

Bechtel Focus Group Report

Sophomore Priority Option

Option Abstract

A commonly perceived problem with the logistics of the current undergraduate housing arrangement is that Sophomores are disproportionately booted from on-campus residences. The *Sophomore Priority* potential Bechtel residential model explicitly prioritizes Sophomores in picks proceedings as a means of addressing this problem. The option has many logistical similarities with the *Unaffiliated Housing* and *House Colonies* options in that these may potentially address disproportionate booting and/or simply the disadvantages of Caltech managed off-campus housing. In fact, since this option is defined primarily by its prioritization of the sophomore academic year, it has multiple possible implementations stemming from the above mentioned models. Namely, sophomore priority option could be either unaffiliated housing with a sophomore priority or a house-affiliated housing with a sophomore priority and thus carry many of the same advantages and disadvantages accordingly. We find that Sophomore prioritization is non-necessary given the logistics of the Bechtel project.

Core Values

In making a recommendation of residential models and policies for Bechtel it is necessary to lay out which *Core Values* are key to the success of the residential model at Caltech, so that whatever recommendation is made ensures their preservation and thus the future success of the Caltech residential model. The Sophomore Priority Option focus group has identified the following aspects as those we hold to be most central to the success of Caltech residential life as it presently exists and critical to preserve in the addition of Bechtel to the system :

1. Caltech affiliated Houses have the ability to influence and/or control membership. This allows students to determine living arrangements and cultures that work well and provide great value for most or all participants. i.e we view the ability of communities (in any form) to organize and select for those with like interests, priorities, and compatible living styles/situations to be important.
2. Houses and students both have a broad degree of independence in autonomy and self-government as well as culture.
3. The present system has prolific cross-class, cross-house, and cross-culture interactions in addition to the aforementioned cultural variation and house-membership divisions rather than to the exclusion or detriment of them. Such a culture of inclusivity regardless of affiliation ensures a strong, cohesive student body and exposure to diversity of views and backgrounds.
4. A broad social and emotional support network exists by virtue of the community provided in the current housing system. This is to be differentiated from institute provided or policy mandated support resources and programs, since those exist independent of changes to the residential models.

These values are intended as residential model specific addenda to the obvious core Caltech features such as the Honor code and explicitly mandated support networks (e.g. UCC program) which we take as givens and will invoke and explain as necessary below.

(Additional, more finalized, values will be specified in the COUCH final report)

Option Description(s)

There are a large number of possible sophomore-priority implementations, at least one potential implementation for each other compatible residential model for Bechtel. The Unaffiliated, Colony, and Themed options could all potentially have a sophomore prioritization component included in them (i.e. we see no fundamental incompatibility with a sophomore prioritization scheme in Bechtel picks procedures). While the Themed housing option is not incompatible, it also does not seem to naturally support an implementation that would not be simply exclusionary to non-sophomore classes. As such, we consider only the Unaffiliated and Colony residential models. This restriction being made, it is worth noting that most of the significant consequences and features of a sophomore-prioritizing scheme are generally applicable to any prioritization scheme regardless of context.

In addition options generated by student organization model (Unaffiliated, Colonies), additional options for this model stem from the level of prioritization enacted. Prioritization, in the most straightforward implementations, could take the form of sophomore guaranteed picks into Bechtel or a sophomore guaranteed pick with prioritization on the pick order within Bechtel compared to other classes.

Option Analysis

Residential Distribution and Demographics:

Using housing data it is possible to lend some graphical support to the notion that Sophomores are disproportionately pushed off-campus. Examining recent trends in population composition by class of on and off campus locations (*Figure 1.*), one sees that relative Sophomore presence in off-campus locations proportionally follows trends in high relative Freshman presence in on-campus locations (specifically 2011-2014, with some year specific fluctuations occurring when pressure from freshman class size and total campus population was lower after this period), while the on/off-campus relative compositions of Juniors and Seniors does not appear obviously tied to the relative Freshman population. This is best explained by noting that House pick procedures typically place some value on seniority. Sophomores are the least-senior class that is not guaranteed on-campus rooms. So, deviations in total population that disrupt relative composition (e.g variations in Freshman class size) are accounted for by pushing Sophomores off campus first. This means Sophomore distribution is firstly influenced by bed supply rather than their demand for locations. It is likely that this effect is not visible in the Junior and Senior classes because they are cushioned by seniority benefits within house proceedings and so are actually distributed based on their demand for locations.

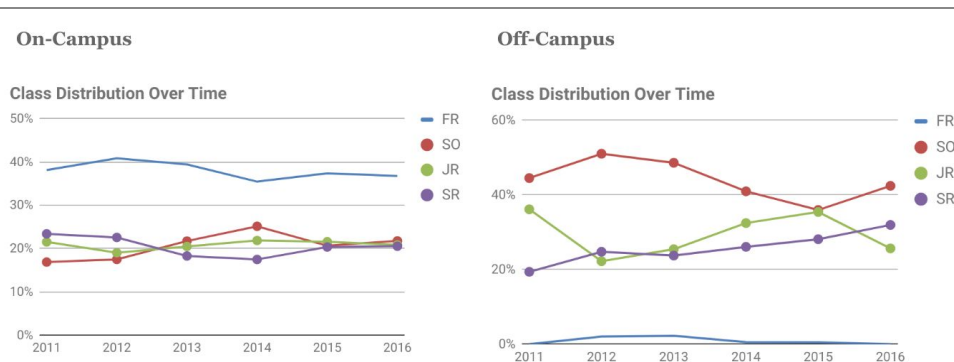


Figure 1. (left) Tracked percent composition by class of students in on-campus residences from 2011 to 2016. (right) Tracked composition of students in off-campus residences 2011-2016.

While Sophomores are disproportionately booted off-campus, not all Houses contribute equally to this effect. Consider the data below in *Figure 2* and *Figure 3* giving the average class composition of all the houses. It is plain from these that not all houses share the same profile.

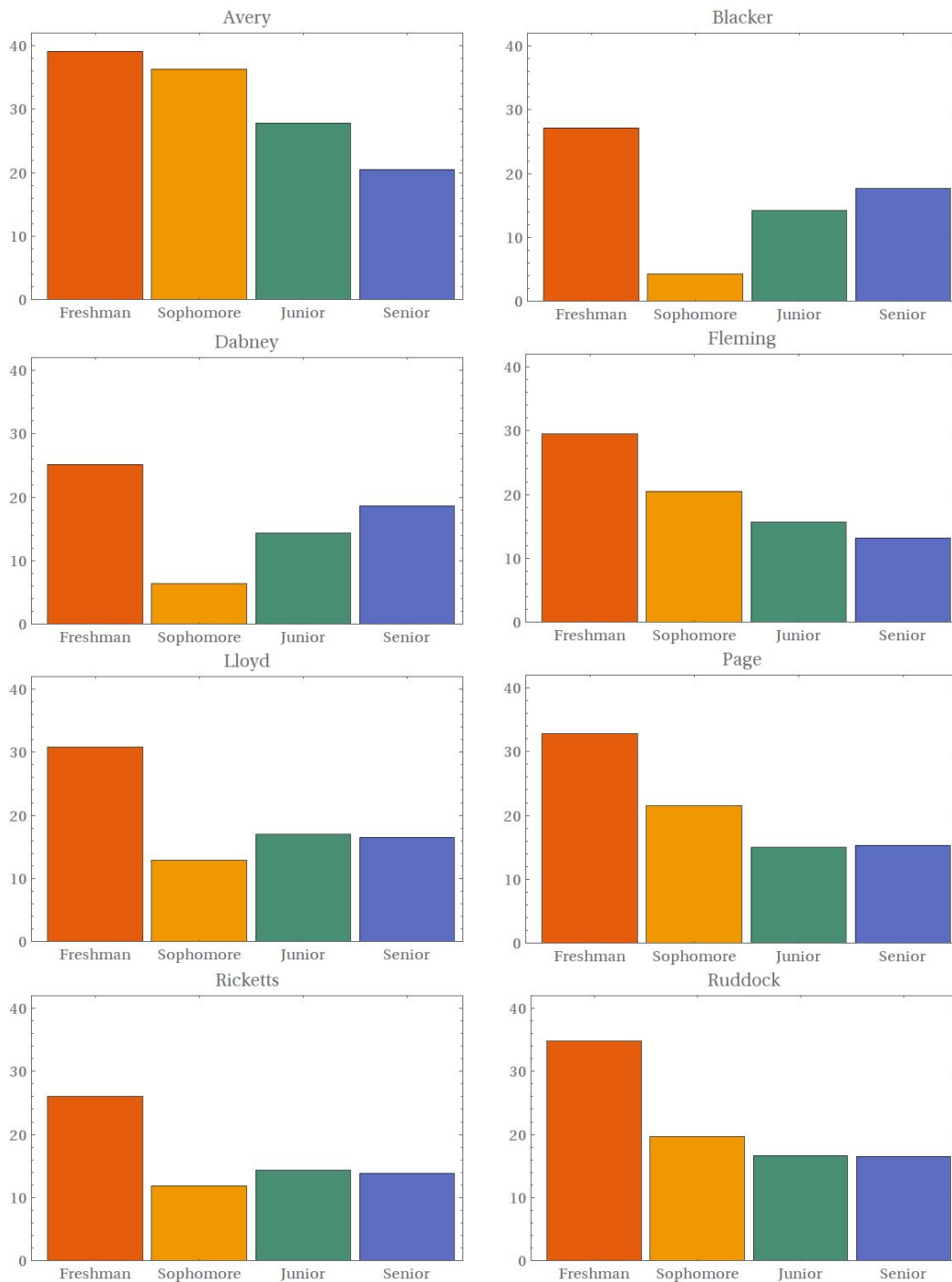


Figure 2. Averaged house membership by class for the period 2011-2016. Each bar represents the average number of people of that class in a given house for the last five years.

Percentage Distribution by Class

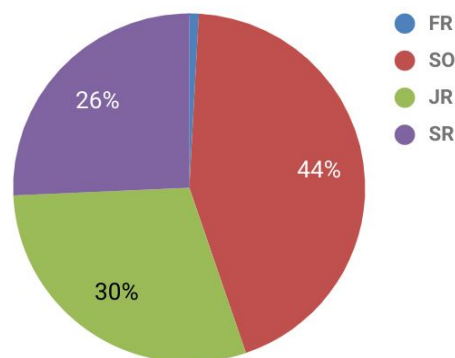


Figure 3. Total percentage composition of the off-campus population by class averaged from 2011-2016.

Dabney and Blacker are two Houses that consistently have a very small number of Sophomores living on-campus--and thus a rather large proportion of Sophomores living off-campus. Houses such as Ruddock or Page, however, have had approximately the same number of Sophomores on-campus as Juniors or Seniors. Avery and Fleming have even had consistently more Sophomores than Juniors or Seniors living in the House (though some of the Sophomores in Avery might be Sophomores from other Houses that picked into Avery through the external lottery, and were themselves pushed out of their Houses).

As such, it is like that a Sophomore-priority system for Bechtel will disproportionately affect the Houses, benefiting members of Houses that currently have low numbers of Sophomores living on-campus more so than Houses that have higher numbers of Sophomores on-campus.

In addition, a major cause of the differences between the number of Sophomores living in the House is likely differing room pick procedures, with some Houses prioritizing seniority to a greater extent or having rules in place that reserve a certain number of rooms specifically for Sophomores. It is possible, if the Sophomore-priority system gives Sophomores a significant advantage, that Houses with more Sophomore-friendly room picks procedures will adopt less Sophomore-friendly procedures, since they know Sophomores will have priority in Bechtel regardless.

Bechtel will be providing a total of 212 beds to the undergraduate population. As of 2016 there are a total of 137 undergraduate students living in Caltech managed off-campus residences (Chester, Del Mar apartments and OCAs) and between 2011-2016 there were an average of 138 students and a maximum of 146 students in Caltech managed off-campus residences. These Caltech managed residences will no longer be available to undergraduates after the opening of Bechtel, i.e. ~140 beds will be removed from the off-campus undergraduate residence options meaning that the Bechtel opening will provide a net ~70 new beds to the undergraduate population. The disparity between the number of beds available after the Bechtel opening and the current number of beds available to students off-campus suggests that a sophomore prioritization scheme that simply guarantees a pick (without order prioritization) would have little to no effect on the demographics of Bechtel compared to the demographics of the current off-campus population since the same forces guiding the present demographics would still be at work. Beds would be effectively guaranteed regardless of student academic year with or without the scheme

and would not address the likely underlying reason for a disproportionately Sophomore-heavy off-campus population.

A prioritization scheme providing a benefit in picking order to Sophomores could potentially lead to differing demographics from the current undergraduate off-campus population, since some portion of the Sophomore population might select a good pick in Bechtel over a poor pick in their own house. However, demographic change in that direction lies counter to the notion that cross-class interaction is a positive value, since additional clustering of a class by location would likely decrease inter-class interaction.

The move to Bechtel inherently carries with it two other forces for demographic change. Namely, Bechtel may broadly pull upperclassmen to it by virtue of being a set of now on-campus singles which are desirable by anyone who would have previously have selected an in-house single as the only option for on-campus singles. Additionally, to another portion of the population Bechtel may prove undesirable compared to current off-campus offerings by the fact that it will be on-board, and that population may choose an in-house location for other considerations now that they must live on board or may select to live outside caltech managed housing for board reasons. While the first of these is inherent to the construction of Bechtel, and recommendations for board arrangements are beyond the scope of this report, both of these effects are significant to consider for a thorough analysis of the demographic changes we are to expect from the introduction of Bechtel and its associated residency model to the Caltech housing system. However, further discussion and analysis of these effects will be reserved to the following section on Logistics and Living Arrangements.

Logistics and Living Arrangement:

Examining self-reported primary reasons for living off as obtained in a recent survey of off-campus students *Figure 4* gives some further support to the claim that Sophomores are more likely to have been kicked off than to be living off-campus for any other reason, but also shows the relative concentrations of upperclassmen living off campus for amenities and/or board considerations. These latter categories - that is, those stemming from logistical concerns - are of primary interest to this section and are a critical population to consider.

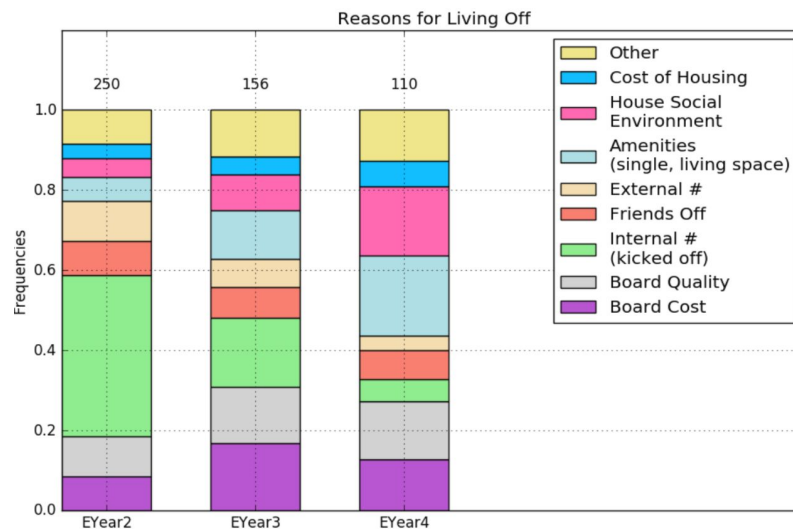


Figure 4. Frequencies of self-reported primary reasons for living off campus sorted by class. EYear2 being Sophomores, EYear3 being Juniors, and EYear4 being Seniors. Population size of each class is listed above the relevant bar, each bar is then colored proportionally by reason.

The fraction of students living off for amenity and board considerations is consistently large and correlates positively with academic year (growing rapidly from a marginal proportion of lower academic year students to the vast majority of upper academic year students living off campus). Therefore, it is reasonable to expect that these factors will be similarly significant in Bechtel population class dynamics since the move from the current off-campus system to the Bechtel residence will significantly impact the options available to students with these priorities. The positive correlation of the proportion of students living off for logistical and cost reasons with academic year must be considered in the light that Bechtel may not be as competitive (cost-wise) of an option for upperclassmen compared to in-house living, since Bechtel will require residents to be on a board plan. This shift in cost-competitiveness of the “non-house” residential options at Caltech could be significant to Bechtel population dynamics and thus the relevance of a Sophomore prioritization scheme in two ways:

1. Students with logistical and cost priorities may want to increasingly live in the houses for non-logistical and cost reasons since there may not be a significant cost difference between Bechtel and the houses, thus leading to other priorities swaying their preferences.
2. Students with logistical and cost priorities may increasingly choose to live in non-Caltech affiliated housing in-lieu of a competitive selection of cost options in the Caltech system.

While the specifics of board and housing costs are beyond the scope of this report, the impacts of the potential demographic shifts due to these factors must be considered when analyzing a policy option targeting certain student population demographics such as a Sophomore prioritization scheme. Both of the above scenarios, however, have negative implications for such a scheme.

If upperclassmen shift increasingly into the houses for other reasons in the absence of variety in logistical and cost options, Sophomores may be increasingly displaced into Bechtel compared to the current displacement to off-campus locations. This would simply magnify potential problems with class-diversity and cross-class interaction under a prioritization scheme as discussed above. Similarly, if upperclassmen shift increasingly into non-Caltech affiliated housing, there will be excess capacity in the housing system which would magnify the ineffectuality problems posed under such a scheme. Thus, since either possible demographic outcome due to logistical considerations in the shift to the Bechtel residence only worsen potential problems with sophomore prioritization, we find that logistical and cost considerations only serve to further argue in the negative to a prioritization scheme.

Compatibility:

We close this analysis with a quick outline of our conclusions under the framework of compatibility with campus life.

Student Life:

We primarily expect that a Sophomore prioritization plan would harm the diversity of student life by incentivizing a specific academic year to live increasingly in Bechtel, thus decreasing their participation in on-campus residences. This is discussed at greater length above, but is highlighted here as a note.

Governance:

We anticipate that a sophomore prioritization scheme would somewhat undermine current autonomy held by the houses in controlling their roompick proceedings, since it would add increased incentives for Sophomores to pick outside the house and may also skew any procedures based on the current off-campus lottery (though this latter problem is likely correctable).

Rotation:

We would expect few to no impacts to rotation under a sophomore prioritization scheme other than those that might arise due to poor class representation within the houses.

Conclusion & Recommendation

We do not recommend a Sophomore prioritization scheme for the Bechtel residence. It serves little to no benefit when compared to the absence of a such a scheme and could potentially worsen the very problem in class residency distribution it is targeted at neutralizing.