To-Go or Not To-Go:
Take-Away Container Usage at Williams College

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Introduction:

As it currently stands, Williams College spends approximately $250,000 a year on trash removal. Based upon a waste audit performed in February 2009, the total percentage volume of waste generated by disposable, compostable containers was around 10%. (CET, 2009) The data was collected from 14 buildings across campus, several of which one would not expect to find disposable containers in (such as Driscoll). In dorms, disposable containers made up 10.2% of all waste by volume, and in Paresky the number rose to 18%. Thus, while a total average of 10% is significant, in some locations the prevalence of disposable containers in the trash is even greater. Additionally, according to Dining Services the school spends nearly $18,000 a year on clamshell to-go containers alone, and they are offered only at Whitman's and Snack Bar (Fig. 1). (Dining Services, 2009) Extrapolating from numbers provided for purchasing over the month of

Figure 1: 9"x9"x3" hinged disposable container (Image Courtesy www.webstaurantstore.com)

October 2008, it appears the college uses approximately 15,000 clamshell containers per month and over 90,000 per school year. (Paresky Ordering Data, 2008)

There are several concerns that are immediately apparent upon seeing such statistics. First, if Williams were able to eliminate nearly 10% of its waste stream by abolishing to-go containers and utensils, that could have important effects in various facets of the college system.

Monetarily, a 10% reduction in waste volume could save approximately $25,000 if it were a one-to-one savings. Environmentally, this abolishment could have an even bigger impact. While Williams does utilize biodegradable, environmentally friendly clamshell containers, because of a shift in compost systems the clamshells must now be trashed. The school trash is hauled to Pittsfield and then incinerated at the Pittsfield Resource Recovery Facility, where steam is generated to provide heat for the local Crane Paper Company. (White, 2007) Therefore, despite the respectable biodegradable characteristics of the eco-clamshells, the traits the school is paying a premium for are of no importance as the product is immediately incinerated. Without a switch in composting programs, this 10% of trash is contributing significant greenhouse gas emissions to the atmosphere via incineration.

Prior to the opening of Paresky in February 2007, the only "to-go" options on campus were Grab-n-Go, available during weekday lunch hours, and Snack Bar, available after dinner hours every night. On the record, student dining halls do not allow the removal of any food from their establishments beyond a hot drink and a piece of fruit, although off the record they are slightly more relaxed about such practices. However, following general abuse of their loose policies, signs began cropping up in fall 2007 warning students not to use disposable hot cups to take food away from the dining hall, and egregious offenders are often stopped on their way out. Therefore, in Greylock, Driscoll, Dodd, and Mission there now exists some delicate balance between taking a small snack for later and packing enough food to supply for several meals. Students generally seem to accept these rules, and discontent is rarely voiced on either side of the matter.

With the 2007 opening of Paresky's Whitman's Marketplace, however, standard dining hall fare suddenly became a take-away option. This shift allowed for a changing of behavior by

the students—one that did not seem to be perceived by Dining Services until after the take-away option had become something of an engrained “right”. The usage of to-go containers has grown exponentially in the past two years; however, the number of students no longer dining in Paresky has not changed nearly as drastically. This is the crux of the problem, and the reason why it may be feasible to substantially decrease this facet of the college’s waste stream. As it currently stands, many students use a to-go container but eat right in the Paresky dining and sitting areas (Fig. 2), or marginally further removed out on the steps in front of the building in warmer

Figure 2: To-go container used in dining area of Whitman’s in Paresky (Photo J. McNamara)

weather. As the waste audit found (and any visual study could easily confirm), compostable containers make up a significant proportion of waste in Paresky at approximately 18%. (CET, 2009) In truth, compostable containers should comprise 0% of the waste stream in Paresky as nobody has “gone” anywhere, and thus do not need “to-go” containers.

This study is considering two aspects of clamshell usage in the dining halls. First, I want to look at possible actions that can be taken so as to discourage students from using to-go containers unless they truly believe they need them. This would ideally eliminate all clamshells

from Paresky waste and likely at least some containers from more removed locations as well. I believe steps can be made in this regard up and down the behavioral ladder, beginning with making it more difficult to obtain a to-go container, to highlighting the environmental impact of their disposal at the doorways and trash bins to instill a sense of guilt in the offending patron, and potentially employing a financial disincentive as a most drastic measure to curb errant behavior. Additionally, I plan on considering alternatives to the disposable clamshells so that even if students do continue to use them—and undoubtedly at least some still will—the to-go containers will no longer comprise such a large percentage of the overall college waste stream. To do this I identified reusable clamshells as a viable option. To-go container usage is a problem at Williams not because students should never eat outside the dining halls, but rather because the behavior currently witnessed is indicative of a lazy attitude that is buttressed by a set of unseen negative externalities.

Setting:

Clamshells, the to-go container of choice for Williams Dining Services, are offered only in the Paresky eateries Whitman's Marketplace and Lee Snack Bar. Despite initially being singularly available at Snack Bar, the clamshells began an eventual migration across the dining area to Whitman's, where they are now also easily accessible. However, Snack Bar still greatly outpaces Whitman's in terms of clamshell consumption according to ordering data, as from May 14, 2008 to May 13, 2009, the college spent $5,909.33 on clamshells in Whitman's whereas Snack Bar spent $11,780.12 over the same time span. (Dining Services, 2009) This is most likely due to the nature of the two establishments, as Whitman's' main clientele remain to be students consuming a meal on the premises, whereas Snack Bar instead predominantly caters to students grabbing a late-night snack to bring back to their dormitory or the library. This is an important distinction to make, as it significantly alters the feasibility of implementing various practices to

instigate behavioral changes. At Snack Bar, when students consume their purchases within the confines of Paresky it is more likely to be off of reusable plates and bowls because they have already made their mind up about where they plan on eating before ordering. At Whitman's, on the other hand, students often will take a to-go container simply because they are unsure of whether they will eat on the premises or not before they get their food. The decision often ultimately boils down to whether they can locate friends in the area, and the fact that nothing is lost (to them) if they do remain but eat out of a clamshell. In this way it seems like a disincentive may be more effective percentage-wise at Whitman's than at Snack Bar.

Findings:

Williams Dining Services spent $18,632.81 on clamshells from May 14, 2008, to May 13, 2009 (Table 1). (Dining Services, 2009) The to-go container model is supplied by Mansfield

Table 1: Price and quantity information for to-go containers at Snack Bar and Whitman's.

Location	Product name	Pack Size	Item qty. Total	Avg. Price	Total
Snack Bar	GREENWAVE 9X9	CS200	319.5	$36.87	$11,780.12
Snack Bar	ECO 9 X 9 1/3	CS300	16	$58.96	$943.36
Whitman's	GREENWAVE 9X9	CS200	120	$39.42	$4,730.13
Whitman's	ECO 9 X 9 1/3	CS300	20	$58.96	$1,179.20
Total			98,700 units		$18,632.81

Paper Company. It is 9"x9"x3", and is composed of natural fiber derived from sugar cane, reeds, and bamboo. (Mansfield, 2009) The construction from natural materials allows it to be both recyclable and biodegradable, and up until recently Williams would compost these containers. The switch to trashing them is owing to a change in composting systems that no longer accepts these containers, eco-friendly hot cups, biodegradable utensils, and napkins. Clamshells comprised 44% of Whitman's paper product purchasing for the year (by cost), while for Snack Bar clamshells were more near 20%. (Dining Services, 2009) This difference is in large part due to Snack Bar's need to invest in a wider variety of disposable products such as several various types of cups, and far more utensils. Between Whitman's and Snack Bar, Dining Services spent

a total of $77,271.55 on disposable products in the past year. A reduction in this area could be significant monetarily speaking.

The Williams waste stream was audited in February 2009, with trash from 14 different buildings collected and analyzed. The concentration of disposable goods within the trash varied greatly depending upon the location of focus. For example, in waste seized from dormitories, disposable containers comprised 10.17% of trash volume. In Driscoll, compostable containers made up 0% of the waste stream, and the same was true for Morley. (CET, 2009) Paresky had the highest percentage of compostable containers in the trash at 18%. Across the entire collection survey, however, the campus average came out to be 10.2% of volume filled by compostable containers. After the 41.3% of waste stemming from non-recyclable trash, compostable containers beat out all other trash entities by volume, including plastic bags, paper towels, and non-compostable containers.

A student at Eckerd College designed reusable clamshells, a possible alternative to the disposable containers currently used by Williams. The model eventually was manufactured by G.E.T. Enterprises, Inc., a Texas-based melamine food service merchandise producer (Fig. 3).

Figure 3: Reusable, melamine-crafted clamshell (Photo Courtesy Eckerd College)

Importantly, the container can sustain temperatures over 180 degrees Fahrenheit, meaning it is dishwasher safe. (G.E.T., 2009) Without this characteristic the model would be unfeasible, as for sanitation reasons the reusable containers must be washed to the same degree of stringency as are all other reused dishes. Additionally, the product is microwave safe. As compared to the current product—billed as being able to contain hot oil or water for two hours without leaking—the melamine products could purportedly retain whatever item they are holding for eternity. In terms of getting food to-go so as to be able to consume it later, this could be an especially valuable point.

The added durability also results in added costs, however. While the current clamshells cost approximately $0.18 per unit, for the melamine products the cost falls somewhere between $4-8 per unit, depending upon the distributor and volume purchased. (Dining Services, 2009; Nargussi, 2009) According to a plan further elucidated in the Discussion, if the college were to purchase 2,000 clamshells it could cost between $8,000-16,000. This would still be less than the $18,632.81 spent annually on the disposable clamshells. Additionally, assuming a one-to-one reduction in percent cost from percent cut in waste volume (as trash is collected by volume and not weight for Williams), the elimination of over 10% of the waste stream could save upwards of $25,000 annually. It is hard to imagine a scenario where the fees for washing and collecting the reusable containers over a year would cost such a sum of money that the immediate payback—let alone the repeatedly saved money year after year after the reusable clamshells had already been purchased—was not sufficient to cover the cost.

I conducted a survey of 64 students' opinions on various aspects of to-go containers, and the results are important to note. First, 62% of respondents answered that the environmental impact of to-go containers did cause them to reconsider using them. Also, around 70% of those

surveyed claimed to use to-go containers between "absolutely never" and "0-1 Times" in a typical week, while another 25% said they used them "2-3 Times" a week. 66% stated that the "most likely" reason for their using a clamshell was because they had to eat their food somewhere other than Paresky, and another 28% claimed a "moderately likely" reason was that they had to eat their food later. Nearly 91% offered as the "least likely" reason to use a to-go container that the line to bus dishes gets too long so disposing of all dishes in the trash is a quicker option. In terms of investment, the greatest consensus over a one-time fee to pay to allow a reusable program to be launched was over 42% voting for $5. 19% called for $1, and 20% called for $0, split nearly evenly between those not supporting the cause and those believing the funding should come from the Zilkha Center for Environmental Initiatives. Finally, for a free-write response to, "How far would you be willing to walk to drop-off a to-go container?" most students cited either (or both) the two libraries and the "nearest dining hall," although a small number mentioned "nowhere" or "anywhere." While the survey was not an entirely unbiased sampling, the results are still valuable as a window on current student opinions at Williams.

Discussion/Conclusions:

The first step in addressing the disposable container usage at Williams is to reduce the amount they are used. The fewer taken, the fewer disposed of, the less trash to deal with. This problem is a matter of behavior more than technology, and it is something that is feasible. Again, up until February of 2007 the only take-away options on campus were Grab-n-Go and Snack Bar (only operational in the post-dinner hours when it was run out of Mission). Students had clearly survived on such behaviors, and there is no reason to believe they could not now. Simply outlawing any to-go containers from Snack Bar and Whitman's is not the answer, however, because it is an option that does have great value at certain times. For example, for a

student with class until 12:35pm and then another class beginning at 1:10pm, by the time they are excused from their first class and arrive at Paresky it is often at least 12:45, peak dining hours. After battling the line at Whitman's, it could easily be 12:55-1pm. Allowing 5 minutes to walk to class, that leaves the student 5 minutes to consume their meal. In this situation, having the ability to bring their meal with them to consume in class is beneficial, and likely saves them from an unhealthy alternative such as pre-packaged snacks from a vending machine. However, when students (and faculty) take to-go containers and eat in, or around the perimeter of, Paresky, that "necessity" component drops out of the equation (Fig. 4). These are the primary offenders

Figure 4: Students consuming meals from to-go containers in Paresky (Photo J. McNamara)

that should be discouraged from such wasteful behavior.

Motivation for change in this regard can come from two principal areas. First, the dining halls should work to encourage eating in. This can be achieved in various manners, but two prominent approaches include making a dining area more appealing, and making it more difficult to obtain to-go containers. In terms of the former, Massachusetts Institute of Technology chose to invest money in encouraging their students to dine-in as opposed to their acquiring reusable containers and utensils for Grab-n-Go options. (Brown and Eaton) Their dining services added new ("fun") dishware, stainless steel utensils, and a more social atmosphere. Williams does not

necessarily need to change in this regard, as the general ambience in Paresky is as good or better than in many of the school's other dining halls.

Williams could, however, stand to gain by making it more difficult to obtain to-go containers. As it currently exists, to-go containers are something of a default option, or at least are as easy to come by as reusable plates and bowls. This can, and must, be changed. The first people to be weeded out are those that really do not mind either way, but simply because a to-go container is just as easy to get they do not stand to lose by taking one. Putting all the to-go containers in one corner, or forcing patrons to go out of their way to ask for one, ensures that even at the most minimal level they really do want it. Beyond that, a financial disincentive must be introduced. This is the only guaranteed way in which diners would be forced to confront just how much they either want or need a to-go container. For example, a surcharge ranging between $1-3 could be levied on any diner wanting to take their meal to-go. I am fully confident that this measure would decrease the number of students removing their meals from the premises drastically. Even a $0.25 surcharge would force students to think about their decision, which is more than is currently being requested of them. Importantly, the system must force the students to feel the cost and not simply direct it to their term bill, as that distancing from the actual payment could be significant enough to not instigate a change in behavior.

A moral disincentive for using to-go containers can run along similar lines as that of a financial disincentive. By forcing people to consider the implications of their decision, they may be less inclined to thoughtlessly grab a disposable container. One way to achieve this would be to put up graphics of landfills by a centralized distribution point for to-go containers, as well as statistics outlining the volume percentage consumed by disposable containers in the Williams waste stream. Again, even a small gesture that forces students to think about the consequences

of their actions may be enough to sway some proportion of the to-go users. As the study conducted on Williams students found, 62% thought about the environmental impact of using a to-go container when deciding whether to take one or not. (McNamara, 2009) Increasing this number to at least 75% (after acknowledging that several in the survey likely only thought about the environmental impact in retrospect but not actually at the time) may help to reduce usage. Considering the fact that the greatest percentage of disposable waste was found in Paresky (18% vs. a campus-wide average of 10%), discouraging students who clearly will not be leaving the building from taking a to-go container is an important step to take.

Perhaps one of the most important short-term changes the college can make is to switch composting systems. Before any other changes are implemented, these biodegradable products should immediately be directed towards composting as opposed to incineration. The college pays a premium to purchase biodegradable take-away containers, cups, utensils, and napkins, however incinerating them nullifies any potential gains they may have. As an important aside, the distance some of these items travel before even making it on campus (such as the current clamshells coming all the way from China) significantly decreases the benefits gained from such ecologically "friendly" materials noting the emissions released in transport. Diverting these products from the school's waste stream and back to composting looks to be financially advantageous, too, although set numbers are unavailable. Switching systems would require the college to return business to Holiday Farm in Dalton, MA, or another local farm that accepts such products. (Cahill, 2009)

Accepting that Williams will take steps to decrease to-go container usage, in the long-term something still must be done about the disposable to-go containers. For this reason I looked into the feasibility of instituting reusable clamshells as a substitute for the current disposable

ones. While they are significantly more expensive per unit, their durability and diversion from the waste stream makes them increasingly attractive. How to install such a plan, however, requires further consideration. First, the students cannot be relied upon to freely return the to-go containers of their own will. Despite nearly 100% of survey respondents claiming they would be willing to walk to the nearest dining hall or library to return their container should they have removed it from Paresky, historical data suggests that this may be less than likely. For example, despite distributing 100% of the reusable Grab-n-Go bags over a year ago, students are rarely—if ever—now seen using them to pick up their lunch. The to-go containers have the advantage that they cannot easily double as some other type of functional equipment (such as a handy bag might), as well as the fact that they may be dirty from food contamination and begin to smell. While both of these factors should encourage students to remove them from their rooms, it may simply signal a migration of containers to the outside common room. I do not think that this program would fail immediately, but rather after the short-term diligence wears off, the long-term laziness and apathy may begin to take over.

Therefore, a policy should be put in place that requires students to be held financially accountable each time they use a container. Importantly, such a plan would have to be launched so that it would not require the students to directly own a container of their own, as that would likely fall into the same trap that the Grab-n-Go bags did. Instead, students could be charged $1 to use a reusable container, and then are free to leave with it. Should they want to use a to-go container again, they must either present the container they already took to trade it in for a clean one free of cost, or they can pay the $1 fee again. One alteration to the plan could include allowing students to swipe in their containers at various checkpoints across campus (such as the nearest dining hall or library as cited in the survey) at any time, even if they did not want to take

out a clean container yet (so it would function like a credit). This could be potentially viable through a card-swipe system. An information campaign would need to be run so that students would not come to think they should be allowed take-out from any and all of the dining halls. Still, even with all these safeguards in place to encourage the return of clamshells, the school should over-supply in the short term in acknowledgement of the assured disappearance of containers. Therefore, 2,000 clamshells should be purchased despite a daily usage of more like 500 containers (and which will theoretically be even lower with the previous campaigns in place to reduce usage overall). Additionally, allowances must be made to account for turn-around time of washing and collecting.

Overuse of disposable to-go containers is neither the most significant environmental or economic problem Williams is currently facing, however that should not limit the efforts taken on the issue's behalf. A series of small, easily feasible changes could result in drastic cost savings as well as environmental gains, while several larger, somewhat more intensive steps could result in total abolishment of disposable containers altogether. At a time when academic department budgets are getting slashed, team rosters severely limited, and extracurricular activities demoted even further, the college could stand to save money in any way possible. The options explained above suggest one such scenario. Additionally, by taking action on this sustainability issue, it may pave the way for more progressive environmental initiatives to be put in place at Williams further on down the road.

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