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My Life for A Voice: The Influence of Voice on Health-Care Decisions

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Abstract Are people willing to give up affordable healthcare and future years of their lives in exchange for having a voice in healthcare decision-making? Drawing upon research on the psychology of justice, we claim that the fairness of healthcare decision-making procedures, expressed by the availability of voice, can be more important than critical health-related outcomes. We examined this proposition using a forced-choice paradigm that required participants to choose between voice and better healthcare outcomes (affordable healthcare and greater life expectancy). Findings from three studies revealed that people maintain a strong preference for voice even at the expense of tangible healthcare outcomes. In study 1, participants preferred a healthcare plan that offered them a voice when it was \$3,000–\$12,000 more costly than a plan that did not offer such voice privileges. In study 2, participants preferred a voice plan to a no-voice plan when the no-voice plan was 5–20 years greater in its average life expectancy compared with the voice plan. In study 3, which used a more demographically diverse, non-student sample, the preference for the voice plan persisted across all conditions, even when the no-voice plan was 25 years greater in its life expectancy, and even when participants' expected to personally live longer under the no-voice plan. These results are explained by participants' expectation to enjoy better personal healthcare outcomes and greater autonomy when afforded voice. These findings demonstrate the importance of voice in hypothetical decision-making relevant to policy-making.

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Keywords Procedural justice · Voice · Tradeoffs · Healthcare

Introduction

The premise that people are self-interested has dominated many accounts of human behavior (Miller, 1999; Miller & Ratner, 1996). In decisions pertaining to critical outcomes such as one's health, this premise seems almost intuitively convincing. Due to the crucial nature of healthcare decisions and the influence they exert on one's health and survival, it can be easily assumed that people are primarily motivated by the desire to achieve better health-related outcomes (Becker, 1974; Janz & Becker, 1984).

Consistent with the self-interest premise, the recent push to bring about change to the American healthcare system has been justified by the need to improve its outcomes. While supporters of the healthcare reform emphasized the system's poor performance at increasingly rising public and private costs, critics of the reform emphasized the procedures through which the new healthcare system would allegedly operate, focusing particularly on issues of voice and participation. Some critics have expressed the concerns that the reformed healthcare system would operate via decisions made by experts with low levels of public input, and with the government getting between patients and their doctors without taking patients' perspective into account. While the President and other proponents of the healthcare reform may have been taken aback by the strength of these procedural critiques, the power of an appeal to procedural injustice does not surprise social psychologists.

The Psychological Importance of Procedural Justice and Voice

Contrary to the self-interest premise, research on the psychology of justice shows that people value procedures that they judge to be fair, sometimes more than the material outcomes obtained by such procedures (Tyler, 2006). The opportunity to participate in a decision-making process (also termed voice) has been identified as the most potent and prototypical aspect of procedural fairness (see, De Cremer & Alberts, 2004; De Cremer, Cornelis, & van Hiel, 2008). The "voice effect" was demonstrated in classic justice studies (Folger, 1977; Thibaut & Walker, 1975) and has been widely and consistently replicated since (Folger, Rosenfield, Grove, & Corkran, 1979; Lind, Tyler, & Huo, 1997; Tyler, 2006). Having a voice is the most central issue that individuals consider in judging the fairness of decision-making processes. The denial of voice leads to negative affect (De Cremer, 2007; Folger, 1977; Lind, Kanfer, & Earley, 1990), lack of decision satisfaction (Van den Bos, 1999), and ultimately to de-legitimization of the authorities that denied voice and the institutions they represent (Folger & Cropanzano, 1998; Tyler, 1994, 2006).

But why is voice so psychologically important? Early research linked voice to an instrumental capacity to achieve desirable outcomes. Actively participating in a decision-making process includes the opportunity to present evidence (process control) and potentially to influence outcomes (outcome control). Thibaut and

Walker (1975), who spearheaded the research on procedural justice, argued that individuals care about procedural justice or voice mainly because of such instrumental reasons. Namely, voice enhances a sense of outcome control thereby facilitating the belief that with the use of voice, favorable outcomes are more attainable.

The instrumental capacity of voice to improve the perceived attainability of desirable outcomes is relevant to healthcare and healthcare policy-making. Whereas the discourse on healthcare policy typically revolves around general, statistical outcomes (average cost of healthcare, average mortality rate, average longevity, etc.) people may still feel that the use of voice would allow them to obtain better healthcare outcomes for themselves regardless of the statistics. If this is the case, then the need to improve the performance of the healthcare system in its entirety may seem trivial relatively to favorable personal outcomes that can be presumably achieved by the use of voice.

The general effect of procedural justice and the specific effect of voice have also been explained by non-instrumental reasoning, linking procedural justice practices to the fulfillment of intrinsic human needs and not to the attainment of self-interested outcomes. Self-Determination Theory (Deci & Ryan, 2002) identifies three fundamental human needs that are critical to one's well-being and psychological functioning: relatedness (Baumeister & Leary, 1995), autonomy (Deci & Ryan, 2000), and competence (Sheldon, Ryan, & Reis, 1996). The desire for voice and participation is associated with needs for both relatedness and autonomy. Much of the work in procedural justice has emphasized its unique role in individuals' belongingness to their groups. According to the group value model (Tyler & Lind, 1992), for example, procedural fairness speaks to shared group values and signals to individuals that they are respected and entitled to the rights associated with group membership.

The capacity of voice to address the need for belongingness is less relevant in the healthcare context since people do not form meaningful group memberships with physicians or healthcare providers. However, the idea that voice has an inherent, non-instrumental importance has received additional support in recent work linking voice to fundamental human need for personal autonomy (van Prooijen, 2009). Voice satisfies the need for autonomy by facilitating the exercise of personal choice and enhancing a sense of agency. Consistent with this reasoning, the effect of voice has been shown to be more pronounced when basic autonomy needs are threatened (van Prooijen, 2009). When deprived of personal autonomy, people focus even more on issues of fair treatment and voice to restore their diminished sense of autonomy. In asymmetric power interactions with powerful authorities, people often feel powerless and may be particularly sensitive to procedural justice information and to whether or not they are granted voice (Langendijk, Van Dijke, & De Cremer, 2009).

The extension of these findings to the healthcare domain is direct: even in the face of prospective improvements in the cost and performance of the healthcare system, people may still resist giving up their privileges of voice and participation to powerful authorities—may they be government officials or healthcare specialists. The two complementary psychological functions of voice can explain its importance in the context of healthcare. First, people may want to have a voice in healthcare

decisions for instrumental reasons if they believe that having a voice will improve the quality of their personal healthcare outcomes. Second, intrinsically, people want to feel that they have agency, autonomy, and choice when they interact with medical authorities. It should be noted that the link between voice and autonomy is distinct from the link between voice and better outcomes: it suggests that people intrinsically value voice and will continue wanting to have it, even when the use of voice does not result in better outcomes.

The Research Framework

Other than exploring the importance of voice in the context of healthcare, we aim to offer several extensions to existing research on procedural justice and voice. In numerous social settings across a variety of situations, research has demonstrated that the impact of procedural fairness can surpass the impact of favorable outcomes (Greenberg & Folger, 1983; Gilliland & Beckstein, 1996; Lind & Tyler, 1988; Tyler, 1996, 2006; Tyler, Mentovich, & Satyavada, 2013; Walker, LaTour, Lind, & Thibaut, 1974). In these studies, however, procedural justice has typically been examined against conventional, mainly monetary or material outcomes. The healthcare setting provides a different type of outcomes, ones that are critical to human survival and well-being. Healthcare outcomes epitomize issues of life and death, and as such they transcend the commonly examined, self-interested outcomes of maximizing personal monetary gains.

Another novel aspect of this research is the exploration of the role of procedural justice in hypothetical, *a priori* situations. Typical studies conducted under the procedural justice framework have looked into the effects of outcomes and procedures *after* people have already experienced both the treatment and the outcomes at stake. Moreover, some have even argued that procedural justice matters *only after* individuals experienced (fair or unfair) procedures. In hypothetical decision-making, on the other hand, people are often assumed to be predominantly guided by self-interest concerns (Miller & Ratner, 1996). Namely, before an actual experience—presumably due to the self-interest myth—the prospects of receiving favorable outcomes seems to be looming larger than the prospects of enjoying procedural privileges. The current study seeks to examine the effect of voice in hypothetical, prior-to-experience situations. Unlike previous accounts, we posit that since voice is linked to both better outcomes and, even more so, to the satisfaction of basic autonomy needs, it should not lose its psychological importance in *ex-ante*, hypothetical situations.

Finally, the current research is also the first to assess *tradeoffs* between voice and its costs, which enables the examination of how much voice is worth to people in terms of desired outcomes. Numerous studies demonstrate the voice effect (Brockner et al., 1998; De Cremer, 2007; Folger, 1977; Folger et al., 1979; Greenberg & Folger, 1983; Tyler, 1987; Tyler, Lind, & Huo, 2000; van den Bos & Lind, 2002). However, in most of these studies voice was not manipulated independently from favorable outcomes, but they were both measured simultaneously. Therefore, voice and positive outcomes are typically found to be positively

correlated, suggesting that people experience voice as associated with positive outcomes rather than something for which favorable outcomes need to be sacrificed. The tradeoff design allows us to assess whether and to what extent individuals are willing to relinquish desirable outcomes to secure voice privileges.

To examine these questions, we used a forced-choice paradigm common in judgment and decision-making (JDM) research. In this paradigm, two sets of issues (in our case, voice and favorable outcomes) are contrasted while participants are forced to choose the one option that they most strongly prefer. Using the context of the recent healthcare debate as an inspiration, we examined whether and to what extent people would be willing to sacrifice desirable health-related outcomes in order to have voice in medical decisions.

The Present Studies

The following three studies look into the value placed on voice in the context of healthcare. In all studies, having voice (i.e., an opportunity to participate in healthcare decisions) is pitted against two tangible material gains: saving money and living longer. We predict that voice will have an impact on healthcare decisions that is distinct from the impact of favorable outcomes. Moreover, we predict that people would be willing to forfeit preferable health-related outcomes (reduced costs and greater life expectancy) to maintain participation (voice) in healthcare decision-making processes. We also predict that two complementary functions of voice—namely, better expected personal healthcare outcomes and enhanced autonomy—will account for the preference for voice.

Study 1

Since much of the policy debate about the provision of health centers on the costs of healthcare, study 1 seeks to examine how much (private) cost people are willing to incur to secure having a voice in healthcare decision-making. To this end, we asked participants to choose between two healthcare plans: a more costly plan that offers voice privileges and a cheaper no-voice plan. To assess tradeoffs between voice and healthcare costs, we varied the difference in healthcare costs between the voice and the no-voice plans across seven conditions such that the voice plan became more and more costly in a constant interval in comparison to the no-voice plan. Our prediction was that people would prefer voice to cheaper costs, and that this preference would gradually diminish as a function of the increasing cost differences between the voice and no-voice healthcare systems.

Method

Participants

A total of 245 people (143 women, 101 men, 1 unidentified) with age ranging from 17 to 48 ($M = 22.98$, $SD = 4.68$) were recruited for participation from various

New York University buildings, mainly from the main university library. Their participation was voluntary and lasted for about 5–10 min.

Procedure

Participants were randomly assigned to one of seven conditions. They were told that they would receive information about two healthcare plans and would be required to indicate their preference. The two healthcare plans (titled Plan A and Plan B) were presented simultaneously using a table. Each plan was represented in a separate column, and the costs and voice information were each presented in a separate row. No other information about the plans was provided. In the first condition, Plan A was described as one in which “people can have a voice in choosing their doctor and medical procedures,” but with average annual costs of \$8,137 per person. Plan B was described as one in which “people cannot have a voice in choosing their doctor and medical procedures” but with average annual healthcare costs of \$5,123 per person. In the other 6 conditions, the same voice/no-voice information was provided, but the healthcare costs in the voice plan rose by \$3,000 increments in each condition while the costs of the no-voice plan remained constant at \$5,123. Thus, in the last condition the price of the voice plan was \$26,137 and that of no-voice plan was \$5,123.

Our main dependant variable was participants’ choice between the more expensive voice plan and the cheaper no-voice plan. In addition, participants answered several demographic questions including age, gender, political orientation, and citizenship.

Results and Discussion

Figure 1 shows the percentage of people that chose the voice plan over the no-voice plan in each condition. Across conditions, participants significantly preferred the voice ($N = 168$) to the no-voice plan ($N = 77$), $\chi^2 = 33.8$, $p < .001$. Logistic regression on the effect of condition on participants’ binary choice between the voice ($=1$) and the no-voice ($=0$) plans indicated that the preference for voice diminished as the difference between the two plans’ costs grew, $B = -.089$, $SE = .024$, $\chi^2 = 14.1$, $p < .001$. Nonetheless, in four of the seven conditions, participants maintained a significant preference for the voice plan, and in the remaining conditions they showed no significant preference between the voice and the no-voice plans.

In the first condition, in which the no-voice plan was about \$3,000 more expensive than the voice plan, 88.9 % of the participants ($N = 31$) preferred the voice plan and only 8.9 % ($N = 4$) preferred the cheaper, no-voice plan ($\chi^2 = 20.83$, $p < .001$). In the second and third conditions that presented cost differences of \$6,000 and \$9,000, respectively between the no-voice and the voice plans, 74.3 % of participants ($N = 26$) chose the voice plan and 25.7 % ($N = 9$) chose the no-voice plan ($\chi^2 = 8.23$, $p < .01$). In the fourth condition that presented \$12,000 difference between the no-voice and the voice plans, 68.57 % ($N = 24$) chose the voice plan and 32.43 % ($N = 11$) chose the no-voice plan ($\chi^2 = 4.83$,

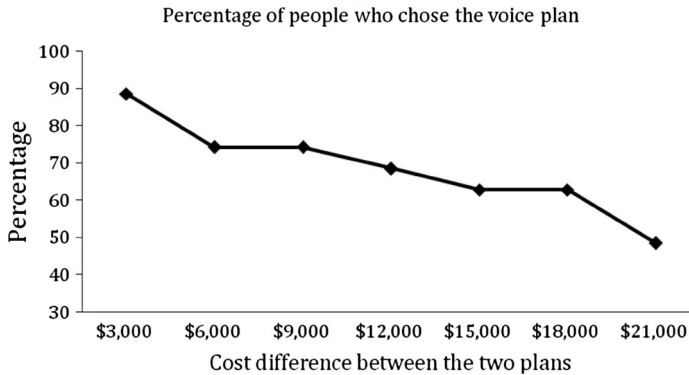


Fig. 1 Results from study 1: percentage of participants that preferred the voice plan to the no-voice plan

$p < 0.05$). In the fifth and sixth condition that presented \$15,000 and \$18,000 difference, respectively, 62.85 % ($N = 22$) chose the voice plan and 37.15 % ($N = 13$) chose the no-voice plan, and these differences were not significant but trended toward preference for voice ($\chi^2 = 2.314$, $p = .128$). Finally, in the seventh condition that presented \$21,000 difference between the no-voice and the voice plans, 48.75 % ($N = 17$) chose the voice plan and 51.25 % ($N = 18$) chose the no-voice plans, indicating no preference for any specific plan ($\chi^2 = .29$, $p = n/s$). Age ($B = -.1$, $SE = .007$, $p = .14$) or political orientation ($B = .18$, $SE = .021$, $p = n/s$) did not affect these patterns of results.

The results of study 1 suggest that, as expected, people do not merely consider healthcare costs, but are also affected by having the opportunity to participate in healthcare decisions. Participants significantly preferred the voice plan when it entailed an addition of \$3,000–\$12,000 to annual expenditure on health per person. This trend somewhat persisted even when the cost of voice rose to an addition of \$15,000 and \$18,000 per year. Though the preference for voice did not reach significance in these conditions, it is likely due to the relatively small sample size. Even in the last condition, in which the voice plan entailed an additional expenditure of \$21,000 per year, only about half of the participants preferred the cheaper plan at the expense of voice. In no experimental condition participants showed a significant preference for the no-voice plan.

These results are particularly important from a public policy perspective. Even under the most conservative interpretation of the results participants declared that they were willing to incur an addition of \$12,000 to secure voice privileges in healthcare decision-making. Such cost difference significantly surpasses the realistic magnitude of healthcare costs before or after the healthcare reform. For example, the annual, post-reform healthcare costs are estimated to shift between \$4,500 and \$5,800 per person (see for example, <http://www.obamacarefacts.com/>)—much less than the premium participants placed on voice.

In study 1, voice was contrasted with tangible, yet more typical healthcare outcome of monetary costs. While results suggest that people are willing to pay for voice, it is not clear how to interpret this finding in terms of participants' personal

health-related outcomes. As one of the participants simply put it, “I will be willing to pay any price to get better healthcare.” Do people want to have voice because they associate it with better health outcomes? If so, is it the only reason for the importance of voice, or—as the non-instrumental outlooks suggest—voice is important independently of the outcomes it may help to achieve?

To address these questions, study 2 contrasts voice with average life expectancy. Life expectancy information is a pertinent measure to estimate the performance of healthcare plans and the medical outcomes they provide. Therefore, life expectancy measures are symptomatic of the system’s general performance (in terms of outcomes). Furthermore, life expectancy information is also indicative of one’s personal longevity. We expect this sort of comparison to invoke a more direct contrast between healthcare outcomes (expressed by greater life expectancy) and the fairness of healthcare decision-making process (expressed by receiving a voice). In addition, study 2 examines the role of expected personal outcomes (i.e., participants’ expectations regarding their own longevity) in driving the preference for the voice plan.

Study 2

Study 2 examines whether people are willing to tradeoff life expectancy for having a voice in health-related processes. To this end, we contrasted two hypothetical healthcare plans: a healthcare plan that offers voice but is always shorter in life expectancy and a healthcare plan that denies voice but offers better life expectancy. Study 2 also explores one potential reason to the voice effect—namely, whether voice changes the favorability of personal outcomes participants are expected to obtain under each plan. Building on findings that voice provides a better sense of outcome control and enhances the perceived attainability of desired outcomes we predict that participants will expect to have better outcomes (in terms of life expectancy) than the plan average in the voice conditions. However, since voice also gains its importance because of non-instrumental reasons, we predict that improved outcomes under the voice plan will not fully account for the preference for the voice plan.

Method

Participants

A total of 150 people who volunteered to participate in the study were recruited from New York University Library. Ninety-six of the participants were females, 53 were males, and 1 was undefined. Participants’ age ranged from 18 to 42, with an average of 22.78 (SD = 5.74).

Procedures

Participants were randomly assigned to one of five experimental conditions and were told that the study was going to explore their preferences regarding two healthcare plans. They were then given information about two hypothetical

healthcare plans that, like in study 1, was summarized in one table. In the first condition, the first plan (Plan A) was described as a plan in which “people cannot have a voice in choosing their doctor and medical procedures,” but with an average life expectancy of 84 years for its members. The second plan (plan B) was described as a plan in which “people can have a voice in choosing their doctor and medical procedures,” but with a life expectancy of 79 years. No other information about the plans was provided. In the remaining four conditions, the same voice/no-voice information was provided, but the difference in life expectancy between the two plans grew by 5 years increments. Thus, in the fifth condition the life expectancy of plan A remained 84, but that of plan B was diminished to 59—a net difference of 25 years.

Our main dependent variable was the participants’ binary choice between plans A and B. We also assessed instrumental considerations by asking participants to report how long they personally expect to live under each plan. Finally, participants’ political affiliation, party identification, and other demographic information were also assessed.

Results

Figure 2 shows the percentage of participants in each plan that chose the voice plan. As expected, across conditions most participants preferred the voice plan ($N = 109$) to the no-voice plan with greater life expectancy ($N = 41$), $\chi^2 = 30.86$, $p < .01$. However, logistic regression analysis yielded that the effect of voice weakened as the difference between life expectancies increased, $b = -3.73$, $SE = .66$, $\chi^2 = 22.83$. Nevertheless, a significant preference for the voice plan persisted in 4 of the 5 conditions even when the difference in average life expectancy between the voice plan and the no-voice plan grew to 20 years.

In the first and second conditions, in which life expectancy of the no-voice plan was 84 years and that of the voice plan was 79 and 74 years, respectively, 93.1 % of the participants ($N = 27$) preferred the voice plan and only 6.9 % ($N = 2$) preferred the no-voice plan with the longer life expectancy, ($\chi^2 = 21.55$, $p < .001$). In the third condition, in which the voice plan had a life expectancy of 69, 15 years shorter than the no-voice plan, 72.7 % ($N = 24$) of the participants preferred the voice plan and 27.3 % ($N = 9$) preferred the longer life expectancy plan ($\chi^2 = 6.8$, $p < .01$). In the fourth condition, in which the difference between the voice plan and the no-voice plan was 20 years, 66.67 % of the participants ($N = 20$) still preferred the voice plan with a life expectancy of only 64 years over the no-voice plan that offers 84 years in life expectancy ($\chi^2 = 3.3$, $p = .08$). In the last condition, which showed 25 years difference in life expectancy between the two plans with the voice plan offering a life expectancy of only 59 years, participants finally did not show a significant preference for voice ($\chi^2 = 1.6$, $p = .19$), with 38 % ($N = 11$), of the participants choosing the voice plan.

Next, we turned to examine the instrumental reasoning regarding the influence of voice. It is plausible that people value voice since they believe it would help them to achieve better healthcare outcomes for themselves. People may believe, for example, that if they can use voice to choose their doctor and medical procedures,

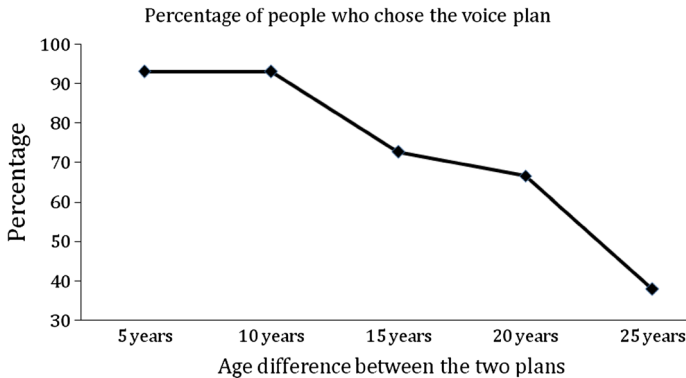


Fig. 2 Results from study 2: percentage of participants that preferred the voice plan to the no-voice plan

then they will also enjoy better treatment and better health and ultimately prolonged longevity. To address this possibility, we asked participants how long they *personally* expect to live under each plan. Table 1 shows participants' personal longevity expectation and whether or not they significantly differed from the plans' means. Table 2 shows whether participants' personal longevity estimations significantly differed in the voice versus the no-voice conditions.

As can be seen in Table 1, participant's expectation regarding their personal longevity deviated from the plans' average. In the voice conditions participants mostly expected to live more than the plan's average whereas in the no-voice conditions they expected to live less than the plan's average. These patterns are consistent with the instrumental impact of voice to improve (or hinder) the perceived attainability of desired outcomes.

However, as can be seen in Table 2, only in first condition, which presented a relatively small difference of 5 years in life expectancy, we can find support for the notion that voice matters solely because of instrumental reasons. In this condition, participants indeed expected to marginally live longer under the voice plan ($M = 77.96$, $SD = 15.25$) than under the no-voice plan ($M = 75.32$, $SD = 15.35$), $t(24) = 1.78$, $p = .09$. When the differences between the two plans were at 10 or 15 years, participants did not show a significant difference in personal life expectancies between the two plans. However, when the difference between the two plans grew to 20 years, participants preferred the *voice plan*, despite the fact that they expected to live significantly longer under the *no-voice plan* ($M = 78.74$, $SD = 12.07$) than the voice plan ($M = 73.22$, $SD = 9.91$), $t(26) = 2.03$, $p = .052$.

Interestingly, important demographic variables such as age ($B = .042$, $SE = .037$, $p = n/s$) or political orientation ($B = -.021$, $SE = .175$, $p = n/s$) did not have any impact on our findings. One of the reasons for that may be linked to the nature of our samples. Both study 1 and 2 were conducted on a student population, which is more homogenous in both age and political orientation. It is possible that the relatively young age of our sample or the sample's other unique features

Table 1 Differences between participants' expectation of personal longevity and the plan's mean, study 2

Condition	Voice plans				No-voice plans			
	Plan mean	Expected	SE	<i>t</i>	Plan mean	Expected	SE	<i>t</i>
1	79.00	77.96	3.05	-.034	84.00	75.32	3.07	-2.83**
2	74.00	79.00	2.11	1.50	84.00	79.53	1.17	-3.80***
3	69.00	76.83	1.44	5.85***	84.00	76.87	1.39	-5.10***
4	64.00	73.22	1.91	4.82***	84.00	78.74	2.32	-2.63*
5	59.00	68.95	2.20	4.52***	84.00	79.12	3.24	-1.5

Note * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 Differences in participants' personal longevity expectations between the voice and no-voice plans, study 2

Age difference	Personal longevity		Difference (voice – no-voice)	<i>t</i>	SE	Sig
	Voice	No-voice				
5	77.96	75.32	2.64	1.74	1.50	.091
10	79.00	79.53	-.53	-.43	1.23	.665
15	76.83	76.87	-.04	-.16	2.10	.98
20	73.22	78.74	-5.52	-2.03	2.71	.05*
25	68.95	79.12	-10.17	-2.46	4.1	.02*

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

contributed to the ease by which participants were willing trade off voice for (average and personal) greater life expectancy.

Discussion Study 2

Study 2 revealed the importance placed on voice as well as at least one reason for which voice gains its importance. First, our results show that participants were willing to trade off greater life expectancy to secure having voice in healthcare decisions. Participants preferred the voice plan when the no-voice plan was greater from 5 to 20 years in its life expectancy compared with the voice plan. At no point participants showed significant preference for the no-voice plan.

We also found that the preference for voice can be partially explained by its instrumental capacity. The use of voice created among participants the expectation for better outcomes. Participants consistently believed that their personal healthcare outcomes (in this case, personal longevity) would be better than the average in the voice plan and worse than the average in the no-voice plan. However, we also found that these patterns cannot fully explain the importance of voice. The voice plan was preferred even when participants expected to personally live longer under the no-voice plan.

These findings support the argument that there is an additional non-instrumental appeal of voice. According to this perspective, voice is intrinsically important, regardless of the outcomes it may help to obtain. Having a voice in healthcare decisions allows people to maintain a sense of choice and agency. It is theorized that due to this sense of autonomy that participants were willing, at least in the declarative level, to forego future years of their lives to have voice. While these findings clearly show that better expected outcomes cannot fully account for the voice effect, non-instrumental concerns, particularly those pertaining to the connection between voice and autonomy have not been directly tested. It remains to be shown that a sense of autonomy, in addition to better expected outcomes, account for the preference for the voice plan.

Another concern in the interpretation of study 2 involves the effectiveness of the manipulation. The fact that participants' generated personal longevity expectation that deviated from the plans' means suggest that perhaps they did not carefully read or understand the manipulation. This concern seems unlikely since participants' personal longevity expectations, albeit not identical to the plan average, were impacted by the condition such that participants expected to live shorter lives as the average life expectancy in the voice plans decreased. However, to fully address this concern study 3 employs a manipulation check to ensure that participants carefully processed the information provided to them.

Study 3

Study 3 was conducted in order to replicate the findings of study 2 using a more diverse sample of US citizens. Study 3 sought to expand on the findings of study 2 in two directions. First, we aim to closely inspect the possible effects of age and political orientation on individuals' preference of voice over greater life expectancy. Second, we aim to directly assess the role of instrumental (i.e., expected personal longevity) and non-instrumental (i.e., a sense of autonomy) reasons that underlie the preference for the voice plan.

Method

Participants

Participants were recruited online from the Amazon Mechanical Turk platform for a payment of \$.25. Mechanical Turk is a platform that has been shown to provide a more diverse and nationally representative sample of the American population (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010). To participate in this study, participants had to have a quality rating of 90 % or greater on the Mechanical Turk website, to have an IP address originating in the United States, and to have completed at least 50 previous studies on the site. Upon completion of the study, participants were asked a simple, manipulation check question about the information they had been provided in the study, and were requested to report the year difference between the voice and the no-voice plans. Only those who answered this question correctly were included in further analyses.

Our final sample was comprised 182 people (108 women, 74 men) varied in age, ranging from 18 to 79 ($M = 31.69$, $SD = 12.45$), political affiliation (46 % Democrats, 25 % Republicans, 22 % independents).

Procedure

The study was described as a short online survey about healthcare preferences. The survey was said to last about 10 min and grant a payment of \$.25 upon its full completion. After indicating their consent to the terms of participation, participants were allowed to continue to the study.

The design of the study was not only identical to that of study 2, but also included measures of autonomy. A sense of autonomy was assessed using 2 items: How much choice do you think you will have over your health under plan A/B (ranging from 1—*not at all* to 7—*very much*); to what extent do you feel you will be free to decide for yourself in plan A/B (ranging from 1—*not at all* to 7—*very much*). These two items showed high inter-correlations ($r = .78$ for plan A and $r = .75$ for plan B).

Results

The results of the study are presented in Fig. 3 and in Table 3. As can be seen in Fig. 3, the effect of voice using a non-student sample was even stronger than that in the student sample. First, across conditions, participants showed a significant preference for the voice plan ($N = 131$) compared with the no-voice plan ($N = 51$), $\chi^2 = 35.61$, $p < .001$. Participants in all five conditions significantly preferred the voice plan to the no-voice plan. Logistic regression analysis indicated that, unlike in study 2, there was no significant decline in the preference for voice even as the difference in the plans' average life expectancies grew, $b = .03$, $SE = .115$, $p = .n/s$.

We then examined whether the voice preference could be explained by participants' expectation to personally live longer under the voice plan (despite its inferior life expectancy). To this end, we conducted a pair-wise t test in each of the conditions to examine whether participants indeed expected to live significantly longer under the voice plan compared with the no-voice plan. The results of this analysis are presented in Table 3. As can be seen in Table 3, the opposite had occurred. In four of the five conditions participants predicted their personal longevity to be significantly longer under the no-voice plan while they still preferred the voice plan. These findings replicate study 2 showing that the preference for voice cannot be fully explained by the quality of the outcomes that can be presumably obtained by the use of voice. It is also worth noting that the manipulation check ensures that participants' estimation of their personal longevity is not related to how they understood the manipulation. Participants knew fully well what each healthcare plan offers in average life expectancy, and—like in study 2—were affected by the life expectancy manipulation in generating estimations regarding personal longevity.

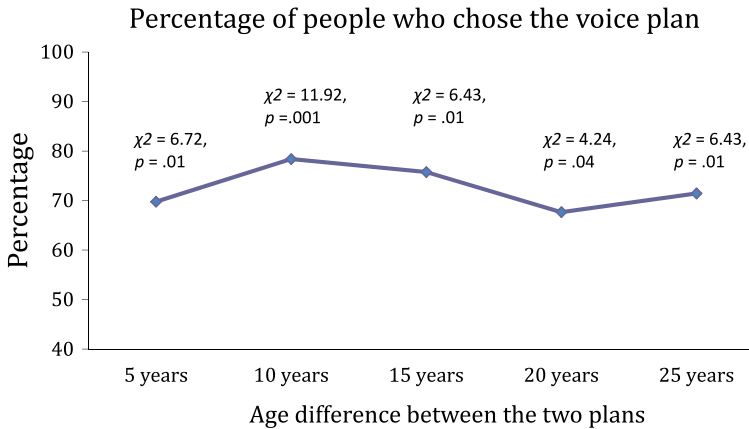


Fig. 3 Results from study 3: percentage and Chi square statistics of participants' preference for the voice plan

Table 3 Differences in participants' personal longevity expectations between the voice and no-voice plans, study 3

Age difference	Personal longevity		Difference (no voice – voice)	t	SE	Sig
	Voice	No-voice				
5	79.83	81.08	1.25	1.16	1.08	.252
10	73.27	77.33	4.06	2.22	1.83	.035*
15	74.36	78.36	4.00	1.90	2.11	.069
20	70.47	79.57	9.1	3.45	2.63	.002**
25	65.03	75.54	10.51	2.57	4.21	.016*

Note * $p < .05$, ** $p < 0.01$

To accurately examine the relative strength of instrumental versus non-instrumental concerns underlying people's preference for the voice plan, we conducted a logistic regression analysis and included both instrumental and non-instrumental variables as the independent variables. Instrumental variables included participants' expected personal longevity under the voice plan and their expected longevity under the no-voice plan. Non-instrumental variables included participants' sense of autonomy under the voice and no-voice plans. Choosing the no-voice plan (plan B) received the value of 0 and choosing the voice plan (plan A) received the value of 1. The results of the logistic regression analysis revealed that, as expected, personal longevity under plan A ($b = .067$, $SE = .022$, $p < .01$), and personal longevity under plan B ($b = -.097$, $SE = .029$, $p = .001$), and a (lack of) sense of autonomy under the no-voice plan ($b = -.643$, $SE = .180$, $p < 0.001$) were all significant contributors to the likelihood of choosing the voice plan. Moreover, the lack of autonomy under plan B (the no-voice plan) was a stronger predictor of participants' choice of plan than expected personal longevity under plan A (the voice plan), or plan B (the no-voice plan), $t(180) = 2.99$, $p < .01$;

$t(180) = 3.18, p < .01$, respectively. Interestingly, a sense of autonomy under plan A (the voice plan) was shown to be insignificant ($b = .028, SE = .192, p = n/s$).

With a sample that offers more variability in age and political orientation we looked at the effect of age and political orientation on the results. To this end, we performed a logistic regression analysis. The condition to which participants were assigned did not influence their likelihood of choosing the voice plan, and to add more power to our analysis, we looked at the effect of age and political orientation in the entire sample. The logistic regression analysis revealed that neither age ($B = -.016, SE = .015, p = n/s$) nor political orientation ($B = -.13, SE = .095, p = n/s$) had a significant effect on participants' tendency to prefer the voice plan. These findings mirror what we found in study 2, but on a more diverse and demographically representative population.

Discussion Study 3

Study 3 was conducted due to the concern that the student samples we used in studies 1 and 2 might have overstated the effect of voice relatively to a more general population. In study 3, the opposite occurred. The effect of voice in this study was consistently strong in all the conditions. In the last condition, despite the immense difference of 25 years in life expectancy between the two plans, participants still significantly preferred the voice plan to the no-voice plan.

Study 3 also illuminates the factors that are involved in participants' preference for the voice plan. Both instrumental factors (expressed in participants' projected personal life expectancy in the voice and no-voice plan) and non-instrumental factors (expressed in participants' sense of autonomy) were involved in choosing the voice plan. Interestingly, a sense of autonomy under the voice plan did not increase the likelihood of choosing it, whereas the deprivation of autonomy under the no-voice plan increased the likelihood of choosing the voice plan, and were a stronger predictor for choosing the voice plan compared with the instrumental concerns of personal longevity expectations. These findings seem to suggest that people are perhaps more sensitive to the negative consequences (in terms of autonomy) of losing voice than to the positive impacts of maintaining it.

It is interesting to note that unlike in study 2, that condition, or the year difference in life expectancy between the voice and the no-voice plan, had no influence on participants' tendency to choose the voice plan. One possible explanation is that participants simply did not pay attention to the manipulation or carefully processed the information about the plans' life expectancies. This explanation, however, is not consistent with the manipulation check ensuring that those that were included in the analyses were fully aware of the manipulation. Moreover, participants' personal longevity expectations in the voice plan consistently declined as a function of the manipulation. One possible explanation for the lack of effect of condition is that among less educated and more politically, economically, and socially diverse population than NYU students, the symbolic effect of voice is even stronger such that an extremely large difference in life expectancy between the no-voice and the voice plan is not sufficient to cause participants to give away their voice. This interpretation is consistent with the

finding that even when they expected to personally live longer in the no-voice plan participants continued to prefer the voice plan.

General Discussion

The studies reported here provide consistent and detailed evidence for the proposition that the affordance of voice in decision-making processes can be more important to individuals than the favorability of their outcomes, even in a critical domain such as one's health. Importantly, the results of our studies indicate that voice gains its importance because of (at least) two reasons: instrumental concerns—reflecting individuals' expectation that voice will change the quality of their personal outcomes, and non-instrumental concerns—reflecting the intrinsic importance of voice in addressing the fundamental human need for autonomy.

On the one hand, participants' expectations about their personal longevity were affected by the affordance/denial of voice. In general, participants expected to do better than the plan's average when given a voice, and worse than the plan's average when denied it. This effect is consistent with the instrumental capacity of voice and echoes similar findings regarding the capacity of procedural justice to improve perceived favorability of outcomes (Krehbiel & Cropanzano, 2000). However, this instrumental influence of voice does not fully explain its psychological allure. Participants were willing to sacrifice a great deal of pertinent health-related outcomes—most notably their expected longevity—to ensure voice privileges. These results challenge the self-interest notion of human motivation in the domain that seems most influential—personal life expectancy. Individuals seem to be willing to sacrifice these important outcomes since voice validates their sense of autonomy and the loss of voice poses a severe autonomy threat.

These findings expand the existing scope of research on the voice effect. The importance of procedural fairness or voice has been examined almost exclusively in post hoc situations. In fact, some have even suggested that the full impact of procedural justice concerns is revealed only *after* an actual experience of the fair (or unfair) treatment (see Miller & Ratner, 1996). The findings presented in this paper demonstrate that the importance of voice can powerfully emerge in a priori decisions that involve choices between procedures and outcomes made before an actual experience of them.

While the hypothetical nature of the studies reported in this paper may seem as a limitation, some claim that hypothetical settings are more appropriate to examine justice judgments (Mitchell & Tetlock, 2009; Mitchell, Tetlock, Mellers, & Ordóñez, 1993). Justice dilemmas in hypothetical situations enable a more sterile examination of individuals' justice motives separating their factual judgments or past experiences from justice concerns (Mitchell et al., 1993). This perspective is consistent with other research showing that hypotheticality is a dimension of psychological distance which is associated with high level representation. This work suggests that hypotheticality leads people to be better able to make decisions based on their primary preferences, goals or values and be less distracted by incidental details of the situation (see, Wakslak, Trope, Liberman, & Alony, 2006).

Moreover, hypothetical settings allow us to assess the relative importance of several justice principles that otherwise may be difficult to tease apart. Past studies, for example, have shown individuals' evaluations of procedural fairness and outcomes favorability are often intertwined (Skitka, Winkler, & Hutchinson, 2003; Tyler & Lind, 1992). After experiencing fair procedures, people typically feel that they also received better outcomes (and vice versa). Using hypothetical settings we were able to uniquely show the importance of procedural justice at the expense of favorable outcomes. Moreover, while the scenarios used in this study are hypothetical, the type of justice concerns they assess (i.e., voice in healthcare decision and healthcare outcomes) mirror real concerns that are applicable to existing public policy debates.

The hypothetical nature of the studies expands the existing framework of procedural justice and voice research but it may raise concerns about the ecological validity of the findings. It is possible that individuals' willingness to forgo future years of their life is mainly declarative, and that they would not easily do so in more realistic situations. Though we agree that a literal interpretation of the results is probably ill-advised, our results bear particular importance to policy decision-making in the context of healthcare and beyond. When forming opinions on new policy initiatives, citizens do not typically have actual experience with the proposed policies. Thus, the public discourse surrounding policy-making is often driven by symbolic preferences, hypothetical situations, and media fueled expectations about the policy at stake. In these situations, citizens' declarative statements and symbolic concerns are important because they drive people's reaction to new policies.

We believe that the findings presented in this paper can shed a light on the existing dynamics concerning healthcare policy in the US, including the controversy surrounding the recent healthcare reform. Many outside observers, for example, may wonder why Americans are not more eager to change a healthcare system that is not as effective in its costs and performance compared to those of other developed countries. The results of our studies suggest that voice, or the threat of losing voice—which was effectively invoked in present and past attempts to reform the US healthcare system—may play a role in driving the public's opposition to change. The threat of losing voice seems to loom larger than much needed improvements in the American healthcare system. On a broader level, the studies presented in this paper imply that information about voice may be crucial in satisfying people's justice concerns in the face of policy shifts. Necessary steps may, therefore, be required to accommodate people's needs for voice information particularly during a policy shift.

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