation. She would ask the child in particular how he/she interpreted the respective situation of each child, in particular that of the child most in need and that of the most deserving. At the end of the interview, the child was thanked for taking part and told how important these answers were for the interviewers.

In addition, a short questionnaire was addressed to the parents of the children interviewed. It contained questions on a few socio-demographic variables such as occupation, diplomas, number of children in the household, as well as political positioning and certain questions concerning the responding parent's opinion about distributive justice.

2. RESULTS

2.1. THE SPONTANEOUS CHOICE OF EQUALITY

The first analyses show that, whatever the distribution of cookies chosen, the answers are **neither** sensitive to the sex of the children in the drawing. **Nor** is there any incidence of a connection between the interviewee's sex and the drawing proposed when the sexes are mixed. The boys did not tend to favor boys or girls, the same being true for the girls (whatever the age).

In fact, whatever the sex of the children in the drawing, the distribution that comes in first is that corresponding to strict equality (three cookies for each child in the drawing). 70% of the children spontaneously choose to apply the equality principle. Next, 15% choose the principle of need, giving more cookies to D (the most deprived). Then 13% privilege the principle of merit by giving C more cookies. The remaining 2% (but that is not more than four children) choose the law of "might makes right" (giving more to A) or the utility principle, (giving more to B, who, being the one who especially likes food, derives the most pleasure from eating cookies, hence the most utility, in the classic sense used in economics), as child #93 said "because she likes to eat so much she will be able to eat more and will be glad". It can be noted that among those who give more to D, C comes more often in second place (10%) than A or B (5%). The spontaneous order of the principles is thus: equality, need, merit, then, residually, "others" (strength or pleasure).

It is not easy to determine if this order is sensitive to different criteria because the high number of children favoring equality leaves only a few children attached to the other principles for a cross-sectional analysis.

Thus the chi-square of the table (chi-square = 3.03, df = 4, p = 0.55) crossing age groups with distribution principles is not significant. It is therefore not possible to affirm that the equality principle would become less and less important with age. The other variables concerning the children do not have a significant statistical effect either. This is the case particularly of the children's sex (chi-square = 1.09, df = 2, p = 0.58). The school where the study was

conducted comes in slightly, but without going so far as to be frankly significant (chi-square = 8.87, $df = 6$, $p = 0.18$).

Crossing choice of the justice principle with parents' occupation does not yield very significant figures either (chi-square = 6.03, $df = 4$, $p = 0.20$). The same is true for the diplomas of the parent answering the questionnaire, and for the number of children in the household. Furthermore, the responding parent's political positioning on a scale of 1 (left wing) to 10 (right wing) does not have any visible repercussions on the child's responses. To clarify this point, several "classic" questions concerning the importance of the different criteria of distributive justice in the workplace or in the country as a whole were asked the parents. But no direct effect of parental opinions was observed on the children's responses.

To sum up: the age, sex, type of school and social background of the children, or the responding parent's political positioning and opinions with regard to distributive justice were not discriminating factors in the spontaneous choice of a justice principle.

In this context of inter-category consensus, only school performance intervenes significantly (see Table 1). The children who were good pupils had a more than average preference for equality. Those who were poor pupils looked more willingly to the need principle and those who were average pupils leaned more in favor of merit.

The way of achieving equality is nevertheless not the same for all. Children who are good pupils use arithmetic and often simply say: "3 x 4 that makes exactly 12 (child #29); while the weaker pupils arrive at equality more or less by trial and error: "I give each of them one each time round" (child #74).

Table 1. Choice of justice principles according to school performance

			DISTRIBUTION OF COOKIES			TOTAL
			Equality	D 1 st	C*, B or A 1 st	
SCHOOL PERFORMANCE	Good	Frequency	87	14	13	114
		%	76.3%	12.3%	11.4%	100.0%
	Average	Frequency	18	3	7	28
		%	64.3%	10.7%	25.0%	100.0%
	Poor	Frequency	13	8	5	26
		%	50.0%	30.8%	19.2%	100.0%
TOTAL		Frequency	118	25	25	168
		%	70.2%	14.9%	14.9%	100.0%

Note: chi-square = 10.70, $df = 4$, $p = 0.03$.

* C (merit) being in the clear majority (21 children) relative to A or B (4 children).

2.2. RANKING THE PRINCIPLES

Many of the children were not deceived by the procedure of adding a token each time the chosen distribution did not allow an overall ranking of their priorities. In particular, those who had opted for equality simply cut the supplementary token into four equal parts so as to give a quarter to each of the children in the drawing. It should be noted that this way of proceeding was not suggested beforehand by the interviewer.

Nevertheless, since the question encourages the ranking of the norms of justice, the answers going along those lines progress in an altogether logical manner (see Table 2). 24% of the children stick to their egalitarian position, but 45% give more cookies to the most deprived (D), 19% to the most deserving and 12% to the one fondest of food or to the strongest (the first coming before the second). If we look at the average number of cookies distributed, we again find the same order: 4.3 for D (need), 3.9 for C (merit), 3.6 for B (utility) and 3.4 for A (strength). It should be noted that the order was the same before the ranking procedure (3.2 for D, 3.1 for C, 2.9 for B or A), but the very slight variance of these figures indicates above all here the clear tendency to prefer equality, as we have already pointed out.

After equality, it is therefore clear that need is the first distribution criterion and that the equity perspective is not completely lacking in children of 6-10. That being said, “need, merit, utility, strength” already emerged in the spontaneous choices, and equality does not disappear following a procedure where everything is done to encourage ranking.

If the two distributions (before and after the supplementary cookies) are crossed, we see a very strong and highly significant tendency for the children to persevere in their first choice (chi-square: 103,75, $df = 9$, $p < 0.0001$). Of those who spontaneously prefer the criterion of need, 100% continue to give D more cookies. 82% of those who tend to favor merit stick to their opinion. Those who had opted for equality also tend not to alter their attitude (the degree of freedom is positive and highly significant since the adjusted standardized residual is 4.8), but if they change their mind (because they have been encouraged to do so), for the majority (42%) it will be to give more to the most disadvantaged. We thus have a high degree of stability in the answers to the two questions and, if there is movement, it goes, in the first place (the most frequent change) from equality towards advantaging the one who seems to be the least favored (D).

Table 2. Spontaneous choice and ranking of justice principles

	SPONTANEOUS		AFTER ADDED COOKEY (IES)	
	Frequency	%	Frequency	%
EQUALITY	118	69.8	40	23.7
NEED (D) THEN MERIT (C)	16	9.5	37	21.9
NEED THEN STRENGTH (A) OR GOURMANDISE (B)	9	5.3	40	23.7
MERIT (C) THEN NEED (D)	6	3.5	9	5.3
MERIT THEN STRENGTH (A) OR GOURMANDISE (B)	16	9.5	23	13.6
STRENGTH (A) OR GOURMANDISE (B)	4	2.4	20	11.8
TOTAL	169	100.0	169	100.0

The differentiating criteria for the children or their parents that might explain the second choice **ranking** are no more significant than the former. The differences in assessing fairness are even less clear among the different categories of children that can be considered. School performance, which had the strongest influence, no longer has any particular effect here. With one exception. Age group plays a more important role here (chi-square = 16.89, $df = 6$, $p = 0.01$), but this is essentially due to the fact that the sense of equality increases between the ages of 6 and 10. As far as the other principles are concerned, evolution according to age is not significant.

2.3. THE ROLE OF PERSONAL INVOLVEMENT

A second way of investigating the stability of the choices made up to this point is to invite the child to become personally involved in order to see if this may alter the justice principle he/she put in first place.

The results show first of all the same stability as earlier. The earlier spontaneous choice and that made when the child is placed in the position of the one who received the fewest cookies is almost the same. Spontaneously the criterion of equality comes in an easy first (54%), followed by need (20%), then merit (14%) and finally utility and strength (12%). After ranking the criteria, we see an order identical to the earlier one, even if equality loses 35% of adhesions (but this was constrained by the experiment), in particular to the advantage of the need principle, which gets 43%, while merit rises to 21%, and the other principles to 17%. It must be noted moreover that this ordering of distribution principles (before or after adding cookies) applies to all ages. Given the possibility of taking more, or at least of being able to balance out their previous choices, the children do not take advantage of it. "Because there's no reason I should have more than the others", as child #108 says, for instance. They continue to privilege equality, and when this is no longer (or less) possible, need, which is clearly identified as such: "since she doesn't have anything and everyone else has something it's better to give her one" (child #16).

The fact that self-interest plays no (or very little) role can be clearly seen when analyzing the numbers of cookies attributed on the basis of the place assigned to the child. Whatever his/her place (A or B or C or D), the child will never on average attribute more cookies to him/her self than to the others. In almost all cases that child will even be the one who has the fewest. The same thing can be observed, still in terms of average numbers of cookies, when comparing spontaneous choice without personal involvement and choice with involvement, or ranked choice without involvement and the same choice with involvement (see Table 3). Once again we systematically observe (in spontaneous or ranked choice) that, whatever the position assigned the child (A or B or C or D), this position receives on average fewer cookies than when no position was assigned the child. The choice of a justice principle is firm and is not, or not very, subject to change due to self-interest.

Table 3. Average number of cookies attributed depending on whether or not the child interviewed is involved in his/her spontaneous or ranked distribution choices

Average number of cookies distributed to...	SPONTANEOUS CHOICES		RANKED CHOICES	
	Cookies given with no involvement	Cookies given when the child has the role noted in row	Cookies given without involvement	Cookies given when the child has the role noted in row
A	2.92	2.86	3.36	3.19
B	2.88	2.79	3.60	3.26
C	3.15	3.12	3.86	3.58
D	3.18	3.08	4.32	3.51

2.4. INFLUENCE OF FRIENDSHIP

Can the distribution proposed by the children be called into question by a friend suggesting a different way of sharing? The answer is a clear “no”, for, if 7 children (4%) hesitate to form a clear opinion, for the other 63% there is no change of opinion, as opposed to 37% who change their mind. The latter are found to a significant proportion among those who had given the most cookies to the strongest or the one who liked food (adjusted standardized residual = 2.3), while those who stuck to their choice, ignoring their friend’s opinion, are prin-

cially those who prefer equality (adjusted standardized residual = 2.0). On the other hand, the friend's opposing view has no significant effect (adjusted standardized residuals approaching 0) on those who choose need or merit. The weakest criteria (utility or strength) are the most doubted, while the most widespread criterion, equality, is not sensitive to the opposing influence of friends.

Few of the characteristics of the children or the parents have an effect on change of mind. In particular, the children's school performance or the parents' occupations play no role here. Alternatively, age has an impact (see Table 4). The older the children, the more they tend to stick to their opinion. As this opinion is maintained particularly in the choice of equality, it appears that equality is a choice that becomes more firm and stable with age.

Table 4. Influence of friends on changing principles of justice

			AFTER FRIEND'S NEGATIVE OPINION, THE INTERVIEWED CHILD ...		
			changes principles	doesn't change principles	Total
AGE	6 years	Frequency	22	22	44
		%	50.0%	50.0%	100.0%
		Adjusted residual	2.2	-2.2	
	8 years	Frequency	24	39	63
		%	38.1%	61.9%	100.0%
		Adjusted residual	.3	-.3	
	10 years	Frequency	13	41	54
		%	24.1%	75.9%	100.0%
		Adjusted residual	-2.4	2.4	
TOTAL		Frequency	59	102	161
		%	36.6%	63.4%	100.0%

Note: chi-square = 7.1, df = 2, p = 0.03.

2.5. THE CHILDREN'S REPRESENTATIONS AND REASONS

Verbatim analysis highlights multiple conceptions of sharing and reasons advanced for arriving at the chosen distribution. Sharing can also mean giving less to oneself than to others—"because I want to be generous" (child #145)—or, on the contrary, attributing more to oneself—"I prefer to give it to myself and (then) share with someone" (child #55). Sharing is also giving to those who have nothing. But the definition of sharing is often associated with "giving everyone the same thing"—"we share equally" (child #123). It is also an activity that takes some thinking "because it's a little bit hard" (child #140), "because there are lots of ways of sharing" (child #118). That is why some children consider the best thing to do is to rely on chance "it's hard, I just go plop, plop" (child #144). Sharing is also "giving to each person, each in their turn" (child #74), and for the older children and the better students, a mathematical operation—"the better you are in math the better you can share" (child #112). Sharing is therefore by definition egalitarian, and pure equality is the only guarantee of fairness ("I share equally... like that it's not unfair to anyone", child #132), insofar as it avoids jealousy ("it's better for everyone to have the same share of cookies so no one will be jealous", child #110), which risks creating frustration ("otherwise the others are going to be mad", child #105), or quarrels ("everyone has to be equal, like that there won't be any fighting", child #52), which compromises creating trust ("they aren't going to be friends", child #13) and damages group cohesion ("since they made the cookies together, they all have to get the same reward", child #157), for the main thing is to have participated ("we all have the right to the same thing, the main thing is to have worked", child #82).

This analysis of the children's discourses also reveals the way the children attribute meaning to the situation. In particular, many chose to give to the "most deprived" and to a lesser extent to the child who contributed the most. The post-distribution interview was thus devoted to exploring the children's perception of the situation of these two figures. What happened to them? Two main types of explanation appear for the most in need. For some, he is less well off due to structural reasons, for example because his parents are poor: "maybe it's because his family doesn't have the money to buy him food" (child #163). Others evoke

more temporary reasons. For example, he is absent-minded and left the cookies his parents had prepared at home: “he forgot everything at home” (child #150). We see a slight tendency to favor D (the most deprived) when the reasons for his lack of cookies are considered to be more structural than temporary: “we should give her more because she doesn’t have anything... because her parents don’t have enough money” (child #110). In addition, some children, perceiving the two possibilities, structural and temporary, prefer when in doubt to consider the worst situation D might find himself/herself in the better to justify their favoritism: “either it’s because she didn’t want them, or because she doesn’t have enough money. OK, let’s say she doesn’t have enough money” (child #169). Finally, some children tend to attribute the responsibility for the situation to the needy child him/her self: “because he didn’t work hard” (child #141). The person who produced the most is also apprehended in a number of ways by the child: he/she is seen as either someone more intelligent or more motivated, or as someone who is especially fond of cookies or of working hard, or as someone who practiced or had help from his/her parents (who taught him/her to make cookies), or as someone who “always want’s to be the best” (child #134).

3. DISCUSSION

The aim of this study was to understand how children interpret distributive situations and use their knowledge in situation to think sharing among persons with variable characteristics referring to different principles of justice. It shows first of all that the great majority of children opt for equality by giving each character, whatever their situation, the same number of cookies. This preference does not regress with age and is not *affected* by the child’s gender or social background or the type of school they attend. Nor does it vary with the child’s involvement in the distribution game. Contrary to what earlier studies seem to suggest, when the children were given the possibility to benefit personally by involving them in the situation, all, even the youngest, persisted in their desire to share out the same thing to each. This preference for equality also resists peer influence, since most of the children faced with a diverging opinion persist in their initial choice. Furthermore, when incited to give up equality by ranking

competing principles of justice, a good number maintain their egalitarian distribution. The choice of equality turns out to be not only massive but also highly stable depending on the context and the position with regard to sharing. This no doubt explains that no difference is observed in the children's responses in relation to the mixed or non-mixed gender of the group in the drawing.

But the verbatim analysis shows that the children are far from having chosen equality for the same reasons. For some, it is the best way of keeping harmony within the group. This is the argument already recorded by Carson and Banuazizi (2008). For others, the choice of equality is self-evident: it is the very definition of sharing. Lastly, for the youngest children, who, as one might expect, express their difficulties in putting other principles in practice, it seems that it is the simplest way of distributing the resources. Nevertheless, when the study seeks to question the children beyond their initial response, by inciting them to come up with a second principle for sharing out the resources, the youngest like the oldest often choose to give more to the child who "has the least". Here we discover that children 6 to 10 years of age do not spontaneously choose equality uniquely for practical reasons but that they are also capable, at this age already, of choosing in favor of this norm. They clearly prefer to share equally, but they are also capable of mobilizing the criterion of need, even if it only comes in second. Moreover, this is in line with certain recent studies, which show that children (6-8 years old), when faced with a situation of inequality, attempt to correct these inequalities (Shaw and Olson, 2013) and that, contrary to some claims, primary-school children manage to make clear distinctions between different norms of justice (Dubet, 1999).

Sharing therefore does not simply mean "sharing alike". For many children it also means "giving to the one who has nothing", distributing on the basis of another norm, that of need. The latter is not a univocal principle, however. The children propose substantially different interpretations of the situation of the child without an afternoon snack, which influences the way they decide to allocate resources. The structural rather than the temporary explanation leads them to give this character more cookies. No doubt this explanation, which implies a minimal ability to represent social differences, is mobilized more

by the older children from upper-class backgrounds (Zarca, 1999), but this hypothesis must be handled with caution because of the small numbers in the study, which do not allow statistical verification.

How to explain the fact that the children willingly choose equality over merit? And in second place need over the other principles? A study by McGillicuddy-De Lisi and Watkins (1994), in which the children give more to the character with the greatest need when it is a friend rather than a stranger, offers a future line of interpretation. We can suppose that, in the absence of specific information on the relations between the characters in the picture, most of the children assumed they were classmates. The explicit references to friendship or school life in the children's verbatim go in this sense. And we know that this context is conducive to espousing equality or need over merit.

In any case, the situation used to test the influence of friends turns out to be pertinent for investigating judgment stability in children. It makes it possible to see that the child's judgment develops with age and that younger children are not very confident of their choices, especially when these are in the minority. The test nevertheless has its limits and does not allow us to study the negotiations between children, which would *certainly* not fail to occur if the friend were really present, as certain studies show (Birch and Billman, 1986). More research, in a more "ecological setting", is therefore needed to study the influence of peer judgment on children's distributive behavior.

But beyond the consensus in favor of equality—and in second place in favor of need—our study shows that the children's responses vary with their school performance. Good pupils favor equality more than the others, those who are average more readily look to merit, and the weakest pupils emphasize need. These results invite looking more closely at the way the children apprehended the meaning of the task they were asked to perform. As the verbatim analysis shows, the best pupils often turned it into a mathematical problem. They sought to show that they were capable of dividing the number of cookies and that they knew their multiplication tables ("I did 4×3 ")—and therefore were more ready to opt for an egalitarian distribution. The other pupils sought to distribute the cookies as they usually do among friends, giving them out one by one until none were left.

Can these differences in adhesion to justice principles according to school performance be interpreted in part by different socializations within the family to these principles? In fact, school performance correlates closely, in France in particular, with social background (Duru-Bellat and Henriot-Van Zanten, 2012).¹ And in our study we find the same connection between the children's school performance and their parents' occupations (chi-square = 17.9, df = 4, $p = 0.001$). Yet the different criteria of fairness can vary with the socio-professional group, even if they tend, on the whole, to be ranked in the same order (Forsé and Parodi, 2009). But to advance more surely in this line of interpretation, perhaps we need to ask the parents other questions about social justice that are less centered than in the case of our questionnaire on reward for work or on the global distribution of revenues in France. We would also have to be able to look beyond the family and take into account other forms of children's socialization, in particular by teachers or other professional staff (e.g. activity leaders). In other words, this interpretation of the role of school performance through the lens of children's socialization remains to be explored further.

More specifically, school performance refers to a perception, no doubt contrasting, of fair compensation with respect to the way the children feel they have been rewarded in school for the efforts they have made. The major international studies on the sense of justice or fairness in adolescent students show that, in France particularly, poor students feel they are treated more unfairly by their teachers than do good students (Desvignes and Meuret, 2009; Friant *et al.*, 2008).² Furthermore, the poorest students emphasize, more than the others, the need in school to help the less "gifted" (Gorard, 2007). The poorer pupils in our study, unlike the others, were clearly more attentive to a criterion that seemed fairer to them than the one by which they were regularly evaluated in school. But other studies on the sense of justice in school, among elementary pupils, would be needed to confirm this interpretation.

- 1 The PISA 2012 study shows that France stands out as the most inegalitarian country in the OECD: school performance in France is more strongly marked by family socio-economic and cultural level.
- 2 The PISA 2013 study shows France to be the world champion of sense of injustice in school, immediately after Turkey.

At any rate, this study shows the benefits of an analysis of the sense of distributive justice in children focused on their representations while taking into account the reasons they mobilize to think sharing situations, in particular with regard to their experience at school.

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ANNEXES

I. The sample

The study was carried out between December 2012 and June 2013 in four primary schools in four Parisian suburbs. The sample had the following characteristics:

CITY/SCHOOL	FREQUENCY	%	DATE OF INTERVIEW
Alpha	33	19.5	December 2012
Beta	47	27.8	February 2013
Gamma	30	17.8	May 2013
Delta	59	34.9	June 2013
Total	169	100.0	

SEX	FREQUENCY	%
Boy	76	45.0
Girl	93	55.0
Total	169	100.0

SCHOOL GRADE	FREQUENCY	%	AVERAGE AGE
First	44	26.0	6.2
Third	69	40.8	8.3
Fifth	56	33.1	10.3
Total	169	100.0	8.4

2. Example of a drawing shown to the children

