The Choice Architect

The Myth of the Neutral Finance Officer

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A popular conception of the public finance officer is as a neutral arbiter, perhaps like an umpire in a baseball game who calls balls and strikes. However, psychological and design research shows that the environment we exist within has a distinct influence on the choices we make. Because the finance officer has a decisive role in architecting the decision-making environment by virtue of what information is presented and how it is presented, he or she cannot be perfectly neutral.

To illustrate, let's consider a decision-making environment in our daily lives: a visit to the grocery store. The decision is what we choose to buy, and the environment is the layout of the grocery store. For example, you may have noticed the fresh produce is usually located close to the entrance. This is because we are likely to allow ourselves to later buy ice cream or candy if we have first placed some healthy produce in our cart. Also, items placed at eye level on the shelf are more likely to be purchased than those not at eye level.

One might point out that the grocer has the incentive to maximize profit so will engage in this kind of decision architecting. However, if a grocer wanted to be "neutral," it would be impossible to do so. Some items have to be closer to the entrance than others. Some have to be closer to eye level on the shelf than others. Even if the grocer decided to randomly select the items that would occupy the most favorable spots on a shelf, then that still will influence the customers' choices.

Similarly, it is not possible for the finance officer to "opt out" of decision architecting. The way in which information is presented has an inescapable influence on how people use the information to make decisions. Just as it is impossible to have a neutral presentation of products in a grocery store, it is impossible to have a neutral presentation of financial and budget information that has no impact on how decisions will be made by others. For example, later we will show that something as seemingly innocuous as the order that options are presented can impact the final choice.

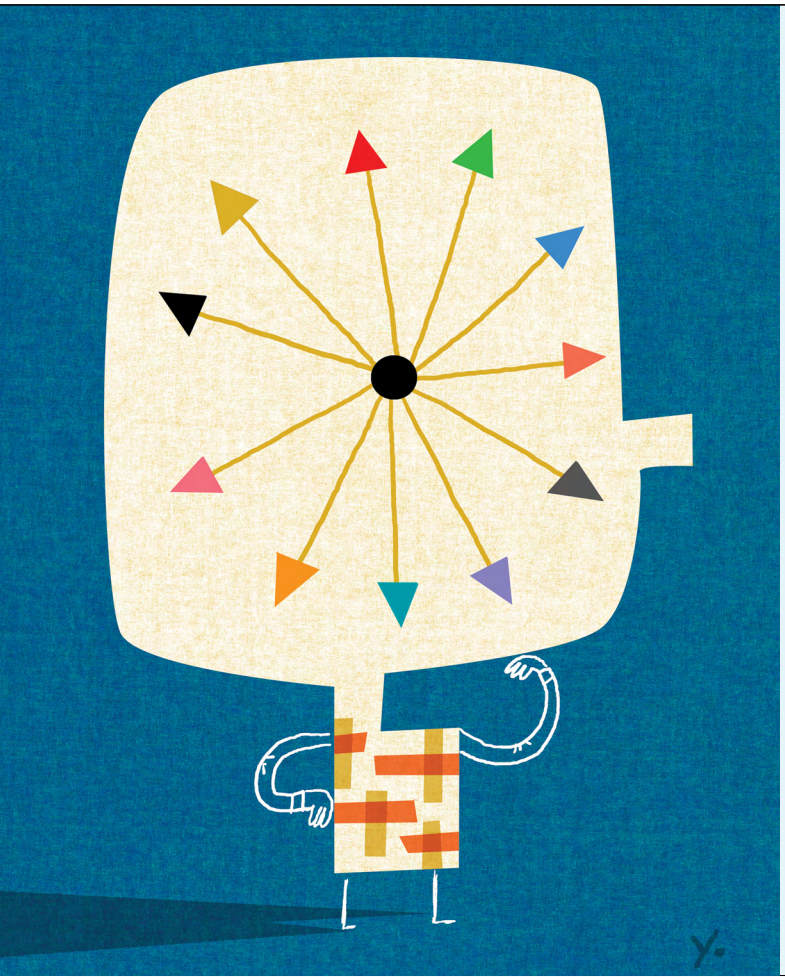
In this article, we will examine the key elements of choice architecture, like the order of options, and show how the way in which information is presented influences choices. We will discuss how finance officers can approach choice architecture, including the ethics of choice architecture. Being intentional about choice architecture does not necessarily mean you are manipulating other people. Because the choice architecture decisions that the finance officer makes can influence the outcome, we need to be intentional and ethical about how choice architecture is used.

The number of choices: how many is too many?

Normally, we think of choice as a good thing—the more options the better! However, research has shown that, under certain conditions, more options can work against good decision-making. This is called choice overload and can be characterized by long delays in making a decision, not making a decision at all, and frustration. Choice overload is perhaps the most important consideration for the finance officer as choice architect.

Choice overload is not a risk in all situations. The table below shows characteristics of situations at greatest risk of choice overload and then an example in a public finance setting.

Fortunately, there are several strategies for combating choice overload. The most obvious is to present decision-makers with fewer choices. Decision-makers will often appreciate being provided with a smaller number of solid choices that they can become familiar with rather than a wide range of options. For example, GFOA has observed that finance officers have success by presenting decision-makers with a limited menu of carefully formed strategies to close a budget deficit.



Choice overload is most likely when there is…	This could appear in public finance when…
No obvious "best" choice	There are multiple competing stakeholder groups with no way to satisfy everyone
Lack of familiarity with the options	Elected officials are new to office or lack technical expertise to understand all the options well
Lack of prior preferences among the options	Decision-makers don't have prior experience with the issue under consideration
Higher perceived stakes (irrevocable use of scarce resources)	Budgets are limited, and there are many demands on those limited resources
A decision-maker who wants to make the best possible decision rather than a "good enough" decision	The public is watching the decision closely

Research has shown that more options can **work against** good decision-making.

Decision-makers still have a choice but don't feel overwhelmed by too many choices.

Another strategy is to agree on criteria that put boundaries on decisions ahead of time. This helps narrow down the choices. For example, a one-time revenue policy prevents a local government from using nonrecurring revenues for recurring expenditures. If the government later receives a one-time revenue, it can eliminate a wide range of choices for how to use the money (i.e., anything that involves ongoing expenditures). You can learn more about financial policies and how to develop them in the GFOA book *Financial Policies*.[1]

Financial policies can be used to create useful boundaries on decisions, but there are other ways to structure decisions and make choices easier. For example, you might develop criteria to help evaluate budget requests. Some local governments have developed evaluation criteria that compare requests to the objectives defined by the government's strategic plan. Decision-making criteria help filter options and, thereby, reduce choices.

Finally, the finance officer should consider whether it is more constructive to evaluate options together or to focus on one specific choice. Evaluating options together provides a basis for comparison that is helpful for nonexperts. However, this runs the risk of fixating decision-makers on easily comparable features of the options (e.g., cost) and overlooking less comparable features. For example, examining a large number of potential capital projects at one time might cause decision-makers to look at acquisition cost and overlook more subtle differences like long-term operating and maintenance costs or the benefit to the community. In this case, the finance officer might be able to develop decision-making criteria to help decision-makers focus on important or notable capital projects.

Takeaway

Consider if the circumstances decision-makers are faced with suggest that choice overload is a risk. If so, the choice architect should take steps to counteract choice overload. Look to limit choices, use decision-making criteria to help filter choices, and make use of comparisons to help decision-makers navigate choices.

Defaults: people tend to stick with the status quo

Choices almost always come with a "default" option: the choice that will be made automatically or without much consideration from the decision-maker. Decision-makers will often go with the default option for two reasons: 1) because it is easier; 2) the default choice is often implied to be the "correct" choice. Therefore, the choice architect must give careful consideration to what the default is. "Do nothing" often serves as a de facto default. This might be relevant to enrolling employees in a defined contribution pension plan, for example. If the default for new employees is that they must opt in (or contribute nothing if they don't), then their savings will likely be lower. Many new employees may choose to do nothing out of inertia rather than make a conscious choice not to participate in the plan. Setting a default contribution greater than zero that new employees can change or opt out of will likely result in greater savings—a beneficial outcome for employees.

In local government budgeting, last year's budget often serves as a de facto default option for next year's budget. Sometimes a default can be helpful, like in our pension example. But in other cases, a default might not be helpful. For instance, perhaps the government is facing major revenue shortfalls or needs to provide services to the community differently than in the past. In these cases, starting with last year's budget might not be helpful. This is the premise of zero-based budgeting: take away last year's budget as the default. Priority-based budgeting also deemphasizes last year's budget as the starting point for the next year's budget. You can learn more about these budgeting methods in GFOA papers "Zero Based Budgeting" and "Anatomy of a Priority-Driven Budget Process."[2]

Takeaway

Consider the default option that is being presented to decision-makers. Was the default chosen intentionally? Is the default appropriate for the circumstances?

The order of choices

The order in which choices are presented impacts which choices are selected because of how people pay attention. For example, research has shown that the order in which candidates for office are presented on the ballot has a nontrivial impact on the election results: Candidates listed first get more votes. This effect is not limited to elections, and the power of being first on the list grows as a list gets longer. Research also shows that the last item on the list can also be advantaged, if the decision-makers are required to read the whole list.

This means that there is no way to "neutrally" present a list of options. Whatever option is first will likely have an advantage over the other options. One implication is to limit the number of options, which will reduce the power of the first position and is consistent with the advice for limiting choice overload. Another implication is that the finance officer will need to think about which option is presented first. Should the "status quo" option be placed first? Should staff's recommended option be placed first? The lowest cost option? Should options be presented in a randomized order? Because finance officers routinely present options to decision-makers, it is important to take into account how the order of the choices impacts the decision.

Takeaway

The order in which choices are presented impacts decisions. The first option often gets chosen. The choice architect must be intentional about the order of choices and the first choice, in particular.

Hierarchy and attributes

Of course, how the choices are described will influence how decision-makers react to the choices. This is easy to imagine with obvious descriptors, like a choice we described as "the most popular with the public" or "least costly." Less obvious ways in which the choices are described matter too. For example, sorting a list of choices by popularity or cost would emphasize popularity or cost, even if the most popular or least costly option wasn't clearly labeled. Even if multiple attributes are included on a list, the attribute that is seen first tends to dominate the decision. Below is a simple example. The first presentation includes cost at the bottom of a list that includes a number of service goals. The second presentation has cost at the top. Cost gets more emphasis in the second presentation, though the criteria in the presentations are the same.

Hierarchies can also matter. Below we have the same Presentation 1 as before, but this time Presentation 2 creates a hierarchy. Cost is still at the bottom in Presentation 2, but it gets more emphasis.

These examples involved top-to-bottom lists. Horizontal positioning matters too: Items further to the right get less weight in decision-making as items further to the left. This is because we read left to right and see the left-most item first. For example, imagine you have an Excel spreadsheet with capital projects arranged in rows. If cost is the first column it will tend to get more attention.

Finance officers regularly present decision-makers with lists of options that vary on common attributes. Cost is the most common attribute, but other examples might include a

EXHIBIT 1 | ORDERING ATTRIBUTES

Presentation 1	Presentation 2
▪ Contribution to mobility goals	▪ Cost
▪ Contribution to environmental goals	▪ Contribution to mobility goals
▪ Contribution to quality of life goals	▪ Contribution to environmental goals
▪ Contribution to safety goals	▪ Contribution to quality of life goals
▪ Cost	▪ Contribution to safety goals

EXHIBIT 2 | HIERARCHY

Presentation 1	Presentation 2
▪ Contribution to mobility goals	▪ Contribution to service goals
▪ Contribution to environmental goals	– Mobility
▪ Contribution to quality of life goals	– Environment
▪ Contribution to safety goals	– Quality of life
▪ Cost	– Safety
	▪ Cost

Research has shown that people will **adjust their choices** based on the framing.

schedule (by date) for capital projects or number of employees for each department. How these attributes are arranged (order, indenting) matters to the decision. For instance, if the finance officer presents attributes as a long, undifferentiated list, then items near the top will get the most attention and items further down might get lost in the shuffle. For example, imagine a long list of capital projects. The projects at the top will likely get more attention. But if the list is organized into major categories (like "water," "streets" and so on), more attention will be paid to the larger categories.

Takeaway

How options are described and how the attributes of those options are organized and presented have an impact on decision-makers' choices. Headers and indentations also emphasize some attribute of information that decision-makers are presented with. The choice architect must carefully consider which attributes to emphasize.

Labeling

Let's continue the theme of how the nonobvious ways in which options are described can impact choices. Here is an example: Let's imagine that the finance officer is presenting a revenue forecast and comparing it to the governing board's desired level of spending. The finance officer could describe his or her confidence that revenue will be sufficient to cover the cost in either of the two equivalent ways.

- I believe there is an 80% chance that revenues will be equal to or exceed expenditures.
- I believe there is a 20% chance that revenues will be less than expenditures.

Again, these statements are mathematically identical. However, the second one emphasizes the negative possibility and the first one emphasizes the positive. Research has shown that people will adjust their choices based on the framing. So if the governing board was presented with the second, more negative frame, it is likely they'd choose to reduce their planned expenditures.

Framing effects apply not just to quantitatively equivalent information. For example, there is research showing that voters will respond differently to the exact same policy, depending on how the policy is described. For example, one study showed that Republicans responded more favorably to a "carbon offset" than a "carbon tax," even though the underlying proposed policies were the same. Framing effects are not limited to one political party or the other, as research has shown a variety of instances where wording choices cause large shifts in voter preferences for the same underlying policy.[3]

Takeaway

The choice architect must be intentional about labels and understand how framing influences decisions. A frame that emphasizes potential negative outcomes would discourage a decision, while a more positive frame could encourage it. Even wording choices that resonate with or grate against the decision-makers' political preferences can influence decisions.

Units and scales

Numbers are a big part of how the finance officer communicates to decision-makers. Perhaps the most relevant research for finance officers is that people cannot easily comprehend the millions of dollars that local government budgets are often described in. They may be better served by numbers that are expressed on a more human scale, like the cost per customer for a new program or the average revenue generated per citizen for a new tax. Most decision-makers will find these kind of numbers more concrete and, therefore, easier to induct into their decision-making.

There are likely other opportunities to make better use of units and scales in communicating information. A good example is the phenomena of compounding interest. Nonexperts usually assume interest increases linearly, but compounding interest increases nonlinearly (faster than linearly). This, for example, might cause decision-makers to underestimate the long-term impacts of an unfunded pension liability that grows at some given percentage each year.

Takeaway

Be mindful of units and scales when presenting information, as this effects how people interpret the numbers. Most importantly, look for opportunities to break large numbers down to a scale that is more relatable. But also beware of ways in which units and scales might distort decision-makers' perceptions.

The ethics of choice architecture

Now that you know the power of choice architecture, it is important to consider the ethics of this power. After all, it will be difficult for finance officers to avoid injecting their personal views into how choices are architected. Of course, we would want the choice architecture to reflect sound, professional judgment, but there isn't always a clear line between where professional judgment ends and personal values and beliefs begin. Nevertheless, finance officers will have to do their best because choice architecture is not optional. Not being intentional about choice architecture doesn't mean that the effects of choice architecture that we described in this article don't apply—it only means that their impact is being left to chance. In many cases, a poorly architected choice may favor the status quo. For example, choice overload could lead to no decision being made, resulting in the preservation of the status quo. Or the status quo could be the default. However, there might be cases where the status quo does not serve the government or its community well, and it is incumbent on the finance officer to help decision-makers consider the options for change. Hence, a guiding principle might be to use choice architecture to help decision-makers reach the best choice for them as easily as possible, with the caveat that what is "best" will require the finance officer to exercise ethical judgment.

Conclusion

The finance officer is a choice architect. Choices can't help but to have an architecture, and the architecture influences how choices are made—like how the architecture of a physical space will influence how people use that space. This means that a finance officer cannot be a completely neutral presenter of financial information. The presentation will influence decisions. It could emphasize some options over others, highlight some evaluation criteria over others, or favor the status quo more than change. Hence, it is important that the finance officer: 1) be aware of how the presentation of information influences choice and 2) use professional judgment to apply choice architecture wisely.

Finally, choice architecture is part of the field of behavioral science. We encourage you to learn more about the growing field of behavioral science and how it can be applied to budgeting. Look for additional articles from GFOA and consider checking out the webinar series[3] on behavioral science that was recently offered by GFOA.

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[1] https://www.gfoa.org/materials/financial-policies-book

[2] https://www.gfoa.org/materials/zero-base-budgeting; https://www.gfoa.org/materials/anatomy-of-a-priority-driven-budget-process

[3] A broader discussion of this topic can be found in "Democracy for Realists" by Christopher H. Achen and Larry M. Bartels.

[4] https://www.gfoa.org/materials/behavioral-science-2021