

# Bechtel Residence as Unaffiliated Housing

Janice Jeon, Dillon Azzam, Charlie Nelson, Michael Rupprecht, Bethany Suter

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## **I. Introduction**

The residential system at Caltech is a large part of the undergraduate experience, and with the addition of Bechtel, there are several factors to consider before deciding how to incorporate it into our current system. Our group researched the ‘unaffiliated housing’ option, and laid out its strengths, limitations, and practical implications. We understood ‘unaffiliated housing’ to be housing outside of the eight Houses, and not strictly housing for those not affiliated with the Houses. Based on our definition of unaffiliated housing, we proceeded to use data collected by our peers to better inform our suggestions.

In addition to analyzing Caltech-specific survey results, we also turned to other universities to learn more about how they handled students who wished to live off campus. Though we did not explicitly include details in our report about residential systems at these universities, having background on Harvey Mudd, MIT, Stanford, Yale, and Cornell was helpful in guiding our general thoughts during this process. Through this analysis, we gained additional insight into various styles of undergraduate housing, and how Caltech was different in its approach to residential life.

Using personal experiences and data from surveys and polls, we decided on a list of Caltech’s values for residential life that should be preserved regardless of the implementation of housing in Bechtel: intellectual growth, mentorship, diversity, identity, support, Honor Code, and choice. Then, we investigated how Bechtel could be structured within an unaffiliated scheme to fit with these expectations. In addition, we considered how the unaffiliated housing format had the potential to introduce new experiences that built on and extended beyond those currently offered.

We found it equally important to address the main logistical details regarding the impact of unaffiliated housing on Rotation, room picks, and the external lottery. Not only was it crucial to outline the general concepts and reasoning behind unaffiliated housing, but it was also essential to develop a plan for the actual implementation of such a proposed system.

Ultimately, we found that using an unaffiliated housing format for Bechtel would offer students the opportunity to form a community in Bechtel, without creating a sense of obligation or

commitment to “The House.” Rather, the community would be centered around connections between students who chose for themselves the living situation that best suited them.

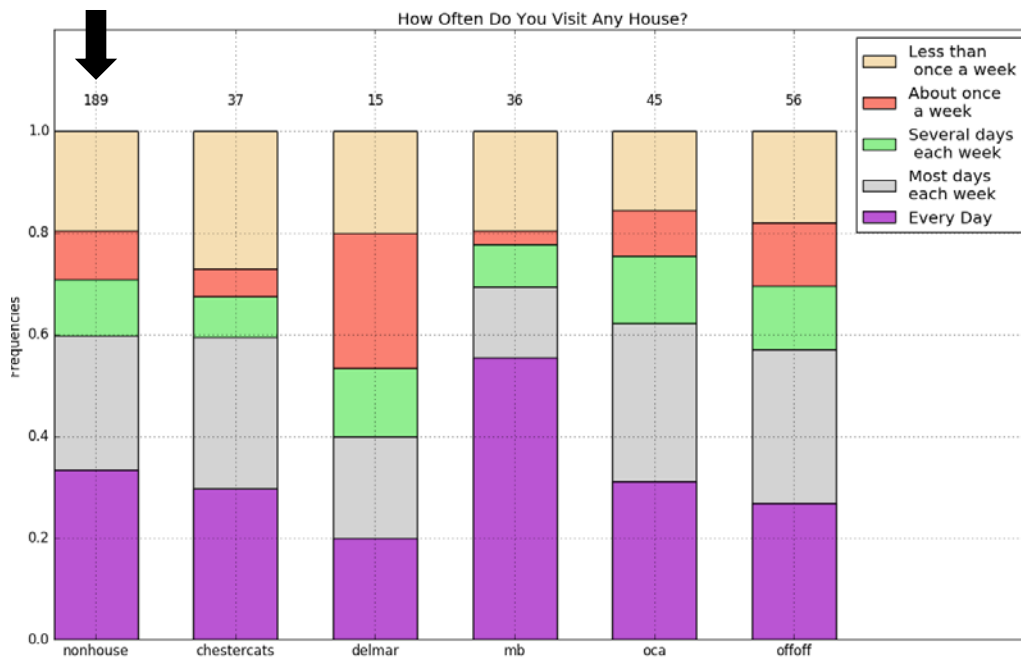
## **II. Advantages and Disadvantages of Unaffiliated Housing**

One of the greatest benefits of designating Bechtel as unaffiliated housing is that it allows students to design the housing experience they want. Currently, most unaffiliated housing options are static, and only allow for a single type of use. Marks-Braun allows for individual living or a suite with one other person. However, the suites are hard to obtain, and if a student wishes to live with several friends, it is difficult for all of them to pick adjacent single rooms. In the Del Mar and Chester apartments, suites of two or three people are the only option. While this provides somewhat more flexibility, the number of people one can live with is still restricted, and the distance from campus can limit interaction to only those who live in the same complex.

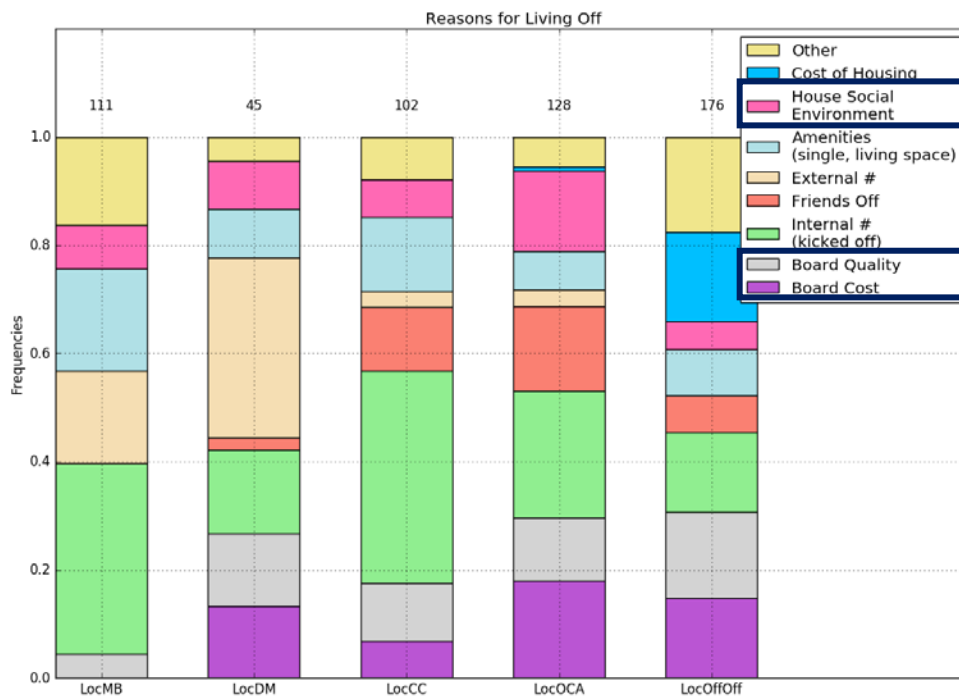
Allowing people to pick into Bechtel as individuals or in suite-sized groups makes Bechtel a great option for offering variety of housing experiences. Students who wish to remain with close friends, whether they share a House affiliation, background, or common interests, can do so by electing to all pick together into a suite. Those who would rather live away from House culture, or would like a place where they can separate themselves and focus on studies, can pick into individual rooms in designated suites. This means they can live more privately while still being around people they can interact with.

Having Peer Advocates (PA) available throughout Bechtel would create a safe and supportive environment regardless of one’s social situation. People who do not have a close group can choose an individual-style suite and potentially meet new people and make friends, while those who already have a group of close friends can pick into a group suite as a block.

A potential disadvantage of unaffiliated housing is the sense of detachment that may develop among residents. We thought about two possible such problems: a feeling of separation from the rest of the student population, and a general lack of community within Bechtel itself. With the exception of the Del Mar apartments, on average, ~70% of students living off campus visit the Houses at least “several days of the week,” and ~60% at least “most days of the week” (Figure 1). In addition, on average, the number of people who cited “House social environment” as their number one reason for living off campus was only ~10% of the total, although ~25% considered it as a contributing factor (Fig. 2 and 3).



**Figure 1.** The number of times students of given off campus residences visit the Houses per week. The column to note is the first column—“nonhouse.”



**Figure 2.** The fraction of students who cited the given factor as their number one factor when deciding whether to move off campus, by off campus residence. The factors to note are “Board Cost,” “Board Quality,” and “House Social Environment.”

		<b>All Factors Considered When Moving Off</b>				
		<b>Respondent Residence</b>				
		Marks/Braun	Del Mar	Chesters/Cats	OCA	Off Off
<b>Reason for Moving Off</b>	Board Cost	0.00	0.67	0.41	0.51	0.72
	Board Quality	0.05	0.67	0.43	0.50	0.61
	Internal # (kicked off)	0.41	0.27	0.43	0.27	0.24
	Friends Off	0.09	0.44	0.35	0.53	0.48
	External #	0.37	0.69	0.17	0.08	0.00
	Amenities (single vs. double living space)	0.52	0.42	0.48	0.38	0.43
	House Social Environment	0.20	0.31	0.24	0.23	0.23
	Cost of Housing	0.00	0.38	0.15	0.09	0.65
	# Responses		111	45	102	128

**Figure 3.** The fraction of students by off-campus residence who took into account the given factor when deciding whether to move off campus. The factors to note are “Board Cost,” “Board Quality,” and “House Social Environment.”

Based on the data, detachment from the Houses is not likely to be a major problem with an unaffiliated Bechtel. In addition, Bechtel being physically closer to the Houses than the Chester apartments suggests there is little reason to expect lower visiting percentages from Bechtel residents.

Regarding the possible absence of cohesiveness within Bechtel, there can be a conscientious effort to plan events for the residents so they have occasions to get to know the other students living in Bechtel. However, in our research we found that in many schools with suite-style living, intra-suite relationships provide plenty of social interaction, and adjacent suites frequently become very close, and this would be especially true if students were allowed to choose suites by group.

At present, our system provides space in Del Mar and Chester for students who wish to live more separately from their House for reasons such as Board, amenities, etc. However, with these complexes no longer available for undergraduates in the coming years, Bechtel is the ideal space for these students.

By implementing the flexible option of unaffiliated housing, Bechtel will fulfill Ccaltech’s core values. With an unaffiliated model, students can mix with peers from other options and years, stimulating intellectual growth and mentorship. Furthermore, there will be a diverse group of

students in Bechtel if it is open to anyone, which can support new interactions between students and an exploration of different experiences and identities. It will be important to create a strong support system through peer advocates (PA) and resident associates (RA), in addition to cultivating an environment that fosters a natural support network among students that reinforces Caltech's Honor Code. Bechtel can offer more choices for students seeking a different living environment outside of the Houses, such as a quiet hallway or suite of friends from different Houses.

### **III. Off-Campus Student Input**

With the help of Tom Mannion, we were able to organize two dinners for students living off campus. These students met the following criteria: they were currently living off campus, and they had been living off campus in the spring of 2016. We wanted to reach the students who had lived off campus for more than one year. Around 30 students attended in total. The first dinner included Dean Gilmartin and VPSA Shepherd. For the second dinner, we also had Jon Webster and three other staff members from CDS.

In addition to the dinners, we collected around 80 survey responses from students living off campus. The responses have been collected and summarized, and the following is a summary of the results:

Some students do not want to be on Board because of food quality or cost. But, there is also an underlying desire to be more independent, which generally motivates students to move off, or it is discovered as a positive consequence. Even if Bechtel must have a meal plan, we can still try to provide opportunities for students to transition into the "adult world." It may be beneficial to provide students with ingredients to cook on their own, an idea that is currently being discussed by Dining, even if an official food co-op is not established.

With the responsibility of cooking one's meals comes the challenge of managing time more efficiently to schedule in trips to the grocery store, meal preparation, cleaning, etc. Some students feel this aspect of off-campus life is something they are not accustomed to and requires adjustment. To address this, it may be useful to have time management workshops aimed for students living off campus. However, with Bechtel, students will probably need less time for managing their living space and doing chores if Bechtel will be staffed with custodians.

Another important issue is the social disconnect between students living on campus and students off campus. Luckily, Bechtel will be closer to the Houses, which will address some of the dissatisfaction and concerns related to walking the far distance to apartments on Chester, for example. There should be opportunities for Bechtel residents to meet each other and become familiar with who is living there, in addition to events that help students remain connected with their House. There still needs to be a balance between social life and quiet time because many students enjoy having the privacy and more defined work-life separation off campus. Maybe there can be a hallway in Bechtel reserved for students seeking a quiet space.

The students who are living off campus because they are “forced off” may feel neglected and forgotten once they leave the House. For many students, the House is where the fun happens, where they can live next to friends, where there is a strong sense of community. If we can connect Bechtel more to the rest of campus and make students on campus realize the importance of staying connected to peers living outside of the House, we can help students feel more included. The addition of Bechtel will solve many of the current limitations of off-campus housing, namely physical/social isolation and the lack of bedspaces on campus. However, for students who are not motivated solely by the more affordable cost associated with living off campus, there are other issues to consider. It seems to come down to the following: students want more control over their food, environment, and time.

#### **IV. Unique Housing Option**

With the absence of Chester and Del Mar, there will be very few options available for students who wish to live outside of the House. Aside from Marks-Braun, there will only be Bechtel available as a Caltech-affiliated residence hall separate from the Houses. Rather than creating another Marks-Braun type environment in Bechtel, i.e. little interaction among residents, we can style Bechtel differently to promote new connections and communities.

		Consistently Interacts with _____ House							
		Avery	Blacker	Dabney	Fleming	Lloyd	Page	Ricketts	Ruddock
Respondent House	Avery	0.951	0.306	0.209	0.129	0.403	0.274	0.177	0.516
	Blacker	0.366	0.977	0.644	0.1	0.188	0.155	0.611	0.488
	Dabney	0.355	0.627	0.932	0.05	0.101	0.05	0.576	0.355
	Fleming	0.156	0.093	0.078	0.937	0.39	0.75	0.265	0.406
	Lloyd	0.431	0.156	0	0.274	0.98	0.372	0.235	0.45
	Page	0.338	0.046	0.046	0.6	0.63	0.83	0.215	0.276
	Ricketts	0.223	0.477	0.567	0.208	0.343	0.223	0.97	0.388
	Ruddock	0.452	0.214	0.154	0.19	0.44	0.273	0.404	0.916

**Figure 4.** The fraction of students who live in the House named on the left side that report that they consistently interact with students who live in the House named on the top. (For example, 35.5% of Dabney members consistently interact with Avery members.)

With Bechtel as an unaffiliated residence hall, students can enter with a certain group they are familiar with, most likely consisting of friends they have made during their time at Caltech. Then, we can introduce students to peers they have not met yet. For example, when students first move in, they can fill out an interest sheet or write a brief paragraph about themselves. Then, RA's or PA's can connect students throughout Bechtel who share similar hobbies or interests. A living space that focuses on cultivating multiple different aspects of a student's identity does not really exist at present. The way the Houses are structured, around common "personalities" and "cultures," may even encourage conformity and keep students in their comfort zone because of self-selection. This has been an area of concern among some students and has also been brought up in discussions with administration. It is possible to address these issues with Bechtel, and it might best be done by making it unaffiliated housing. In the end, not only can students live in a suite with friends they are comfortable with, but they can also expand their network and meet new people.

Another potential issue with the current system is the lack of interaction between different Houses. Not only does each House interact with itself the most, but some Houses do not interact at all, e.g. Lloyd and Dabney (Fig. 4). By creating a space that is open to anyone, with room picks

dependent on an external lottery, students from different Houses will most likely be living in neighboring suites, even if individual suites are filled by people from the same House. Another option is designating off-campus alleys, with the potential advantage being that X House can be forced to live next to Y House. However, though it may be nice if X and Y Houses are more social together, it may be more effective not to try to “force” anything. Furthermore, it is possible that having House-affiliated suites may just serve to remind students of their House affiliation, presenting a barrier to inter-suite connections that can be overcome if the suites are simply left unaffiliated.

## **V. Shared Governance**

We envision Bechtel as a residence hall that has social activities planned by students and RA’s, but does not have an executive committee, e.g. President, VP, etc. Social events can largely be organized by RA’s and PA’s, with sign-ups early in the year for students interested in helping with activity planning. It may be beneficial to plan three or four events per term, and then depending on interest, there can also be events with Houses. The “social team”/“advisory group” can also be responsible for receiving complaints or suggestions from students about life in Bechtel and relaying these comments to administration or RA’s. PA’s will most likely be focusing more in personal issues and situations, while the RA’s will be overseeing serious problems related to student offenses. With Bechtel, RA’s should have a more involved role than they currently do in off-campus housing.

## **VI. Practical Implementation**

In terms of how people will be assigned to rooms in Bechtel, the traditional external lottery can be adapted with minimal effort. By designating some suites as group suites where a sizeable group can elect to pick into an entire suite as they currently can in off campus houses, larger groups can stay together and form their own communities inside Bechtel. Other suites, designated as individual suites, can be available on a room by room basis similar to the implementation for singles in Marks and Braun. These can then be used by those wanting more separation from social pressures on campus.

We suggest having a first round where all groups submit an application form to Housing. Then, based on the highest external lottery number in each group, Housing can place groups in the



appropriate suites. Then, there can be a second round where students can pick into individual suites based on external lottery number. However, this will have to be monitored to ensure that there are not empty rooms in various suites scattered around Bechtel.

One of the strengths of the unaffiliated proposal for Bechtel is that it is in many ways an iterative improvement on previous policies and options available at Caltech. Many of these have been proven to work and should not be scrapped in order to implement proposals for more unfamiliar schemes. This conserves resources and allows students to smoothly adjust to the reality of the new residence. By designating Bechtel as unaffiliated housing, there will be fewer problems that arise during the transition and initial implementation of Bechtel, and it is more likely that students will react positively to its addition to campus.

Based on the Bechtel Occupancy survey, students who live off campus interact less frequently with the Houses than do students who are on campus (Fig. 1). And, House-affiliated students spend much of their time with people in their own House, as mentioned earlier, which can lead to a less dynamic social environment for those living off campus. We believe that maintaining a room pick system based off of an external lottery (such as the current system), can be a way to encourage diverse social interactions by introducing an aspect of randomness when groups are placed into suites around Bechtel. This will ensure that students will have the chance to live with and meet new people.

Rotation can remain the same throughout the process, and will likely see an increase in participation due to Bechtel's closer proximity to the Houses. And, there should be little concern with filling Bechtel under this proposal as long as Institute policy to provide housing at below market rates continues. Once Bechtel opens, everyone who has been living in off-campus alleys, Chester, or Del Mar will need to find another place to go. Since the only other housing besides Marks-Braun will be off-off arrangements, we predict students will choose to live in Bechtel.

The PA system is intended to provide competent and standardized peer help to students who need it. If Bechtel is designated unaffiliated housing, the PA system will most likely be similar to Marks-Braun's PA implementation. In Marks-Braun, there will be two PA's with one PA in each residence. Based on a discussion with Dr. Felicia Hunt, it is likely that the suite system in Bechtel can be utilized to provide more support to students than would otherwise be available. Each suite can have a representative who provides an interface to the PA system, through meetings with the PA's on an intermittent basis. As a result, students needing support can find it without

stress. This can improve the frequency of interactions between students and sources of support, as well as the efficacy of the system as a whole.

After discussions with Dr. Jennifer Howes from the Health and Counseling Center about how the PA system might be implemented in an unaffiliated residence hall, it seems that because the PA system is new, we can shape it to best fit the unaffiliated model. And, to build a sense of community, we can include intentional programming to encourage connections between students and with faculty. It will be important to appeal to a broad audience and support interactions based on new experiences, rather than a House identity.

Given HA's important role in the physical and mental health of students, we have also thought about how Bechtel as unaffiliated housing will affect the distribution and number of HA's on campus. Given the recent expansion of the HA program, we believe that there will be a sufficient number of trained HA's present by the time Bechtel is complete. In addition, the current off campus population consists largely of juniors and sophomores, who will have the opportunity to become HA's before or during their time in Bechtel, so we are confident that there will be enough present throughout the suites.

Other issues include how Board will be merged with Bechtel. Through our conversations with Jon Webster, it seems that the unaffiliated option allows the most flexibility and least impact on how Board can be implemented. ~10% of students in off-campus residences (except Marks-Braun) cited Board cost as the primary factor in moving off campus (Fig. 2), with ~56% citing it as a contributing factor (Fig. 3). So, we deemed it important to gauge the impact of any housing option on possible Board cost increases. After discussions with Jon Webster, it seems that students will need to be on Board, though Dining is open to modifying Board as a whole to create a more desired meal plan.

Because student waiters present a significant part of the cost of undergraduate dinners – ~10% of the non-dBal Board price, according to Jon Webster – the presence of student waiters in Bechtel will be a significant cost. Especially because of the upcoming minimum wage increase, housing options that require student waiters (such as making Bechtel its own House), might result in undesired Board cost increases. Having Bechtel as an unaffiliated residence will require no student waiters, making it a cheaper option, which would better appeal to the 56% of students citing Board cost in moving off campus.

## VII. Freshmen?

There are pros and cons associated with having all freshmen, or a subset, live in Bechtel. These points have been investigated by the focus group for the all-freshman housing option. We have mainly thought about the absence of appealing opportunities for students who want to “opt out” of the House system. This is an especially important topic to consider when deciding whether freshmen should have a place in Bechtel, since a common argument against freshmen living in Bechtel is that they do not know what they are opting out of, they could be missing out. These are certainly relevant concerns given the current residential system—so much of student life revolves around the Houses. However, this reasoning does not necessarily justify making freshmen take part in the House system if they do not want to. Rather, we can strive to offer new opportunities with this concern in mind and work around the challenges if we wish to let freshmen opt out. Another point to emphasize is that freshmen living spaces in Bechtel does not only have to be for the students who do not wish to be involved in the Houses; it can also be for students who still want to be associated with a House, but also are interested in adding to their social life outside of the House. There are several logistical issues with freshmen living in Bechtel including Rotation, reserving bedspaces, etc., and we have included more information later in the report.

If we decide to let freshmen live in Bechtel, we will need to reserve a certain number of bedspaces without the guarantee that all of those spaces will be filled. However, the alternative is having incoming freshmen decide whether they would like to live in Bechtel before we have our external lottery. So, we can save  $X$  rooms for the  $X$  number of freshmen who have expressed interest. But, this is not ideal because our housing process begins as early as April, and most incoming freshmen may not have even committed to Caltech before they must make a decision regarding Bechtel. If we keep around 10 rooms, or one or two suites, we should be able to fill them if we aim to offer these spaces to freshmen who have rotated into a House they did not rank highly. The main idea is that freshmen will have the chance to go through Rotation, then depending on the outcome, can choose to live in Bechtel. This is different from letting students rank the eight Houses plus Bechtel during Rotation. Though this is an option, it is a different scenario that may be trickier to control. Also, when we save a suite for freshmen, it is possible that some students will not want to live with each other. So, another route is saving these bedspaces in Marks-Braun, which usually has one reserved room for freshmen with circumstances that prevent comfortable living within the Houses.

## **VIII. Future Direction**

We would like to continue discussing how we can improve Board to satisfy students' expectations based on feedback from students living off campus. A few options are making dinner more Chandler-style vs. family-style, adjusting dBal, shifting dinner times, etc.

In addition, we plan on working with other focus groups, such as themed housing, to consider how to add something new to Caltech's current residential system. Then, we can form a cohesive plan for Bechtel that can be evaluated and adjusted in the coming years.

## **IX. Conclusion**

We believe that Bechtel should bring students back on campus while preserving a sense of independence that comes with living outside of the Houses. Bechtel should be used as a residence hall independent of House affiliation that fosters communities based on new experiences and common interests. Our proposed system involves having students apply as individuals or in groups to live within Bechtel, with few modifications to the current external lottery system. However, we recommend giving additional thought to whether we should allow freshmen to live in Bechtel. And, if we decide to open it to freshmen, whether it will largely serve as an "opt out" option, or one that will add to the House experience.

The strength of creating Bechtel as an independent, unaffiliated residence hall is that it offers flexibility for students to develop their own social environments. This flexibility allows students to make Caltech comfortable in their own way. Students may not feel satisfied with the House system and find that living with a smaller group of friends in Bechtel suits their social needs better. They may also find that Bechtel encourages a broader range of discussion and mingling between options and years.

Caltech is a unique place for students to grow and develop their technical talents. For students to flourish academically and emotionally, they need to feel like they belong. Students should have the freedom to create social spaces in Bechtel that meet their needs, and we believe unaffiliated housing meets this criterion.