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Get Real: An Examination of the Real Food Challenge at the University of Vermont

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Get Real: An Examination of the Real Food Challenge at the University of Vermont

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Abstract

The Real Food Challenge (RFC) is a national student movement that is trying to harness student power to shift $1 billion—roughly 20%—of college and university food budgets across the country towards local, ecologically sound, fair, and humane food sources—what they call "real" food—by 2020. The University of Vermont (UVM) was the fifth university in the country to sign the Real Food Campus Commitment, pledging to shift at least 20% of its own food budget towards "real" food by 2020. The purpose of this thesis is to evaluate the implementation of the Real Food Campus Commitment at UVM.

In order to examine the demand for "real" food on the UVM campus I analyzed a survey of 904 undergraduate students that used contingent valuation to evaluate students' willingness-to-pay (WTP) for the "real" food attributes. I found that a majority of students are willing to pay a positive premium for "real" food, but that the average premium is quite small. Furthermore, I found that student characteristics and attitudes significantly influence WTP. Specifically, gender, residency, college, and attitudes about price and origin of food are significant predictors of WTP.

To evaluate the potential of the RFC to significantly transform the food system I analyzed the activities and components of the RFC using the framework of food democracy. In addition to analyzing the activities and components of the RFC as a national movement, I analyzed the movement as it is being realized on the ground at UVM. My analysis reveals that the RFC has the potential to transform the food system because it promotes all five dimensions of food democracy as both a national movement and as realized on the ground at one university.

Both of my analyses suggest that the RFC has significant potential to transform the food system at UVM, but that food systems education for the greater student body will crucial to see that potential fulfilled. This thesis can contribute to the success of the Real Food movement at UVM by identifying areas of weakness and opportunities for improvement in terms of increasing student preference for "real" food and promoting food democracy. Moreover, this thesis may be useful for national RFC staff and other campuses that are implementing the RFC, as it demonstrates how the RFC is being played out on the ground at an institution that is at the forefront of the movement.

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Acronyms

CSSC – California Student Sustainability Coalition

CV – Contingent valuation

CRWG – Corporate Research Working Group

FTC – Farm-to-College

FTI – Farm-to-Institution

RFC – Real Food Challenge

RFR – Real Food Revolution

RFWG – Real Food Working Group

TFP – The Food Project

TFPC – Toronto Food Policy Council

UVM – University of Vermont

Chapter 1: Introduction

Institutions of higher education have seen a rapid expansion of sustainable food initiatives, amongst other campus sustainability efforts. Specifically, there has been growing interest in local, ecologically sound, and ethical food on campuses. Collectively, colleges and universities across the United States spend approximately $5 billion annually on food (The Real Food Challenge, n.d.). The Real Food Challenge (RFC), a national student movement, is attempting to leverage the power of students and the market share of higher education to transform the dominant food system. It is trying to shift 20%—or $1 billion—of existing college and university food budgets towards local/community-based, fair, ecologically sound and humane food sources—what they call "real food"—by 2020 (Real Food Challenge, n.d.).

Higher education occupies an influential place in the food system, and therefore is a particularly ripe place to initiate food systems change. Figure 1.1 depicts where institutions of higher education are situated within the food system. In 2010, food expenditures in the U.S. totaled approximately $1.24 trillion (USDA Economic Research Service, 2014). Slightly less than half of that (approximately $605 billion) was spent on food away from home, otherwise known as the foodservice industry (USDA Economic Research Service, 2014). The foodservice industry is comprised of a commercial sector and a non-commercial, or institutional, sector. Commercial foodservice operations are publicly accessible, operate on a for-profit basis, and are not generally run as subsidiary or complementary operations; they include such operations as sit-down restaurants, fast food restaurants, recreational eating locations, and hotels/motels (Schmelzer, 1981). Non-

commercial or institutional foodservice operations are generally run as subsidiary or complimentary operations, have limited public access, and are not run as for-profit operations by the organization (Schmelzer, 1981). Organizations, however, may contract their foodservice out to companies that do operate on a for-profit basis. Examples of institutional foodservice include hospitals, prisons, primary and secondary schools, higher education, and nursing homes.

As Figure 1.1 shows, higher education, as a faction of institutional foodservice, represents only a small proportion of food expenditures in the U.S. (approximately $5 billion out of $1.24 trillion). Colleges and universities, however, have considerable influence in the foodservice industry, and shifting their purchasing patterns could catalyze a major shift in nation's food landscape (Schwartz, 2012). The majority of colleges and universities contract their foodservice operations out to companies. Just three companies—Aramark, Compass Group, and Sodexo—control 92% of the contracted foodservice market (D. Schwartz, personal communication, April 7, 2014). They have considerable leverage within the foodservice industry, because they represent the largest and most lucrative revenue stream for foodservice companies; campus foodservice represented 32% of the total annual revenue for all contracted foodservice in 2008 (Schafer, 2011). There is considerable competition for higher education accounts among the largest three companies, which encourages the companies to respond to shifting trends and demand (D. Schwartz, personal communication, April 7, 2014). Perhaps as a result, the higher education market leads foodservice industry trends (Schwartz, 2012).

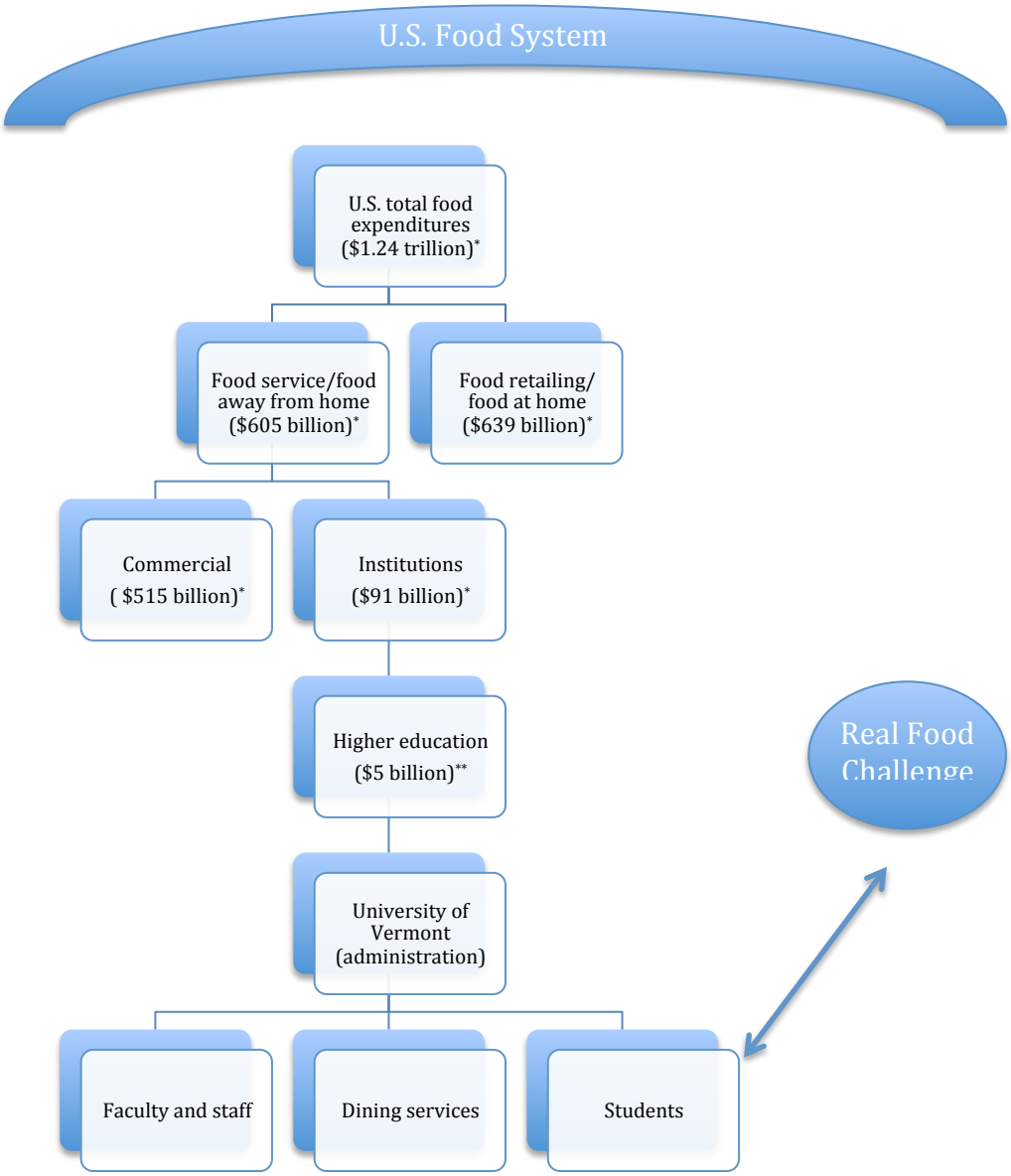

Figure 1.1: Mapping UVM in the U.S. food system

Note: *Data is for 2010 and was retrieved from the USDA Economic Research Service at http://www.ers.usda.gov/data-products/food-expenditures.aspx#26636
**Data retrieved from http://www.realfoodchallenge.org/about/faqhttp://www.realfoodchallenge.org/about/faq

Leaders of the RFC hope that shifting 20% of higher education food budgets towards "real" food will set a precedent for other institutions and push the Real Food movement past a tipping point, so that purchasing "real" food becomes the norm rather

than the exception. I am not aware of any literature describing specific tipping points within the food system, but there are a few ways in which the RFC might push the movement for a more just and sustainable food system past a tipping point. First, shifting 20% of purchases towards "real" food will require the creation of appropriate infrastructure, supply chains, and knowledge. Once these have been established, the RFC believes it will be much easier to increase "real" food purchases beyond 20% and towards a majority. Second, by targeting students, the RFC is educating future consumers and leaders, who will sustain and grow the Real Food movement. Moreover, they will demand "real" food at other institutions and venues once they graduate, thus helping to grow the Real Food movement beyond higher education. Lastly, if enough colleges and universities sign on to the RFC it will become the norm for institutions of higher education to do so. For example, the sustainability movement has reached such a point that it is aberrant for colleges and universities not to have some sort of sustainability initiative. Making "real" food a norm in higher education could also set a precedent for other types of institutions. The considerable leverage that higher education has within the food system makes research about the RFC—a movement that is trying to change the landscape of higher education foodservice—worthwhile and pertinent.

Students are the driving force behind the RFC. As Figure 1.1 shows, the RFC is trying to leverage the influence of higher education within the food system by harnessing the power of students. The RFC recognizes that students—and young people in general—have the biggest stake in the future, and thus the most compelling reasons to change the dominant food system (The Real Food Challenge, n.d.). They also recognize that while students may not directly control the food purchases at colleges and universities, they do

have significant influence on administrations and dining service operations, the two authorities that do control food purchases. Generally speaking, higher education administrations want to keep students happy and maintain a positive reputation to attract incoming students. Unrest amongst students does not bode well for an institution's reputation, and thus an administration has a vested interest in appeasing students. Similarly, dining service operations have a vested interest in keeping students happy. The majority of colleges and universities in the U.S. contract their dining services out to a foodservice company; these companies have a vested interest in keeping students happy, because enough dissatisfaction amongst students could prevent the institution's administration from renewing their contract with the company (for the reason previously described). Self-operated dining services have the same vested interest in keeping students happy as administrators do, since they are part of the university and thus share the same goals. The considerable influence students have on dining patterns necessitates research about their demand and preference for "real" food.

The University of Vermont (UVM) joined the Real Food movement in 2012 when the interim President of the university signed the Real Food Campus Commitment, which pledged to shift 20% of UVM's food budget towards "real" food by 2020. As the fifth university in the nation to sign it, UVM is ahead of most HEIs in the process of actually implementing the commitment. Since 2012, the Real Food Working Group (RFWG), a team of UVM students, faculty and staff, has been working with University Dining Services to determine how UVM should implement the campus commitment.

As a student member of the RFWG, I have been actively involved in the Real Food movement and the day-to-day reality of the implementation of the Real Food

Campus Commitment. As a result, I have witnessed first-hand the challenge of growing the Real Food movement on campus and I have come to question the potential of the movement to significantly transform the food system. This thesis is an opportunity for me to take a step back from the reality of the RFC on the ground to consider the current and future state of the movement.

As a relatively new movement, nothing has been published yet about the RFC. The considerable student power and market share the RFC has the potential to leverage warrants an examination of the movement. We know that students across the country are pushing their institutions to sign the Real Food Campus Commitment, but we do not know what type of students prefer "real" food, or what proportion of students on campus prefer it. We also do not have a broad picture of what implementation of the RFC looks like on the ground and how implementation is or is not moving in a direction that has the capacity to significantly transform the food system. The purpose of this thesis is to address the gap in the literature by evaluating the RFC at one of the leading institutions in the movement, UVM. I do so by addressing the following research questions:

(1) What does demand for "real" food at UVM look like?

(2) What factors affect student preference for "real" food at UVM?

(3) What is the potential of the RFC, as it is currently being realized on the ground, to significantly transform the food system?

To explore these questions I begin chapter 2 by reviewing the literature about sustainable food initiatives in higher education and student values and perceptions regarding local and sustainable food. I then give an overview of the RFC and UVM. In my first article, chapter 3, I use survey data to characterize the demand for "real" food at

UVM and explore what factors affect student preference for “real” food. In my second article, chapter 4, I draw on my personal experience as a participant observer in the Real Food movement to analyze the activities and components of the movement using a food democracy framework. I analyze the potential of the movement on a national scale as well as a local scale at UVM. I conclude this thesis in chapter 5, with a discussion of the theoretical and practical implications of my findings.

Chapter 2: Background

2.1 SUSTAINABLE FOOD INITIATIVES IN HIGHER EDUCATION

The current agro-food system is dominated by industrial agriculture, which is characterized by increasingly few, larger farms that grow monocultures; they are highly mechanized, capital intensive and rely on purchased inputs, such as fossil fuels and chemicals (Conner, 2004). Moreover, a wave of mergers and acquisitions in the 1970s and 1980s transformed a largely national-oriented food system into an increasingly globalized system dominated by multinational food companies (Lyson and Raymer, 2000). This dominant system is highly environmentally, economically, and socially unsustainable.

Various food initiatives have been developed in response to the globalized, industrial agro-food system. Such efforts are quite varied but all seek to address the economic, environmental, and/or social sustainability of food systems in one way or another. Some examples include the re-localization of food systems, such as direct markets, short food supply chains, and farm-to-institution; the slow food movement; and various labeling schemes, such as Fair Trade certification, organic certification, and humane certifications.

A growing number of colleges and universities across the country have adopted sustainable food initiatives on their campuses (Barlett, 2011). At least 300 campuses have farms, fair trade initiatives, or farm-to-college programs (Real Food Challenge, 2014). As the concept of sustainability is broad and encompasses a range of concerns—namely economic, social, and environmental—so too are the types of initiatives on campuses.

Barlett (2011) outlines four ways in which colleges and universities are implementing sustainable food initiatives on campus:

1. Dining-service innovations in procurement, menus, and kitchen operations;
2. Academic and co-curricular programs, including courses, concentrations, and internships;
3. Direct-marketing opportunities, including farmers markets and community supported agriculture (CSAs);
4. Hands-on experiences in community gardens and campus farms.

These types of initiatives listed above can be motivated by a variety of factors, such as concern for the environmental impact of food (carbon emissions, fertilizer and pesticide use), ethical and social justice issues (fair wages and treatment of workers, humane treatment of animals), health issues, and concern for the local economy (Barlett, 2011).

One sustainable food initiative that has become increasingly popular in the past decade is farm-to-college (FTC), which is part of the larger farm-to-institution (FTI) movement. FTI initiatives seek to increase the supply of locally grown food in institutions, such as schools, universities, hospitals, prisons, and museums. The two primary goals of FTI initiatives are to support local farmers and improve public health (Harris et al., 2012; Feenstra & Ohmart, 2010). FTI programs can vary in type; typically programs involve sourcing local or regional fruits, vegetables, and other food items to serve in cafeterias, stores, restaurants, catered events, meetings, and special events, but some programs involve direct to consumer marketing opportunities (farmers markets, CSAs, farm stands) or on-site gardens or farms (Harris et al. 2012).

Farm-to-college programs, specifically, are a relatively new phenomenon and have been growing in number around the country. As of 2004, 78 higher education institutions had some sort of FTC program (Murray, 2005). Programs types vary with regards to size of the university, geographic location, public/private, and self-operated/contracted dining service (Murray, 2005). Most universities cite supporting local farmers and the local economy as the primary motivating factors for FTC programs, followed by better public relations, high quality food, and environmental benefits (Murray, 2005). Some FTC programs are implemented at the corporate level across multiple campuses that share a food-service provider (Murray, 2005).

There are various reasons motivating institutions of higher education to adopt food initiatives. Just as Murray (2005) found with FTC programs, many colleges and universities support food initiatives because of growing student demand (which affects public relations and reputation), but there are other reasons why institutions might support such efforts. Sustainable food initiatives can be viewed within the context of more general sustainability initiatives in higher education. The reasons, then, that colleges and universities have for implementing more general sustainability initiatives can be applied specifically to food initiatives. In his dissertation, Shriberg (2002) conducted an extensive review of the sustainability literature and from it identified five major reasons as to why scholars believe colleges and universities should promote sustainability initiatives on campuses:

1. They have the expertise, leverage, and resources to lead sustainability efforts.
2. They occupy a special place in society and thus have a social/moral obligation to pursue sustainability.

3. They serve as models for students and society and thus have a responsibility to demonstrate sustainable behavior.
4. They are problem causes, in that that they reinforce the human-nature divide in the current societal paradigm and that they have significant environmental impacts.
5. They could improve their reputations by adopting sustainability as a core principle.

The above list clearly demonstrates that colleges and universities have numerous and significant reasons to pursue sustainability, of which food initiatives are a large part because they can encompass all three components of sustainability (economic, social, and environmental). Support for the RFC is largely driven by student activism. Shriberg's summary of the literature, however, suggests that colleges and universities have more reasons beyond student demand to support initiatives like the RFC.

2.2 STUDENT VALUES

As sustainable food initiatives, such as the RFC, are spreading to campuses across the country it is important to consider how students perceive the values promoted by these initiatives. In this section I review the literature on food-related values of students and student support for the values promoted by sustainable food initiatives.

In a national sample, Feenstra et al. (2011) found that the most important food-related values to college students were safety, freshness, taste, convenience, nutrition and price. Marquis (2005) found that the most important factor motivating food choice for college students was convenience, followed by price, pleasure, and health. Dahm, Samonte, and Shows (2010) found taste to be the most important factor in students' food

decisions at a mid-sized southern university, followed by price, appearance, availability and package information. These findings agree with past studies that found health, taste, and price to be among the most important food-related values to the public (Lusk & Briggeman, 2009; Connors et al., 2001). Thus, it appears that students are replicating the dominant paradigm of the food system that places emphasis on values that have a direct impact on the person consuming the food.

Similarly, consumer-oriented values seem to be most important to students in their selection of dining location. The most important factors are price, menu selection, convenient location, and cuisine type (Mintel 2012). Only about 5% of students choose a dining location based on local ingredient usage or the use of Fair Trade products (Mintel, 2012).

Students' values are reflected in the factors that are most important to their satisfaction with campus dining services. Andaleeb and Caskey (2007) found that the most important issues to students at a college in northwestern Pennsylvania regarding their satisfaction with campus dining services were food quality and selection, price, staff behavior, atmosphere, and responsiveness (speed with which students are served). More specifically, they found that students would like to see more variety in the food offered to them (including more diverse menus) as well as healthier selections (Andaleeb and Caskey, 2007). Echoing Andaleeb and Caskey's finding, Kim, Moreo, and Yeh (2008) found that food quality was the most important factor with regards to student's satisfaction with campus dining at Oklahoma State University.

A few recent studies have examined students' attitudes towards values promoted by sustainable food initiatives. Pelletier et al. (2013) surveyed students at two schools in

Minnesota and found that about half of them reported alternative production practices (specifically, local, organic or sustainable) to be moderately or very important to them, and there were few demographic differences across attitudes. Gerson et al. (2013) found that about half of the college students they surveyed at a university in northern California had positive attitudes towards local food and reported that they had attended a farmers market. Dahm, Samonte, and Shows (2010) found that 40% of students had positive attitudes about organic food, and that more than half of students supported the use of organic food on campus. Robinson-O'Brien et al. (2009), found that 21% of adolescents surveyed in Minnesota (ages 15-23) considered it important that their food be grown locally, 23% considered it important that their food be grown organically, 34% considered it important that their food be non-genetically engineered, and 30% considered it important that their food be unprocessed.

Feenstra et al. (2011) surveyed a national sample of college students to better understand student demand for alternative production practices. They found that more than half of students considered it important that their food was humanely raised (about 62%) and was produced by workers earning a living wage (about 51%) (Feenstra et al., 2011). Less than half of students considered it important that their food was grown sustainably (about 41%), locally (about 30%), certified organic (about 25%), or on a small farm (about 18%) (Feenstra et al, 2011). They also found that over 40% of students would be willing to pay $0.50 (a 14% increase) more for a salad originally costing $3.50 that is organic, local, sustainably produced, or produced in accordance with living wage guidelines (Feenstra et al., 2011); over half of students (at least 58%) would pay $0.25 (a 7% increase) more (Community Alliance with Family Farmers, 2008). These findings

suggest that initiatives focused on the welfare of others (e.g. humane treatment of animals and living wages for workers) may get the most support from students and that initiatives focused on promoting small farms may not be very well supported by students. It is interesting that only about 30% and 25% considered it important that their food be locally grown or certified organic, respectively, but over 40% of students were willing to pay more for food with those attributes.

A survey conducted at Clark University found that 44% of students reported issues of local, organic, sustainable food to be very important to them (Clark University, 2010). It also found that 30% of students surveyed were very willing to pay more for a meal plan that had a higher percentage of local, organic, sustainable food; 51% were somewhat willing to pay more; and only 19% were not at all willing to pay more (Clark University, 2010). This suggests that while less than half of students consider issues of alternative food systems to be very important to them, the vast majority of students (about 80%) value them enough to pay some sort of premium for them.

2.3 THE REAL FOOD CHALLENGE

The Real Food Challenge (RFC) was inspired by a group of food system activists and leaders who recognized the need to combine all of the seemingly disparate student activism around food issues on campuses across the country to create a single, coherent movement. These leaders noticed that while there was a lot of inspiring activism across the country, few of the actors knew about each other's efforts. Furthermore, they noticed that climate change activists, student farmers, local food enthusiasts, fair trade advocates, and farmworker rights organizers, to name a few, were all working in isolation from one another (D. Schwartz, personal communication, April 7, 2014). They saw potential in

these diverse movements and recognized the need to craft a common language, a collective vision, and clear goals that would allow these activists to mobilize and gain recognition together.

In 2006, at the Kellogg Foundation, a long-time ally and funder of food systems work, hosted a Food and Society Conference for their grantees and other organizations. The foundation had conducted research and found that only 2% of the U.S. food economy was fair, healthy, green, and affordable (The Real Food Challenge, n.d.). They challenged the conference attendees to move that number from 2% to 10% in ten years (The Real Food Challenge, n.d.).

At the conference, delegations from the California Student Sustainability Coalition (CSSC) and The Food Project (TFP) saw a connection between all of the student activism on higher education campuses and the Kellogg Foundation's challenge. They began discussing the benefits of creating a national network—what would become the RFC—to support and amplify the efforts of diverse student activism on campuses across the country (The Real Food Challenge, n.d.).

TFP is a non-profit located in Boston, MA that "has built a national model of engaging young people in personal and social change through sustainable agriculture" (The Food Project, n.d.). The CSSC is non-profit network of student sustainability organizations in California that strives to implement policies and programs that will help transform their institutions into models of sustainability (California Student Sustainability Coalition, n.d.). These two organizations served as models for the RFC and members from both of them have been primary driving forces behind the vision and launch of the RFC (The Real Food Challenge, n.d.).

Together, student leaders and members from TFP and CSSC created a steering committee in 2007 to formally start building the type of national network they envisioned. The RFC officially launched in the fall of 2008 with student action for "Real Food Now" on over 150 campuses. That winter, over 700 students from 200 campuses converged at one of five regional Real Food Summits. Since then the movement has spread to over 300 campuses and engaged over 150,000 students (D. Schwartz, personal communication, April 7, 2014).

The RFC aims to address the social, economic, and environmental problems associated with the agro-food system by harnessing the purchasing power of higher education institutions. Higher education institutions across the country collectively spend about $5 billion annually on food to feed about 17 million students (The Real Food Challenge, n.d.). The flagship goal of the RFC is to shift 20% of existing higher education food budgets—or $1 billion—towards Real Food by 2020. Real Food is defined as:

> Food that truly nourishes producers, consumers, communities and the earth. It is a food system--from seed to plate--that fundamentally respects human dignity and health, animal welfare, social justice and environmental sustainability. Some people call it "local," "green," "slow," or "fair." We use "Real Food" as a holistic term to bring together many of these diverse ideas people have about a values-based food economy.
>
> (The Real Food Challenge, n.d.)

While 20% may not seem like a lofty goal, a 2007 study conducted by the W.K. Kellogg Foundation found that "healthy, fair, green, and affordable food" represented less than 2% of the U.S. food economy (D. Schwartz, personal communication, April 7, 2014). The RFC also supports efforts to grow more college farms, student-community

partnerships, academic programs that deal with food systems, solidarity actions with food system workers, climate change-connections and more.

As mentioned above, the impetus for the RFC was the recognition that various forms of food systems initiatives shared common values on campuses across the country. These initiatives were all part of the larger food movement but they lacked common goals, a common framework, and a collective voice. Students around the country were already organizing for a more just and sustainable food system—they just needed to be unified in order to amplify their voice and impact. Thus, the RFC emerged as a response to the social movement concerned with food systems issues already present in higher education.

The primary way the RFC intends to meet its goal of shifting $1 billion of university food budgets towards real food is through the Real Food Campus Commitment. The commitment, which was modeled in part on the President's Climate Commitment, asks university and college presidents to formally prioritize "real" food. It commits the university to procure more "real" food (at least 20% by 2020), improve institutional transparency, and increase student and community engagement (The Real Food Challenge, n.d.).

Thus far, 30 schools have signed the Campus Commitment, pledging to shift over $60 million of university food budgets towards "real" food (The Real Food Challenge, n.d.). Some schools have exceeded the 20% goals: University of California Santa Cruz, Oberlin College, and Warren Wilson College pledged to purchase 40% "real" food by 2020; Johns Hopkins University pledged 35% by 2020; and Bard College and Macalester College pledged 30% by 2020 (The Real Food Challenge, n.d.).

In order to increase the amount of "real" food on campuses, the founders of RFC recognized the need for a measurement tool that could help students track how much "real" food their campus food service were actually purchasing. Thus, a team of students and food service industry experts developed the Real Food Calculator, on online tool to track food purchases. In her examination of SFIs on higher education campuses, Barlett (2011) discovered that most institutions do not track purchasing totals and thus are unable to demonstrate the extent to which their goals are being met. The Real Food Calculator, which measures "real" food percentages by dollar, addresses that weakness by providing a tool for students to assess baseline-purchasing patterns, identify opportunities for improvement, and track progress in sustainable purchasing over time. Thus far, students from over 188 institutions have utilized the calculator (The Real Food Challenge, n.d.).

The calculator tracks food purchasing and calculates "real" food percentages based on the Real Food Guide, a list of criteria that food must meet to qualify as "real." These rigorous standards have been developed to be compatible with, and build upon, existing sustainability standards set by organization such as Business Alliance for Local Living Economies (BALLE), Association for the Advancement of Sustainability in Higher Education (AASHE) and Leadership in Energy and Environmental Design (LEED) (The Real Food Challenge, n.d.). The criteria, which are third party certifications and characteristics of producers, have been divided into four categories: local/community based, ecologically sound, fair, and humane. In order to qualify as "real," food must meet the criteria of at least one of the four categories, which the RFC defines as such:

- **Local and Community-Based**: These foods can be traced to nearby farms and businesses that are locally owned and operated. Sourcing these foods supports the local economy by keeping money in the community and builds community

relations. The food travels fewer miles to reach consumers. The food is seasonal, and when it is fresh, it often has a higher nutrient content.

- **Fair**: Individuals involved in food production, distribution, preparation--and other parts of the food system—work in safe and fair conditions; receive a living wage; are ensured the right to organize and the right to a grievance process; and have equal opportunity for employment. Fair food builds community capacity and ensures and promotes socially just practices in the food system.

- **Humane**: Animals can express natural behavior in a low-stress environment and are raised with no hormones or unnecessary medication.

- **Ecologically Sound**: Farms, businesses, and other operations involved with food production practice environmental stewardship that conserves biodiversity and preserves natural resources, including energy, wildlife, water, air, and soil. Production practices should minimize toxic substances as well as direct and indirect petroleum inputs.

(The Real Food Challenge, n.d.)

The organization of the RFC movement was inspired by Berkana Institute's Four Stages for Developing Leadership-in-Community, which reduces the complex process of social change into four core elements: naming, connecting, nourishing, and illuminating (D. Schwartz, personal communication, April 7, 2014). The four elements are:

1. **Name it**: Innovators and activists often work in isolation from one another; they do not recognize that their work has value beyond their own community and that they are part of a larger community or network of practitioners. Naming it is about identifying the work that individuals are doing and how it contributes to a community.

2. **Connect it:** Developing connections among members of a community or movement can strengthen individual efforts through the sharing of ideas, inspiration, resources, and confidence.

3. **Nourish it**: In order for movements to be successful and create meaningful change they need to be nourished with a variety of resources—most notably, relationships and learning. By building

relationships leaders can learn from each other about how to create meaningful change.

4. **Illuminate it**: Because efforts that are based on new ways of thinking are often overlooked or misperceived as aberrations it is important to showcase the success stories of an emerging movement. Illuminating the good work of a movement can inspire others to step up and it paints a picture of what is possible—what a new world could look like.

(The Berkana Institute, n.d.)

The founders of RFC recognized that students across the country were leading individual food initiatives or campaigns based on similar visions, but that the students failed to see how their work fit into a larger community of people campaigning for a more just and sustainable food system. There is great strength in being a member of a community or a movement, and the RFC serves to identify seemingly disparate campaigns as members of a community striving for similar goals. The RFC creates space for students to connect with each other by hosting regional and national trainings and summits. It seeks to nourish the movement by fostering relationships and learning among isolated campaigns. By mobilizing diverse food movements around common goals and common language the RFC can help each of them gain recognition and begin to paint a picture of a new paradigm.

2.4 THE UNIVERSITY OF VERMONT

Located in a state that is a national leader in innovative food systems work, UVM is committed to food systems research and education. The university has engaged sustainable food initiatives in all four of the ways Barlett (2011) outlined, which is still relatively uncommon. It engages academic and co-

curricular programs by supporting food-systems related internships, offering a variety of food-systems related courses, an undergraduate Food Systems minor, and a M.S. in Food Systems. A more detailed outline of UVM's curricular elements can be found in Table 4.3 in chapter 4. It supports hand-on experience by offering a Farmer Training Program. UVM provides direct marketing opportunities in multiple ways: Eco-reps, a student internship program hosts multiple farmer's markets on campus throughout the academic year; University Dining Services (UDS) has partnered with The Intervale Food Hub to offer UVM students the option to purchase a CSA share on campus; and students in the Farmer Training Program sell produce they grow at a farm stand on campus. University Dining Services has supported innovations in procurement such as having a dining location dedicated to local, sustainable food (Brennan's), where about 55% of food served is local and/or sustainable; purchasing Fair Trade coffee, tea, and bananas; serving only sustainably sourced seafood by 2015; and purchasing only Certified Humane, cage-free shell eggs (University Dining Services, n.d.).

Various student groups on campus are also committed to a more sustainable food system: Slow Food UVM preserves and shares local, culturally significant foods and customs; Common Ground is a student run organic farm; and Campus Kitchen salvages unused food from local farms to create meals for the local food shelf. These various projects and organizations demonstrate a widespread commitment on the UVM campus to values promoted by the RFC.

UVM students first became involved with the RFC when a Sodexo Sustainability Intern piloted the Real Food Calculator in 2009. In 2011, the President of Slow Food UVM decided to invite members of that group to attend a Food Justice Summit at Northeastern University sponsored by RFC organizers in the Northeast. Three sophomore students were eager to launch a broader UVM campus food movement, and returned from this summit with the energy and connections needed to further develop the presence of the RFC at UVM.

These three students assumed leadership of Slow Food UVM in the fall of 2011, and became part of the first cohort of recognized "grassroots leaders" with the RFC. Through garnering the energy and commitment of their Slow Food club members, and partnering with regional organizers from the RFC, they used the first national Food Day (October 24, 2011) as a launching point for a strategic campaign to bring the Real Food Campus Commitment to UVM. The event brought together members of the UVM community who, through participation in petitions, photo campaigns, and an eat-in, demonstrated their interest in establishing this formal commitment to bettering the food at UVM. The next four months were spent relaying the case to faculty and administrators, before the commitment was officially signed by interim President on March 22, 2012.

Upon the signing of the Real Food Campus Commitment in 2012 the Real Food Working Group (RFWG)—a team of students, faculty, staff, and representatives from Dining Services—was created and charged with implementing the Campus Commitment. A team of student interns have been running the Real Food Calculator to track UVM's purchasing since 2009. During the first semester the calculator was run (Fall 2009) Sodexo was spending 10.07% of its food budget on "real" food (University of Vermont, 2015). The latest data available is for spring 2013, during which about 12% of the budget was spent on "real" food (University of Vermont, 2015).

Chapter 3: An Analysis of Student Preference for Real Food

3.1 INTRODUCTION

A growing number of higher education institutions across the country have adopted sustainable food initiatives on their campuses (Barlett, 2011). The various sustainable food initiatives present on higher education campuses and elsewhere, such as local, sustainable, organic, fair trade, and civic agricultural initiatives, are all components of a larger social movement that contests the dominant agro-food system (Constance, 2008). The Real Food Challenge (RFC)—a national, student movement—was launched in 2008 as way to support and amplify the efforts of all of the seemingly disparate sustainable food initiatives on campuses across the country.

The RFC aims to address the social, economic, and environmental problems associated with the dominant agro-food system by harnessing the purchasing power of

higher education institutions, which collectively spend about $5 billion annually on food (Steel, 2012). The flagship goal of the RFC is to shift 20% of existing higher education food budgets—or $1 billion—towards "real" food by 2020. "Real" food is defined as:

> Food that truly nourishes producers, consumers, communities and the earth. It is a food system--from seed to plate--that fundamentally respects human dignity and health, animal welfare, social justice and environmental sustainability. Some people call it "local," "green," "slow," or "fair." We use "Real Food" as a holistic term to bring together many of these diverse ideas people have about a values-based food economy.
>
> (The Real Food Challenge, n.d)

As this definition is subjective and difficult to measure, the RFC developed criteria, which are third party certifications and producer characteristics, that are divided into four categories: local/community based, ecologically sound, fair, and humane. In order to qualify as "real," food must meet the criteria of at least one of the four categories:

- **Local and Community-Based**: These foods can be traced to nearby farms and businesses that are locally owned and operated. Sourcing these foods supports the local economy by keeping money in the community and builds community relations. The food travels fewer miles to reach consumers. The food is seasonal, and when it is fresh, it often has a higher nutrient content.

- **Fair**: Individuals involved in food production, distribution, preparation--and other parts of the food system—work in safe and fair conditions; receive a living wage; are ensured the right to organize and the right to a grievance process; and have equal opportunity for employment. Fair food builds community capacity and ensures and promotes socially just practices in the food system.

- **Humane**: Animals can express natural behavior in a low-stress environment and are raised with no hormones or unnecessary medication.

- **Ecologically Sound**: Farms, businesses, and other operations involved with food production practice environmental stewardship that conserves biodiversity and preserves natural resources, including energy, wildlife, water, air, and soil. Production practices should minimize toxic substances as well as direct and indirect petroleum inputs.

(The Real Food Challenge, n.d.)

The primary way the RFC intends to meet its goal of shifting $1 billion of higher education food budgets towards "real" food is through the Real Food Campus Commitment. The commitment, which was modeled in part on the President's Climate Commitment, asks presidents of higher education institutions to formally prioritize "real" food. It commits the institution to procure more "real" food (at least 20% by 2020), improve institutional transparency, and increase student and community engagement (The Real Food Challenge, n.d.).

Thus far, 27 institutions have signed the Real Food Campus Commitment, pledging to shift over $60 million towards "real" food (The Real Food Challenge, n.d.). Furthermore, students from over 188 institutions have utilized the Real Food Calculator, a tool designed to measure an institution's "real" food purchasing percentages (The Real Food Challenge, n.d.). As the Real Food Movement spreads to campuses across the country and gains popularity amongst students it becomes clear that the term "real" is emerging as a new attribute for food products.

While the characteristics of "real" food—local, sustainable, fair, and humane—are not novel, the usage of a catchall term for them is. Much research has been devoted to the exploration of demand and preferences for these individual characteristics, which I will discuss in the next section. Since the Real Food movement is relatively new there has not yet been any literature devoted to demand and preferences for the new "real" attribute. As such, this paper extends the literature by exploring student preference for "real" food at a mid-sized university in the northeast. The objective of this paper is to characterize student preference for "real" food, as measured by their willingness-to-pay

(WTP) a positive premium for a meal plan consisting of at least 20% "real" food. We measure students WTP and explore how personal characteristics and attitudes influence the likelihood of being WTP a positive premium.

3.2 BACKGROUND

Student Values

A few recent studies have examined college and university students' attitudes towards the values promoted by the RFC and found that significant proportions of students had positive attitudes towards them. Gerson, Goto, Wolff, and Giovanni (2013) found that about half of students at a university in northern California had positive attitudes towards local food and reported that they had attended a farmers market. Similarly, Dahm, Samonte, and Shows (2010) found that 40% of students at a mid-size southern university had positive attitudes about organic food, and that more than half of students supported the use of organic food on campus. Pelletier, Laska, Neumark-Sztainer, and Story (2013) found that about half of students at two universities in Minnesota reported alternative production practices (specifically, local, organic or sustainable) to be moderately or very important to them, and there were few demographic differences across attitudes. Robinson-O'Brien, Larson, Neumark-Sztainer, Hannan, and Sory (2009), found that only 21% of adolescents (ages 15-23) in Minnesota considered it important that their food be grown locally and 23% considered it important that their food be grown organically.

Feenstra, Allen, Hardesty, Ohmart, and Perez (2011) surveyed college students across the country about a variety of values and found that slightly more than half of students considered it important that their food was humanely raised (about 62%) and

was produced by workers earning a living wage (about 51%). Less than half of students considered it important that their food was grown sustainably (about 41%), locally (about 30%), certified organic (about 25%), or on a small farm (about 18%). They also found that over 40% of students would be willing to pay a 14% premium for a salad originally costing $3.50 if it was organic, local, sustainably produced, or produced in accordance with living wage guidelines, despite the fact that less than 40% of students considered it important that their food be grown locally or organically (Feenstra et al., 2011).

A survey conducted at Clark University, a small university in the northeast, found that 44% of students reported issues of local, organic, and sustainable food to be very important to them (Clark University, 2010). It also found that 30% of students surveyed were very willing to pay more (an undetermined amount) for a meal plan that had a higher percentage of local, organic, sustainable food; 51% were somewhat willing to pay more; 19% were not at all willing to pay more; and 75% would be more inclined to eat in a dining hall if there were more local, organic, sustainable food (Clark University, 2010). This last finding, especially, indicates that students may prefer "real" food, even if they do not consider the values promoted by the RFC as very important to them.

Willingness-to-pay

There has been a wealth of literature devoted to consumers' preference and demand for various credence attributes of food, which are attributes that are not identifiable even after consumption. Credence attributes may provide private benefits to consumers, but their production often has "affiliated public dimensions" (Lusk, Nilsson & Foster, 2007). These fairly intangible attributes often have outcomes related to public health, environmental conservation, origin, creation of employment, supporting small-

scale agriculture and local rural communities, farmers living and producing in marginal and/or disadvantaged conditions, and workers' rights (Moser, Raffaelli, & Thilmany-McFadden, 2011). The four characteristics encompassed in the "real" attribute—local, ecologically sound, fair, and humane—are credence attributes. To our knowledge, there has not yet been any literature specifically analyzing the demand for "real" food as a compound of the four distinct attributes. As such, in this section I review the literature on consumer demand for these four credence attributes individually.

The literature on demand for local food is quite varied, with authors finding consumers willing to pay premiums ranging from about 10-40%. Carpio and Isengildina-Massa (2009) found that South Carolina consumers were willing to pay a premium of about 25% for local produce and meat. Li, Wang, and Kolodinsky (2012) found that Vermont consumers were willing to pay a 43% premium local food. Loureiro and Hine (2002) found that over 70% of Colorado consumers were willing to pay a premium for local potatoes and that, on average, they were willing to pay a 10% price premium. Onozaka and McFadden (2011) found that consumers across the United States were willing to pay a 9-15% premium for local produce. Ortiz (2010) conducted an experiment at a restaurant on a university campus in Iowa and found that university students and staff, specifically, were willing to pay a premium for local food; 44% of the restaurant patrons in his experiment paid a premium (ranging from 8-14%) for a menu item that featured a local product (fruit, vegetable, or meat).

The literature shows that consumers are willing to pay a premium for various types of ecologically sound food, including coffee, produce, seafood, meat, and chocolate (Loureiro & Lotade, 2005; Loureiro & Hine, 2002; Loureiro, McCluskey, &

Mittelhammer, 2002; Johnston, 2001; Didier & Lucie, 2008; Lusk et al., 2007). Krystallis and Chryssohoidis (2005) found that the majority of Greek consumers were willing to pay a premium for organic food across product categories, but that the premium was highest for produce. Li et al. (2012) found that Vermont consumers were willing to pay a 48% premium for food produced using environmentally friendly methods, but only a 34% premium for certified organic food. Since about 2000 consumer preference for organic food has been surpassed by local food, where as before 2000 consumers had greater preference for organic food. (Adams & Salois, 2010).

Multiple studies have found that consumers are willing to pay a premium for Fair Trade products, such as coffee and chocolate, but the premiums they found vary quite a bit. Trudel and Cotte (2009) found that American consumers were willing to pay a $1.40/lb. premium for Fair Trade coffee. However, Loureiro and Lotade (2005) found that American consumers were willing to pay a much smaller premium of $0.21/lb. for Fair Trade coffee. Didier and Lucie (2008) found that French consumers were willing to pay a premium of 0.61 euro/100g for Fair Trade chocolate. Arnot, Boxall, and Cash (2006) demonstrated that the price premiums for Fair Trade products reported in stated-preference studies are not just hypothetical; they found that 21% of participants in their revealed-preference experiment actually paid a premium for Fair Trade Coffee at a university coffee shop in Canada. De Pelsmacker, Driesen, and Rayp (2005), however, found that only 10% of consumers were willing to pay the current price premium for Fair Trade coffee in Belgium, but that a majority of Belgian consumers valued the ethical aspect of Fair Trade coffee and 25% of consumers were willing to pay a price premium for it lower than the current market premium.

Recent studies have found that consumers are willing to pay a premium for increased animal welfare when purchasing animal products, but like other credence attributes, the premiums consumers are willing to pay vary quite a bit. Naald and Cameron (2011) found that U.S. consumers in one county are willing to pay a $0.35/lb. premium for humanely raised chicken. Lusk et al. (2007) found that a national sample of U.S. consumers were willing to pay a $0.84/lb. premium for pork with a certification of animal well being, which was significantly greater than the premium consumers were willing to pay for pork that was certified for environmentally friendly production. Tonsor, Olynk, and Wolf (2009) found that Michigan consumers were WTP significantly more ($2.11/lb.) for pork voluntarily produced without gestation crates. Glass, Hutchinson, and Beattie (2005) found animal welfare improvements had a significant, positive effect on Northern Ireland consumers' WTP for pork. Maria (2006) found that the majority of consumers in Zargozza, Spain were concerned about animal welfare and that 75% of respondents reported WTP a premium for animal friendly food products. Taylor and Signal (2009) found that the majority of the Australian consumers were concerned about animal welfare, and the majority of respondents were willing to pay a premium of at least 5%, while about 20% of respondents were willing to pay a premium of 10-20%. While multiple studies demonstrate a WTP for animal welfare, Napolitano, Girolami, and Braghieri (2010) caution that it is still unknown whether the premium consumers are willing to pay is sufficient to cover the extra costs associated with increased animal welfare standards.

Theoretical Framework

The theoretical framework we use for this analysis is Lancaster's (1966) theory of consumer demand, which suggests that utility is derived from attributes of goods rather than from goods themselves. Thus, the utility derived from a good is a function of the good's attributes, given the consumer's preferences. This can be represented as:

$$U = f(X_1, X_2, \dots, X_n; P)$$

where U is utility, P is the consumer's preferences, and X_i are attributes of the good in question. We assume that a consumer will choose the goods with attributes that maximize his or her utility, given their preferences. Because the utility derived from attributes is a latent construct it is not directly observable. However, a proxy measure of utility can be estimated by WTP, because it is assumed that a consumer will be willing to pay a price premium for a given attribute if he or she derives utility from that attribute.

In this study we assume that college and university students may prefer "real" food because they derive utility from the "real" attribute. We define the "real" attribute as meeting at least one of the following criteria (as previously defined): local, ecologically sound, fair, or humane. Since there is currently no market for the specific bundle of attributes that define "real" food, we use the contingent valuation (CV) method to estimate students' WTP for the specific bundle of attributes. The CV method circumvents the absence of a market for "real" food by presenting students with a hypothetical market in which they have the opportunity to buy a meal plan that offers "real" food. CV has been widely used to value consumer demand for the individual characteristics of "real" food—local, ecologically sound, fair, and humane (Loureiro & Hine, 2002; Loureiro &

Lotade, 2005; Giraud, Bond, & Bond, 2005; Glass et al., 2005; Thilmany, Bond, & Bond, 2008; Lusk & Briggeman, 2009). In this study we use CV to measure students' preference for the "real" attribute as a catchall term of the four characteristics it encompasses.

As summarized by Breidert, Hahsler, and Reutterer (2006) there are some criticisms of measuring WTP with direct consumer surveys, like the CV method: consumers can over or underestimate their WTP; stated WTP does not necessarily translate into purchasing behavior; and focusing on price can displace some of the product's other attributes. These criticisms must be weighed against the convenience and cost-effectiveness of the CV method. While there may be some concerns about the hypothetical nature of the CV method, Loureiro et al. (2003) found that consumers who reported a WTP a premium for a product was actually more likely to purchase that product.

Although models based on stated preference are not as reliable as models based on revealed preferences, we had no way of obtaining students' revealed preferences for "real" food on campus. Currently, students do not have the option of purchasing a meal plan that has at least 20% "real" food, and therefore there is no data on revealed preferences. As such, in this study we utilize CV to obtain students stated preference for a meal plan consisting of at least 20% "real" food.

The type of CV method we utilize in this study is the payment card method, which involves a survey question that has an ordered set of threshold values and the respondent is asked to choose the highest value they would be willing to pay for the good in question (Mitchell & Carson, 1989). The payment card method is very convenient (no

need for interviewer prompts) and it largely avoids the problem of non-response with open-ended questions (Cameron & Huppert, 1998). This method is, however, vulnerable to biases associated with the range of values and the intervals between the values (Mitchell & Carson, 1989). To mitigate these biases, we minimized the intervals between values and allowed respondents to choose not to pay any premium, or pay less than or greater than our range of premiums.

3.3 METHODS

Survey Instrument

Our research was conducted at The University of Vermont (UVM), a land grant university located in Burlington, Vermont. In the fall of 2013, when this research was conducted, UVM had 11,781 students enrolled in degree programs, 9,970 of which were undergraduate students. UVM was one of the first schools to pilot the Real Food Calculator in 2009 and was the fifth school in the country to sign the Real Food Campus Commitment in 2012. At the time this study was conducted, UVM was already spending about 13% of its annual food budget on "real" food (The University of Vermont, n.d.).

In the fall of 2013 the Real Food Working Group (RFWG)—a multi-stakeholder group on campus tasked with implementing the Real Food Campus Commitment—partnered with a UVM undergraduate social research methods class in a service-learning context to develop and conduct a survey of undergraduate students at UVM. Two of the authors (Kolodinsky and Porter) are members of the RFWG and Porter served as a representative from the RFWG to advise the students on what type of information to elicit from the survey. Though members of the RFWG had input into the creation of the survey, the students ultimately designed the survey as a class. The survey (Appendix A)

collected the following information: demographic characteristics, awareness of the RFC, most frequent dining location on campus, the importance of several attributes when deciding where to eat on campus, and willingness to pay more for a meal plan that had at least 20% "real" food. They survey was coded prior to distribution to ensure that response data would be valid and useful.

The students in the class were responsible for distributing the survey using convenience-sampling methods in November 2013. Each of the 48 students in the class was given 20 surveys to distribute to UVM undergraduate students on campus and at other student gathering spots. A total of 904 surveys were completed. Table 3.1 shows demographic characteristics of our sample and compares them to the demographics of the entire UVM undergraduate population.

Though the sample was a convenience sample, Table 3.1 demonstrates that the demographic information of the sample is similar to the UVM undergraduate student population, with two exceptions. The only significant differences were among class years and colleges. Sophomores were slightly overrepresented and seniors were slightly underrepresented. We hypothesize that seniors may have been underrepresented because the majority of them do not live on campus or have a meal plan, and therefore less of them may have been on campus when the survey was distributed. The College of Agriculture and Life Sciences (CALS) and the School of Business Administration (SBA) were slightly overrepresented and the College of Arts and Sciences (CAS) was slightly underrepresented. CALS may have been overrepresented because most of the students in the class that administered the survey were CALS students.

Table 3.1: *Demographic characteristics of survey respondents*

Characteristic	**Sample % (n=904)**	**UVM % (n=9,970)**	**p-value**
Gender (n=890)			
Male	43.6	44.0	0.81
Female	56.4	56.0	
Classification (n=892)			
First year	26.5	27.6	0.31
Sophomore	35.2	24.1	0.00*
Junior	23.0	22.8	0.98
Senior	15.4	25.5	0.00*
Residency (n=882)			
In-state	34.5	31.9	0.12
Out-of-state	65.5	68.1	
College (n=892)			
CALS	23.0	13.1	0.00*
CAS	33.0	45.9	0.00*
RUB	5.8	6.2	0.83
SBA	13.1	8.0	0.00*
CEMS	8.9	10.1	0.07
CESS	8.3	7.7	0.41
CNHS	8.0	9.0	0.23

Note. Percentages may not add up to 100 due to rounding.
** Significant at α=0.05*

Before presenting students with the CV question on the survey we included a brief description of "real" food, as it was assumed that not all students were aware of the definition of it. The CV question we used to elicit students' WTP for real food was as follows: *Consider the resources you and your parents/guardians have to pay for your meals at college. How much more would you be willing to pay for your meal plan if over 20% of the food was defined as "real" using the qualifications above (circle one)?* The options they were able to choose from were presented in dollars/semester and represented a less than 1%, 1%, 3%, 5%, 10%, or greater than 10% premium. There was also an option to not pay any more per semester. The premiums were calculated based on the average meal plan price (for financial aid) of $1,883.00. We chose to set the minimum

amount of "real" food in the hypothetical scenario at 20%, because that is the minimum amount UVM has committed to reaching by 2020.

Statistical Analysis

The data was analyzed with Statistical Package for Social Sciences (SPSS) Version 21. First, we conducted cross-tabulations using Chi-square tests. Then we used a binary logistic model to identify how personal characteristics and attitudes influence students' preference for "real" food. Competing models, such as tobit and ordered probit, revealed few, if any, significant predictors explaining the variability in WTP, given there was a positive WTP. As such, we chose to use a binary logistic regression to determine which predictors influenced whether or not a respondent was willing to pay a premium or not.

Logistic regression enables you to predict whether or not an individual is a member of a group (yes or no) based on a set of explanatory variables (*X*). The dependent variable (*y*) is dichotomous and can take the value of 1 (member of the group) or 0 (not a member). In logistic regression the relationship between independent and dependent variables is not linear. Rather, the dependent variable is transformed by the logit function as such:

$$\text{Logit}\left(y(x)\right) = \alpha + \beta_1 X_1 + \beta_2 \text{X}_2 \ldots + \beta_i \text{X}_i$$

Where α is the constant term and β is the coefficient of independent variables.

Logistic regression predicts the odds ratio for each independent variable, which is a measure of association between the presence of an independent variable and membership in the group (y=1). An odds ratio of one indicates that the given independent

variable has no effect on an individual's membership in the group. An odds ratio above one indicates that increasing the independent variable by one unit increases the odds that the individual will be in the group (y=1) by a magnitude of the odds ratio, holding all other independent variables constant. Conversely, an odds ratio below one indicates that increasing the independent variable by one unit will decrease the odds that the individual will be in the group (y=1) by a magnitude of the odds ratio, holding all other independent variables constant.

The dependent variable in our model is whether or not a student is WTP a positive premium for a meal plan that consists of at least 20% "real" food. We use students' positive WTP as a proxy for preference for "real" food. If a student is WTP any positive premium we assume that he or she derives utility from the "real" attribute and has a preference for "real" food. We built the model by including demographic characteristics that were hypothesized to influence preferences as well as variables that measure students' attitudes. A description of the explanatory variables included in the model can be found in Table 3.2. The model was specified as:

$$y = \beta_0 + \beta_1 \text{FEMALE} + \beta_2 \text{INSTATE} + \beta_3 \text{CALS} + \beta_4 \text{RUB} + \beta_5 \text{ORIGMOST} + \beta_6 \text{PRICEMOST} + \beta_7 \text{SOPHOMORE} + \beta_8 \text{JUNIOR} + \beta_9 \text{SENIOR} + \epsilon \quad .$$

We include an indicator variable for whether or not a student is a Vermont resident (INSTATE) because we hypothesize that Vermont residents may be more likely to prefer "real" food, given the strong local and sustainable food movements in Vermont (U.S. Department of Agriculture, National Agricultural Statistics Service, 2007; U.S. Department of Agriculture, National Agricultural Statistics Service, 2008; Vermont Sustainable Jobs Fund, 2013). One of the demographic characteristics represented in our

model is the college that students are enrolled in. UVM has seven colleges, but we only include two of them in the model. We chose to include the College of Agriculture and Life Sciences (CALS) and the Rubenstein School of Environment and Natural Resources (RUB) because those two colleges offer the majority of classes at UVM that pertain to food systems.

Table 3.2: *Explanatory variables used in binary logistic regression model*

Variable Code	**Description of Variable Code**
FEMALE	1 = student is a female; 0 = male
SOPHOMORE	1 = student is a sophomore; 0 otherwise
JUNIOR	1 = student is a junior; 0 otherwise
SENIOR	1 = student is a senior; 0 otherwise
INSTATE	1 = student is a Vermont resident; 0 otherwise
CALS	1 = student is in College of Agriculture and Life Sciences; 0 otherwise
RUB	1 = student is in Rubenstein School of Environment and Natural Resources; 0 otherwise
ORIGINMOST	1 = student considers the origin of food to be very important to them when deciding where to eat; 0 otherwise
PRICEMOST	1 = student considers price to be very important to them when deciding where to eat; 0 otherwise

Information on students' class year and meal plan were collected in the survey, but bivariate analyses reveal that these two variables are significantly associated ($p=0.000$). Furthermore, bivariate analyses reveal that neither variable is significantly related to students WTP a positive premium ($p=0.605$ for class year and $p=0.766$ for meal plan). Therefore, we decided to only include one of them in the model. We chose to use class year instead of meal plan because in addition to implying some meal plan information (e.g. all freshmen must be on an unlimited plan) it also implies the level of education a student has received. It is hypothesized that a students' level of education may influence their WTP, as other studies have found that education influences

preference for organic, fair trade, local, or humane food products (Loureiro & Hine, 2002; Loureiro & Lotade, 2005; Onianwa, Wheelock, & Mojica, 2005; Naald & Cameron, 2011).

Some of the students in the sample had no meal plan because they lived off-campus. We were initially concerned that these students would not be willing to pay any premium and might bias the results. Bivariate analyses, however, revealed that the frequency of students willing to pay a premium did not vary by the presence of a meal plan ($p=0.966$). Therefore, students who did not have a meal plan were left in the sample.

We include two variables that serve as a proxy for consumers' attitudes. The PRICEMOST variable represents how important price is to a student when he or she decides where to dine. The ORIGMOST variable represents how important the origin of food (i.e. local, organic, fair trade, humane) is to a student when he or she decides where to dine. Both of these attitudes were measured on a Likert scale from one to five ("not at all important" to "very important"). The PRCIEMOST and ORIGMOST variables are indicator variables for whether or not a student responded that the characteristic of the dining experience was very important to them (a 5 on the Likert scale). It is hypothesized that these attitude variables may influence students' preference for "real" food, as previous studies have demonstrated that attitudes can influence WTP for "real" food characteristics, such as locally produced (Zepeda & Li, 2006; Campbell, Dipietro, & Remar, 2014).

3.4 RESULTS

Table 3.3 displays the distribution of how much students were willing to pay for a meal plan consisting of at least 20% "real" food. A majority (70.8%) of students were

willing to pay a positive premium. The median premium was $18.00/semester (a 1% premium) and the average was $45.02/semester (a 2.4% premium). Bivariate analyses (results detailed in Table 3.4) revealed that the frequency of students willing to pay a positive premium varied significantly ($p<0.10$) with gender, college, the importance of origin of food, and the importance of price. There were no significant relationships between WTP and either class year or residency.

Table 3.3: *Distribution of WTP for "real" food*

Additional $/semester	Students WTP (%)
0.00	29.2
< 18.00	10.1
18.00	21.8
56.50	18.4
94.17	11.8
188.35	3.7
> 188.35	5.1

Note. Percentages may not add up to 100 due to rounding.

The results for the logistic regression predicting students' WTP a premium for a meal plan consisting of at least 20% "real" food are displayed in Table 3.5. Overall, the model was significant ($p=0.000$) and correctly assigned 71.1% of students to their correct group (willing to pay or not willing to pay). However, while it correctly identified most (99.5%) of the students who are willing to pay a positive premium, the classification of students that were not willing to pay was quite poor (only 1.2% correctly predicted). The purpose of our model is to identify characteristics of students that increase their probability of being willing to pay a premium for "real" food, and our model is very good at predicting these types of students. There is considerable variability among students who are not willing to pay a premium, and our model does not do well at classifying this group.

Table 3.4: *Association between student characteristics and WTP*

Variable	n	WTP (%)	Not WTP (%)	X^2	p-value
Gender	881			3.103	0.078*
Female		73.0	27.0		
Male		67.5	32.5		
Class	875			1.846	0.605
Freshman		73.4	26.6		
Sophomore		68.4	31.6		
Junior		70.6	29.4		
Senior		72.6	27.4		
Residency	873			2.364	0.124
In-state		74.3	25.7		
Out-of-state		69.3	30.7		
College	883			13.222	0.040*
CAS		69.1	30.9		
CALS		76.4	23.6		
RUB		86.5	13.5		
SBA		69.6	30.4		
CESS		70.1	29.9		
CEMS		62.2	37.8		
CNHS		66.2	33.8		
Importance of origin	885			6.563	0.010*
Very important		81.1	18.9		
Otherwise		69.3	30.7		
Importance of price	885			4.278	0.039*
Very important		65.0	35.0		
Otherwise		72.6	27.4		

Note. Percentages may not add up to 100 due to rounding.
** Significant at α=0.10*

Table 3.5: *Logistic regression predicting students' WTP*

Predictor	β	SE of β	d.f.	p-value	e^{β} (odds ratio)
CONSTANT	0.724	0.180	1	0.000*	2.062
FEMALE	0.311	0.159	1	0.050*	1.364
INSTATE	0.289	0.168	1	0.085*	1.335
RUB	1.065	0.426	1	0.012*	2.900
CALS	0.326	0.196	1	0.097*	1.385
CLASSYEAR			3	0.369	
SOPHOMORE	-0.334	0.202	1	0.098*	0.716
JUNIOR	-0.095	0.229	1	0.679	0.910
SENIOR	-0.083	0.260	1	0.749	0.920
PRICEMOST	-0.572	0.187	1	0.002*	0.564
ORIGMOST	0.712	0.270	1	0.008*	2.039

** Significant at α=0.10*

The model confirms the results of the bivariate analysis that gender, college, and attitudes towards price and the origin of food significantly influence students' WTP a premium for a meal plan consisting of at least 20% "real" food. Though bivariate analyses do not find a significant relationship between residency and WTP, the model shows that residency is a significant predictor, holding all other variables constant.

According to the model, females, Vermont residents, RUB students, and CALS students are more likely to be willing to pay a positive premium. Furthermore, students that consider the origin of food to be very important to them when deciding where to eat are more likely to be willing to pay a premium. Conversely, students who consider price to be very important are less likely to be willing to pay a premium. The greatest odds ratio was for RUB students, who the model predicts are nearly three times as likely to be willing to pay a premium than students in other colleges. Though just barely significant, sophomores are slightly less likely to be willing to pay a premium than freshmen. Juniors and seniors, however, do not have significantly different odds than freshmen.

3.5 DISCUSSION

Our analyses reveal that the majority of students were willing to pay a premium for a meal plan consisting of at least 20% "real" food, with a median premium of $18.00/semester and an average premium of $45.00/semester. We do not currently know how much additional a meal plan would need to cost in order to cover the additional costs of sourcing 20% "real" food, so we cannot comment on how the premiums students were willing to pay compare. Furthermore, there are a couple of factors that complicate the measurement of students' WTP for the "real" attribute. First, students may not be responsible for paying for their meal plan, thus making it difficult for them conceive of

what type of premium whoever pays for their meal plan would be willing to pay. Second, it may be difficult for students to conceive how much their would be willing to pay for "real" food over the course of a semester, rather than at just one eating occasion, which is how most studies measure WTP. What is more interesting than the exact premiums that students are willing to pay is the fact that they are willing to pay any premium at all. The fact that the majority of students were willing to pay a positive premium suggests that most students derive at least some utility from the "real" attribute and have a preference for "real" food.

Feenstra et al. (2011) found that 40% of students were willing to pay a 14% premium for a salad that was produced sustainably or locally. We only found about 9% of students willing to pay a comparable premium (10% or more) for "real" food. This may not be a fair comparison, however, because we asked students to consider a premium on their meal plan for the entire semester rather than for just one meal. Students may be willing to pay a higher premium for a single meal because it is a smaller incremental cost to consider at the given time and does not lock them into paying that premium each time they want to eat.

We were not surprised to find that in-state students (i.e. Vermont residents) were more likely to be willing to pay a premium, given the strong presence of local and ecologically sound food in Vermont (U.S. Department of Agriculture, National Agricultural Statistics Service, 2007; U.S. Department of Agriculture, National Agricultural Statistics Service, 2008). In-state students may be more familiar with these types of values and products and may already be in the habit of paying a premium for them. Furthermore, these students may be willing to pay a premium for "real" food

because they associate it with local food, and they have a desire to support their local food economy. Previous studies have found that consumers who are motivated to purchase local food by perceptions of support for the local food economy are willing to pay higher premiums (Thilmany et al., 2008; Carpio & Isengildina-Massa, 2009).

Our finding that female students are more likely to prefer "real" food echoes Loureiro and Lotade's (2005) finding that females are more likely to pay a premium for both Fair Trade and organic coffee. Other studies, however, have found that gender does not significantly influence WTP for local or organic food (Loureiro & Hine, 2002) or that it negatively impacts WTP for local food or humanely raised animal products (Onianwa et al., 2005; Naald & Cameron, 2011).

Our finding that class year, overall, is not a significant predictor of students' WTP implies that 1-3 additional years of education do not change students' preferences for "real" food. Although some studies have found education to be positively related to WTP for characteristics of "real" food (Loureiro & Hine, 2002; Loureiro & Lotade, 2005; Onianwa et al., 2005; Naald & Cameron, 2011), others have found a negative relationship (Giraud et al., 2005; Jekanowski, Williams, & Schiek, 2000). Zepeda and Li (2006) found demographics, and education in particular, to be poor proxies for preferences.

Although class year, overall, was not a significant predictor of WTP, sophomores are just barley less likely to be willing to pay than freshmen. This may be because sophomores are tired of eating food included in the meal plan, as all students living on campus (mandatory for freshmen and sophomores) are required to have a meal plan. They may not be willing to pay any premium for a meal plan with "real" food, because they do not want to have a meal plan at all. Juniors and seniors, however, may not have

significantly different odds than freshmen because they are not required to have a meal plan and thus feel freer to pay or not pay as they choose.

We found that RUB students and CALS students are more likely to be willing to pay a premium for "real" food than students in other colleges. These two colleges house most of the environmental and food systems related classes offered at UVM. Therefore, it appears that education and awareness about these issues may increase students' preference for "real" food.

The odds ratio for CALS students may be less than the odds ratio for RUB students because CALS includes a much broader variety of majors and disciplines than RUB. Although CALS houses the Food Systems program, it also houses majors such as public communication and biology. Conversely, almost all students in RUB are required to take environmentally oriented courses that likely expose them to importance of ecosystem services and the destructive practices of conventional food production. Furthermore, these students may not only be more likely to be educated about environmental issues as they relate to food production, but they also may be more likely to value the environment since they self-selected into that college.

Both of the attitude variables we included in the model were significant. We found that students who consider price to be a very important are less likely to be willing to pay a premium for "real" food. This is not surprising, as previous studies have found price consciousness to negatively influence preference for food with credence attributes, such as locally produced (Zepeda & Li, 2006; Campbell et al., 2014). Unfortunately, our study was not able to definitively determine whether students who were not willing to pay a premium were not willing to do so because they could not afford to or because they

did not perceive the value of "real" food to warrant a price premium. We assume, however, that almost every student would be able to afford an additional $0.01-$18.00 (<1%) per semester, which was one of the choices in the CV question. Therefore, we assume that since students had the option to pay such a small premium and chose not to, they must not derive any utility from the "real" attribute.

It was also not surprising that we found that students who consider origin of food to be very important are more likely to be willing to pay a premium. Essentially, this indicates that students with strong attitudes about the origin of food are willing to act on those attitudes. The high odds ratio of this variable also indicates that a strong attitude towards the origin of food is one of the best predictors of preference for "real" food.

Only 12.5% of our sample reported that the origin of food is very important to them, which is considerably less than the 44% of students who reported issues of local, organic, and sustainable food to be very important to them at Clark University (Clark University, 2010). However, when we include students that reported the origin of food to be important to them (as opposed to very important) the proportion increases to 35.6%. This number is somewhat in line with Feenstra et al.'s (2011) finding that between 25% and 61% of students consider it important that their food be organic, local, sustainable, fair, or humane. It is difficult to compare findings, however, because we did not ask students about the importance of each of the individual characteristics of "real" food, as Feenstra et al. did.

Implications for Practice

Our findings indicate that students' values are one of the strongest predictors of their preference for "real" food. Though values are often considered to be enduring,

college can be a "coming-of-age" time in students' lives when they begin to question their values and beliefs. As such, universities may be particularly effective places to influence students' values surrounding food.

Thus far, the outreach strategy of the RFWG at UVM has been to simply increase awareness about the RFC. Messaging has primarily focused on informing students about what the RFC is, what "real" food is, and the fact that UVM has committed to purchasing 20% "real" food by 2020. However, bivariate analyses found prior awareness of the RFC not to be a statistically significant predictor of preference for "real" food. This, coupled with the significance of the ORIGIN variable, suggests that the outreach strategy of the RFWG should move beyond raising awareness of the RFC and start targeting students' values.

One way the RFWG could target students values about the origin of food could be to focus outreach efforts on the benefits of "real" food and the negative impacts of the "conventional" food it seeks to replace. Theoretically, this type of information would give students reasons to care about the origin of their food. This type of information has been difficult for the RFWG to convey in their primary modes of outreach, such as table tents in the dining halls and posters around campus. Therefore, it may be worthwhile for the RFWG to focus on other modes of outreach that allow for more detailed information.

One example of outreach that the RFWG has utilized that has been effective in conveying detailed information through personal conversations has been tabling at events on campus. This type of outreach, however, is not particularly efficient for reaching the maximum number of students. One way to reach a greater number of students while still retaining the benefits of a personal conversation is to give presentations in classes on

campus. Presentations would allow for the explanation of detailed information to many students at once and would give students the chance to ask questions. Presentations could also be given in residence halls on campus, at club meetings, or other student gatherings. Other forms of outreach that utilize verbal communication, such as radio or video segments, could also be useful for conveying detailed information.

Our results also indicate that students who highly value the price of food are less likely to prefer "real" food. While it may not be possible to change the importance of price in students' decision making, given constrained budgets, it may be possible to change their perception of price with regards to "real" food. Currently, the RFWG's strategy is to make the price of "real" food options competitive with conventional options in retail dining locations. Students may just assume that "real" food options will cost them more, so the RFWG could do outreach to inform students that "real" food is offered in unlimited dining locations, thereby not costing them anymore, or that it is price competitive with conventional options in retail locations. Though this type of outreach may increase preference for "real" food on campus, it may not change students' preference for the attributes of "real" food off-campus, where those attributes will indeed cost more.

In addition to values, our results indicate that awareness of food systems issues is another promising leverage point for increasing student preference for "real" food. UVM is already a leader in food systems education (see table 4.3), but much of the food systems related curriculum is housed in the College of Agriculture and Life Sciences and the Rubenstein School for Natural Resources. Education about food systems should be expanded across all colleges and disciplines, so that all UVM students have at least a

basic understanding of pertinent issues. Both the university and the RFWG could facilitate this expansion of food systems education. The university could mandate the integration of food systems curriculum into at least one required course for all majors or could require a one-credit seminar for all students that included food systems topics. The RFWG could give presentations to large courses in each college or could present at First Year Orientation. The RFWG could also educate students across the disciplines in the residence halls, by training Resident Advisors to educate students about food systems issues.

Just increasing student preference for "real" food will not necessarily push the Real Food movement forward. Increased preference needs to be coupled with actions that students can take to demonstrate their preferences. Therefore, it is important for the RFWG to communicate to students how they can demonstrate their preferences. For example, the RFWG could launch a campaign to encourage students to take specific actions that demonstrate their preference for "real" food. These actions could range from simply asking for more "real" food in the dining halls to writing formal letters to university administrators. Since students do not currently have many opportunities to demonstrate their preference for "real" food by choosing "real" food over other food in the dining halls, they need to demonstrate their preference for "real" food in other ways. By demonstrating their preference for "real" food students signal to their dining service provider that there is demand for "real" food. Significant student demand could lead to a greater percentage of "real" food on campus, and thus a greater impact on the food system.

3.6 CONCLUSION

The purpose of this study was to examine student preference for "real" food, as measured by students' WTP for a meal plan consisting of at least 20% "real" food. We found that the majority of students were willing to pay a positive premium, though only about 20% were WTP a premium of 5% or more. Attitudes towards the price of food and the origin of food were found to significantly influence preference for "real" food. The two strongest predictors of a positive WTP were attitude about the origin of food and enrollment in RUB, which may be a proxy for attitude about the environment. Demographic characteristics, such as gender and residency, were significant predictors, but class year was not.

This research is the first of its kind to explore student preference for the new "real" attribute promoted by the RFC. By leveraging the purchasing power of higher education institutions, the RFC has the potential to create significant market demand for "real" food and transform the food system. Therefore, with the spread of the RFC to campuses across the country, it is becoming increasingly important to characterize student preference for "real" food.

This study only examined preferences of undergraduate students at one mid-sized university in the northeast. As such, results may not be generalizable to other universities. Furthermore, our data may not be representative of the UVM undergraduate student population as we used a convenience sample. Though, as we showed in Table 3.1, our sample is relatively similar to the population in terms of student characteristics.

As with any study relying on stated preference measures, such as contingent valuation, there is the risk of over or underestimating WTP. We were unable to capture

students' true WTP for "real" food, because the RFC was relatively new to UVM at the time of this study and there was not yet any revealed preference data. Future research could be conducted to corroborate our stated preference data with revealed preference data. Additionally, it would be useful to extend this research to universities across the country to determine whether or not student preference for "real" food is consistent or if UVM is an anomaly.

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Chapter 4: An Analysis of the Potential of the Real Food Challenge

4.1 INTRODUCTION

Higher education institutions in the United States collectively spend approximately $5 billion annually on food (The Real Food Challenge, n.d.). The Real Food Challenge (RFC), a national student movement, is attempting to leverage the power of students and the market share of higher education to transform the dominant food system. They are trying to shift 20%—or $1 billion—of existing higher education food budgets towards local/community-based, fair, ecologically sound and humane food sources—what they call "real" food—by 2020 (Real Food Challenge, n.d). The University of Vermont (UVM) joined this movement in 2012 when the interim President of the university signed the Real Food Campus Commitment, pledging to shift 20% of UVM's food budget towards "real" food by 2020. As the fifth university in the nation to sign the Campus Commitment, UVM is ahead of most institutions in the process of actually implementing it. Since 2012, the Real Food Working Group (RFWG), a group of UVM students, faculty and staff, has been working with University Dining Services to determine how UVM should implement the Campus Commitment.

I have spent the past two years working closely with the RFC in a variety of capacities. I have been involved in different levels of the movement: from a campus level to a national level. Through these various opportunities I have come to understand the RFC from a variety of perspectives: as a student, as a researcher, and as a graduate fellow. At first my participation with the RFC was purely a work responsibility; my membership on the RFWG was an obligation of my graduate fellowship. As time went

on, however, I became much more immersed in the movement and found myself as an insider looking out just as often as an observer looking in. My experience very much became that of a participant observer. I was simultaneously an active member in the movement and a graduate student trying to research it. At first I wasn't sure if I agreed with the values and mission of the RFC and felt conflicted about being a member of the movement out of obligation rather than a conscious choice. The more I learned about the RFC, however, the more I came to respect it and believe in its potential. All the while, I have been careful to remain critical of the movement, always taking a step back to question the significance and broader implications.

As a relatively new movement, little has been written about the RFC. As such, I wanted to use the unique opportunity I had to speak to the potential of the movement. Over the past two years I kept thinking that there is something special about the RFC—that it has more potential to transform the food system than previous initiatives on college campuses have had. It wasn't until I discovered the concept of food democracy that I could articulate *why* the RFC is different. I knew that it seeks to leverage the market share of higher education to create significant demand for "real" food, but I could not place my finger on how it is different from other market mechanisms, such as third-party certifications (e.g. organic certification). When I discovered the food democracy framework I quickly recognized how the RFC is different—it isn't only trying to influence market demand, it is trying to fundamentally change the power structure of the food system.

The purpose of this piece is to critically reflect on my experience with the RFC in order to analyze how the Real Food movement promotes food democracy. I seek to

answer the following questions: (1) How does the RFC, as a national movement, promote food democracy? (2) How does the RFC, as realized on the ground at UVM, promote food democracy? By answering these questions, I hope to be able to comment on the RFC's potential to transform the food system.

I will address these questions using Neva Hassanein's (2008) framework of food democracy. Hassanein's framework identifies five key dimensions of food democracy. I will analyze the activities and programs of the RFC, as a national movement, to determine how to the Real Food movement, as a whole, is promoting each of these dimensions. I will then analyze the implementation of the Real Food movement at UVM to determine how the movement, as it is being realized on the ground, promotes the five dimensions of food democracy.

UVM is one of the institutions at the forefront of the Real Food movement, and as such, I am perfectly situated to examine how the RFC is playing out on the ground. Though there are many people involved with the RFC at UVM, there are few who have been involved in as many facets of it as I have. In addition to my variety of roles within the RFC, I have been simultaneously immersed in a graduate program in food systems. As such, I have been using my coursework as lenses with which to understand the RFC. By critically reflecting on the movement while actively participating in it, I have cultivated a unique understanding of it.

I begin this piece with an introduction to the concept food democracy and the framework that Hassanein has developed for analyzing programs. I then apply Hassanein's framework to the RFC as a national movement and also the Real Food movement at UVM. The framework allows me to identify to what extent the RFC, both

nationally and locally, is promoting dimensions of food democracy. I conclude by drawing on my analysis to offer suggestions for how the Real Food movement could better promote food democracy at UVM and other institutions.

4.2 FOOD DEMOCRACY

The term "food democracy" was popularized by Tim Lang (1998, 1999), a professor of food policy, in the late nineties in his writings on food policy. He first used the term to "highlight the great struggle over centuries, in all cultures, to achieve the right of all citizens to have access to a decent, affordable, health-enhancing diet, grown in conditions in which they can have confidence (Lang, 1998, p. 18)." He uses the term as an inverse to what he calls "food control," or the approach to food policy that is associated with pressure from above (by either private capital or government). For Lang, food democracy is "a set of demands from below" that calls for "greater access and collective benefit from the food system (Lang, 1999, pg. 218)." According to Lang, the history of food policy can only be understood in the context of the tension between democratic control of the food system and control from above (i.e. governments and corporations). The struggle for food democracy bubbles up in most countries, rich and poor alike, and has been a significant counter-pressure to industrialization and globalization for almost two centuries (Lang, 1999).

Welsh and MacRae (1998) further develop the concept of food democracy by drawing on their work with the Toronto Food Policy Council (TFPC). For them, food democracy "emerges from people's active participation in shaping the food system, rather than by accepting the system as passive consumers" (Welsh & MacRae, 1998, pg. 238). The TFPC seeks to address issues of sustainability and food security by promoting food

democracy, and the closely associated notion of food citizenship. The TFPC rejects traditional anti-hunger advocacy, because it passively accepts traditional structures of consumer capitalism, which treats food as a commodity good. Instead, the TFPC embraces food democracy as the central concept for achieving community food security, because it requires that we move beyond the simple notion of people as consumers and of food as a commodity (Welsh and MacRae, 1998). Food democracy and food citizenship recognize that people have more than just their ability to buy and reject goods and services; they have rights and responsibilities beyond those of consuming goods (Welsh and MacRae, 1999). For Welsh and MacRae (1998), the transformative potential of food democracy lies in this significant challenge to the traditional notion citizens as consumers and food as a commodity.

Hassanein (2003) draws on Lang (1999) and Welsh and MacRae (1998) to explore the concept of food democracy and its practical utility with respect to transforming the food system. For her, food democracy is more than just a concept; it is a way by which our society can move forward in creating a more sustainable food system. The conflict in the discussion of what a sustainable food system should look like is ultimately a conflict of values (Hassanein, 2003). There are a broad range of interests in the vision for a more sustainable food system—visions of economic, ecological, and social sustainability. But how do we weigh those interests against each other? As Hassanein (2003, pg. 78) puts it, "who gets to decide where the 'equitable balance' lies?" She argues that appealing to experts or any independent authority cannot solve the disputes within the food system. Surely, experts have an important role in the decision making process, but, as she puts it, "when values clash, there is no independent authority

that society can meaningfully appeal to for a definitive resolution of disputes (Hassanein, 2003, pg. 78)."

In search of an alternative method for resolving disputes in the food system, Hassanein draws on Prugh, Costanza, and Daly's (2000) argument that sustainability, in general, must be socially and politically defined. She argues that active participation of the citizenry and political engagement is our best hope for resolving the disputes within the food system. She warns that this process will inevitably lead to conflict, as the choices that must be made will affect everyone. But, she says, "such conflict is not something to shy away from; conflict leads to change (Hassanein, 2003, pg. 79)." We must, then, embrace this conflict inherent to the political process in order to make meaningful decisions about the nature and direction of our food system.

Hassanein (2003) sees the concept of food democracy as a way for the citizenry to socially and politically define our food system. She claims that, "if solutions to problems in the agro-food system depend in a very fundamental way on participation, the emerging concept of food democracy serves as a constructive method for political practice because participation is a key feature of democracy (Hassanein, 2003, pg. 79)." Food democracy rests on the idea that the citizenry should be actively participating in the definition of agro-food policies and practices (Hassanein, 2003). This participation of the citizenry contests the control that powerful private capital exerts on food and agriculture today (Hassanein, 2003). Food democracy rejects the idea that people are merely passive consumers subject to the processes of industrialization, concentration of economic power, and globalization. It recognizes that people, as citizens, have the power and responsibility to shape their relationship with food and agriculture through active participation. By

challenging the traditional structures of capital in this way, food democracy has the opportunity to transform the food system and how people interact with it.

The concept of food democracy is somewhat of a decentralized terrain; what food democracy is or looks like is neither clearly defined nor agreed upon. As such, alternative food movements define, imagine, practice, and promote democracy in a myriad of ways (Siniscalchi & Counihan, 2014). In their introduction to *Food Activism*, Siniscalchi and Counihan (2014, pg. 9-10) observe, "some movements, like Slow Food, highlight a conception of food democracy defined as universal access to tasty, healthy, sustainable, and fairly produced food, whereas others, like La Via Campesina, emphasize food sovereignty and its focus on local control of food production and distribution." For some, food democracy looks like CSAs, food box schemes, farmers' markets, buy local campaigns, food policy councils, urban gardening projects, and/or Farm-to-School initiatives (Levkoe, 2006; Hamilton, 2004; Carlson & Chappell, 2015). These efforts can be seen as promoting democratic ideals in society (Levkoe, 2004) and opposing the corporatization of food and agriculture (Hinrichs, 2003). These distribution mechanisms foster meaningful interactions between producers and consumers, and give control over food production and distribution to citizens rather than corporations (Johnston, Biro, & MacKendrick, 2009; Carlson & Chappell, 2015).

According to Hamilton (2004), the movement for food democracy has been unfolding for a generation, but it has been decentralized and unnamed. He sees democracy as the underlying value driving the many, diverse alternative food movements, such as local food, direct marketing, sustainable agriculture, and food security. The common purpose of these diverse movements, he says, "is to empower

citizens to have choices and find greater satisfaction in a food system reflecting the democratic values we share and that underpin our society and economy (Hamilton, 2004, pg. 5)." He adds, "these democratic values and movements reject the industrialized and degraded values of cheap food and replace them with concern for the needs of the people and the land, with human focused values that weigh satisfaction and sustainability, information and involvement as equally as efficiency and price and profits and productivity (Hamilton, 2004, pg. 5)."

Andrée, Ayres, Bosia, and Massicotte (2014) draw on Alexandria Fisher's (from the NGO Food First) work to make an important distinction about food democracy, in that it is not the same as the "vote with your fork" ideology that is so popular in the United States. That is to say, consumers' buying local or organic food does not constitute a food democracy. Unlike food democracy, which advocates for political participation by citizens in defining their food system, "voting with your fork" is not democratic, because your participation is directly related to how much money you have to "vote" with. It is important to distinguish the political solutions favored by food democracy from market-based solutions proposed by other alternative food movements, such as the organic industry and fair trade.

Returning to the various conceptions of food democracy highlighted above by Siniscalchi and Counihan, a discussion of food democracy would not be complete without addressing its linkages to the closely related notion of food sovereignty. Originally coined by the International Peasant Movement, food sovereignty is the demand "that all people have the right to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and the right to define

their own food and agricultural systems (Via Campesina, 2007). In the introduction to *Globalization and Food Sovereignty*, Andrée et al. (2014, pg. 11) broadly define food sovereignty as "a set of reactions to neoliberal globalization and the industrial food system that is presented as an alternative approach predicated on the dispersal of power." Food sovereignty is fundamentally about placing control of the food system in the hands of those that have been oppressed by corporate capitalism and the globalization of the food system (Carlson & Chappell, 2015). In direct opposition to the "market knows best" ethos of neoliberalism, food sovereignty favors democratic economic decision making on a local level (Andrée et al., 2014). According to Carlson and Chappell (201, pg. 4), food sovereignty "is about redirecting the values, resources, and joys of food, to focus on the health and livelihoods of each country's farmers and citizens themselves, rather than the needs and profits of a global, financially driven and speculative marketplace that serves investors and large multi-national companies."

The concept of food sovereignty first emerged in 1996, from a working group of La Via Campesina, a transnational movement of peasant and farmer organizations. The seeds of food sovereignty may have been sown by peasants in the global south, but the concept has since been invoked across the globe and by a disparate set of actors (Andrée et al., 2014). Just as we see with food democracy, disparate actors in the campaign for food sovereignty have emphasized different priorities and usages of the concept (Andrée, et al., 2014). Andrée, et al. (2014, pg. 25-26) explain:

"…for some, food sovereignty requires first and foremost stronger and better state regulation over food and agriculture. For others, it is mostly a normative tool and discourse to denounce the impacts of neoliberal policies and of the WTO Agreement on Agriculture on small producers. For some activists, food sovereignty means community, or even personal, control over their food systems. This position is then connected to the

promotion of 'buy local,' organics, and farmers' markets, often without questioning the capitalist structures of these alternative food networks. For still others, food sovereignty represents a right to be defended and respected, a right to alternative agricultural policies and practices, based on a diversified and sustainable production, as well as social reproduction and ecosystem maintenance…in order to guarantee a healthy life for both rural and urban communities, in the global North and the global South."

As both concepts seem to have varying interpretations, the boundaries between food democracy and food sovereignty are somewhat blurred. Both concepts seek to redefine the power dynamics in the food system by relying on democratic processes for decision-making. Moreover, they both contest the top-down control over the food system by corporations. Ayres and Bosia (2014) see little difference in the two concepts, but rather see food democracy as just a different name for food sovereignty in the United States. They say, "in the United States, food sovereignty might be framed as food democracy; nonetheless, the premise and priorities remain the same, whether named democracy in terms of community and popular participation over decision-making, or sovereignty in terms of local and community-based control over food-related decisions (Ayres & Bosia, 2014, pg. 320)."

Andrée, et al. (2014), however, make a distinction between food sovereignty and food democracy, in that the former has historically been, and continues to be, generally rooted in a producer perspective, whereas the latter tends to be more rooted in a consumer perspective. Food sovereignty grew out of transnational movement of peasant and farmer organizations in the global South that were trying to protect the livelihoods of small food producers from neoliberal policies. Food democracy, on the other hand, has been the counterpart of food sovereignty in the global North, where consumers, rather than producers, are the driving force. The concept of food democracy has partly grown out of

opposition to the neoliberal notion that people are merely passive consumers, rather than active citizens in the food system. Despite their different origins, the two concepts both challenge the basic conditions supporting the dominant food system (Andrée, et al., 2014).

I have chosen to use food democracy, rather than food sovereignty, as a framework for this work because it is the dominant concept in the United States, where my work is situated. Furthermore, the RFC is a movement that was started *by* consumers *for* consumers. It is primarily concerned with empowering consumers on university campuses to participate in the definition of their food systems. Therefore, food democracy seems to be a more relevant framework from which to analyze the movement.

If a food democracy is indeed our best hope for creating a more just and sustainable food system, then how do we create it? Levkoe (2006) maintains that social movements in the food system have the potential to foster food democracy. He says:

> "The transition to a food democracy requires that people develop the knowledge and skills necessary to actively participate and to have an impact on different political levels. Food justice movements utilizing local grassroots initiatives, have the ability to provide this opportunity. Through organizations, collective groups of citizens are able to work together to raise awareness, put pressure on governments, and build viable alternatives to the current system."
>
> (Levkoe, 2006, p. 92).

He uses a case study of The Stop Community Food Center in Toronto, Canada to demonstrate that food justice movements can be spaces for collective action and learning knowledge and skills that are necessary in the transition toward a food democracy. Hassanein (2003) sees social movements in the food system as the driving force behind the transition toward a food democracy. She says, "the main source of pressure to democratize the food system comes from the constellation of organizations in the

alternative agro-food movement" (Hassanein, 2003, pg. 80). Indeed, even before the concept of food democracy entered the conversation, social movements have been recognized for their potential to transform the food system. Buttel (1997) maintains that social movements will most likely be the dominant mechanism for creating significant, positive change in the food system, if it is to occur.

If social movements, like the RFC, have the potential to bring about a more just and sustainable food system by moving it towards food democracy, then it is essential that we critically examine these movements and whether or not they are indeed making progress in the transition to food democracy. Analyzing initiatives from a food democracy lens will allow us to gauge their transformative potential and, perhaps, make necessary changes to them in order to move towards food democracy. The RFC aspires to create a more just and sustainable food system—one that nourishes producers, communities, consumers, and the earth—by leveraging the market share of higher education and empowering the next generation of consumers to take an active role in defining their food system. I will use a food democracy lens to connect how the RFC is playing out on the ground with its potential to achieve significant food systems change.

Though the democratization of the food system has been recognized by scholars and activists as a central concern in contemporary food politics, there has been very little articulation of what exactly food democracy looks like in practice (Hassanein, 2008). As such, Hassanein (2008) developed an analytical framework for the key dimensions of food democracy in order to develop theoretical and practical understanding of the concept. She used this framework to analyze an initiative that involves university students working on a farm to produce food for distribution to low-income people

through the food bank and to members of a CSA. The framework allowed her to identify strengths and weakness of the initiative with respect to its democratic characteristics and to determine the extent to which the initiative is moving toward food democracy.

Hassanein's framework identifies five key dimensions of food democracy that are crucial to everyone's relationship to food and the food system in a strong democracy. A strong presence of all of these dimensions for all groups of people is an indicator of meaningful movement towards food democracy. Conversely, if any of these dimensions are weak or absent for any group of people, then food democracy is still a ways off. The five dimensions are as follows:

- **Collaborating towards food system sustainability**
  A food democracy necessarily involves collective action by and among organizations; it cannot be achieved by the decisions and actions of a singular organization. Coalitions between organizations to address particular needs or issues increases citizen power by enabling organizations to effect change they could not achieve on their own and by expanding the number of people involved in an effort. Coalitions involving differing interests can also help groups learn about one another.

- **Meaningful participation in governing and shaping relationships to food and the food system**

The following four dimensions are all components of meaningful participation by individuals

  - **Becoming knowledgeable about food and the food system**
    It is necessary for individuals to have broad knowledge of the food system and its various facets in order to effectively participate in a food democracy.

  - **Sharing ideas about the food system with others**
    By engaging in discussion and deliberation of ideas, individuals are able to clarify issues, discuss values, and make better decisions.

  - **Developing efficacy with respect to food and the food system**
    Individuals move beyond being passive consumers to actively determining their own relationship to food. This also involves public work by a mix of individuals to address and solve community food problems.

  - **Acquiring an orientation toward the community good**

> A strong food democracy involves individuals that are willing to go beyond their self-interests to promote the wellbeing of the community, both human and non-human (i.e. the land).
>
> (Hassanein, 2008)

I will use Hassanein's framework to reflect on my experience working with the RFC by critically examining the degree to which each of the five dimensions outlined above are present. I will examine the presence of these dimensions in the RFC, as a national movement, and also in the RFC, as realized on the ground at UVM. This will allow me to examine the extent to which the RFC embodies and promotes food democracy on two different levels.

4.3 METHODS

I have been an active member of the RFWG since August 2013. I joined the RFWG as part of my Graduate Fellowship, which was created to fund a graduate student to conduct research about the UVM food system. As a Graduate Fellow, I was to support the group and its goal of implementing the Campus Commitment. I have provided support for the group in a variety of ways, including administrative support, meeting and event planning, strategic planning, and outreach coordination. I have been responsible for recording the meeting minutes at monthly meetings, which has allowed me to document the group's activities and discussions over the past two years.

Until recently, the RFWG was divided into three sub-committees: Outreach, Policy, and Calculator. The Outreach Committee was primarily responsible for spreading awareness about the RFC on campus. The Policy Committee was responsible for creating a Charter for the group's work, a decision matrix for the group to use when making product shifts, and a multi-year action plan to guide the group's future activities. The

Calculator Committee was responsible for auditing University Dining Service's invoices using the Real Food Calculator and identifying potential product shifts. I spent my first semester attending each of the three subcommittee's meetings, in addition the monthly group meetings. This allowed me to immerse myself in the various facets of the RFC at UVM and develop a holistic understanding of the group.

In the fall of 2013 the RFWG served as the community partner for an undergraduate service-learning Social Research Methods class. The objective of this partnership was to learn more about student awareness of the RFC. The class conducted observations, interviews, and a campus-wide survey to explore students' dining habits and preferences, awareness of the RFC, and willingness-to-pay for a meal plan with at least 20% "real" food. As the community partner, a few members of the RFWG, including myself, attended five classes throughout the semester to engage with students during the research process and learn about their findings. I also conducted further analysis on the survey data to learn more about what factors affect students' preference for "real" food. The results of my analysis can be found in Chapter 3 of this thesis. The survey data, along with class discussions, have contributed to my understanding of the RFC at UVM.

In addition to my participation on the RFWG at UVM, I served on the Corporate Research Working Group (CRWG) between January 2014 and January 2015. The CRWG is a group of RFC student leaders and staff from around the country that was created to conduct research about corporate foodservice companies in order to inform the next RFC campaign. As a member of the CRWG I conducted various forms of research: I interviewed producers in the Northeast to learn about their experience with higher

education and corporate foodservice companies; I interviewed potential allies in selected industries, such as the poultry and seafood industries; and I researched dining contracts in higher education to identify potential leverage points for negotiations. Through my participation on the CRWG I gained perspective on how the RFC functions on a national scale and how UVM fits within the larger Real Food movement.

In the spring of 2014 I conducted a series of six focus groups about the UVM food system and the RFC in order to better understand the values and perspectives of undergraduate students at UVM. These focus groups were intended to expand upon the survey research conducted in the fall of 2013 by providing in depth detail about students' attitudes towards the RFC and their food-related values. Moreover, these focus groups were intended to inform the process of vetting proposals for a new dining contract that began in the winter of 2014. The process of conducting and analyzing these focus groups gave me an in-depth understanding of the student experience within the UVM food system.

Through the experiences described above, I have been immersed in RFC for the past two years. The combination of experiences allowed me to understand the RFC from multiple perspectives and in multiple contexts. My participation on the CRWG allowed me to understand the national scope and strategy of the RFC, while my participation on the RFWG rooted me in the day-to-day realities of implementing the RFC on the ground. My survey analysis and focus groups allowed me to understand the RFC from a student perspective, while my participation on the RFWG allowed me to understand the challenges of implementing the commitment from the perspective of administrators/staff, faculty, and dining services. The myriad of ways I have come to understand the RFC

allow me to comprehensively analyze the movement using Hassanein's food democracy framework. Since UVM was one of the earliest signers of the Campus Commitment and is a leader in the implementation process, it is a particularly rich place to analyze the extent to which the RFC, in practice, promotes food democracy.

4.4 ANALYSIS

The Real Food Challenge—a national movement

Collaborating towards food system sustainability

At the highest level, the RFC was started as an attempt to facilitate collaboration between university campuses across the country towards food systems sustainability. A group of food system activists and leaders recognized the need to combine all of the seemingly disparate student activism around food issues on campuses across the country to create a single, coherent movement. They noticed a lot of inspiring activism across the country, and yet few of the actors knew about each other's efforts. Furthermore, they noticed that climate change activists, student farmers, local food enthusiasts, fair trade advocates, and farmworker rights organizers, to name a few, were all working in isolation from one another (D. Schwartz, personal communication, April 7, 2014). They saw potential in these diverse movements and recognized the need to craft a common language, a collective vision, and clear goals that would allow these activists to mobilize and gain recognition together.

In 2006, at the Kellogg Foundation, a long-time ally and funder of food systems work, hosted a Food and Society Conference for their grantees and other organizations. The foundation had conducted research and found that only 2% of the U.S. food economy was fair, healthy, green, and affordable (The Real Food Challenge, n.d.). They challenged

the conference attendees to move that number from 2% to 10% in ten years (The Real Food Challenge, n.d.).

At the conference, delegations from the California Student Sustainability Coalition (CSSC) and The Food Project (TFP) saw a connection between all of the student activism on higher education campuses and the Kellogg Foundation's challenge. They began discussing the benefits of creating a national network—what would become the RFC—to support and amplify the efforts of diverse student activism on campuses across the country (The Real Food Challenge, n.d.).

TFP is a non-profit located in Boston, MA that "has built a national model of engaging young people in personal and social change through sustainable agriculture" (The Food Project, n.d.). The CSSC is non-profit network of student sustainability organizations in California that strives to implement policies and programs that will help transform their institutions into models of sustainability (California Student Sustainability Coalition, n.d.). These two organizations served as models for the RFC and members from both of them have been primary driving forces behind the vision and launch of the RFC (The Real Food Challenge, n.d).

Together, student leaders and members from TFP and CSSC created a steering committee in 2007 to formally start building the type of national network they envisioned. The RFC officially launched in the fall of 2008 with student action for "Real Food Now" on over 150 campuses. That winter, over 700 students from 200 campuses converged at one of five regional Real Food Summits. Since then the movement has spread to over 300 campuses and engaged over 150,000 students (D. Schwartz, personal communication, April 7, 2014).

The RFC aims to address the social, economic, and environmental problems associated with the food system by harnessing the purchasing power of higher education institutions, which collectively spend about $5 billion annually on food to feed about 17 million students (The Real Food Challenge, n.d.). The flagship goal of the RFC is to shift 20% of existing higher education food budgets—or $1 billion—towards Real Food by 2020. Real Food is defined as:

> Food that truly nourishes producers, consumers, communities and the earth. It is a food system--from seed to plate--that fundamentally respects human dignity and health, animal welfare, social justice and environmental sustainability. Some people call it "local," "green," "slow," or "fair." We use "Real Food" as a holistic term to bring together many of these diverse ideas people have about a values-based food economy.
>
> (The Real Food Challenge, n.d.)

While 20% may not seem like a lofty goal, a 2007 study conducted by the W.K. Kellogg Foundation found that "healthy, fair, green, and affordable food" represented less than 2% of the U.S. food economy (D. Schwartz, personal communication, April 7, 2014). The RFC also supports efforts to grow more college farms, student-community partnerships, academic programs that deal with food systems, solidarity actions with food system workers, climate change-connections and more.

As mentioned above, the impetus for the RFC was the recognition that various food activism shared common values on campuses across the country. These student activists were all part of a larger food movement but they lacked common goals, a common framework, and a collective voice. Students around the country were already organizing for a more just and sustainable food system—they just needed to be unified in order to amplify their voice and impact. Thus, the RFC emerged as a unifying umbrella for the activism around food systems issues already present in higher education. The

purpose is to foster collaboration between schools in order to affect change in the food system that no one institution or group of students could affect alone.

The primary way the RFC intends to meet its goal of shifting $1 billion of university food budgets towards real food is through the Real Food Campus Commitment. The commitment, which was modeled in part on the President's Climate Commitment, asks university and college presidents to formally prioritize "real" food. It commits the university to procure more "real" food (at least 20% by 2020), improve institutional transparency, and increase student and community engagement (The Real Food Challenge, n.d.). Thus far, 30 schools have signed the Campus Commitment, pledging to shift over $60 million of university food budgets towards "real" food (The Real Food Challenge, n.d.). By creating a national collaboration among university students and administrators, the RFC is able to make a much more profound signal to the market than individual institutions could.

In addition to facilitating collaboration between institutions, the RFC facilitates collaboration between stakeholders on college and university campuses. One of the stipulations in the Campus Commitment is that a multi-stakeholder Food Systems Working Group be established to implement the Commitment (The Real Food Challenge, n.d.). This working group is supposed to be populated by diverse stakeholders across campus, with a strong representation by students. These working groups are spaces created expressly for the purpose of collaboration among diverse stakeholders. The RFC recognizes that no single stakeholder group on a campus (e.g. students, faculty, staff, or dining services) could implement the Campus Commitment alone. Since the various stakeholder groups on campus each have their own set of interests, it is imperative for the

groups to collaborate in order to make decisions about the campus food system. Furthermore, by collaborating, the groups learn about one another's interests and perspectives. Each of the stakeholder groups may have distinct goals for the campus food system, and by bringing the groups together, the Food Systems Working Group allows these diverse stakeholder to learn about each other's aims.

One of the main tenets of the RFC is to empower students within campus food systems to affect the kind of change they want to see. Though students do hold power as paying consumers of colleges and university themselves, as well as food on campus, they lack other types of power in the system. Traditionally, students have little to no say in the processes that shape campus food systems, such as contract negotiations or institutional policies. Students mainly exercise their power by choosing what and where to eat, from the limited options that are available to them. However, they typically have little to no power in determining those options or the structure of the food system on campus. This limited power is why it is so important for students to collaborate with other stakeholders on campus through a Food Systems Working Group to achieve their vision for a campus food system.

Meaningful Participation

Hassanein's framework suggests that in addition to collaboration, food democracy requires meaningful participation from individuals. As outlined above, meaningful participation includes gaining knowledge, sharing ideas, developing efficacy, and contributing toward the community good. I will now consider how the RFC, as a national movement, promotes each of these dimensions. Figure 4.1 illustrates the dimensions of

food democracy that the program components of the RFC promote and Table 4.1 outlines components of the RFC that promote dimensions of meaningful participation.

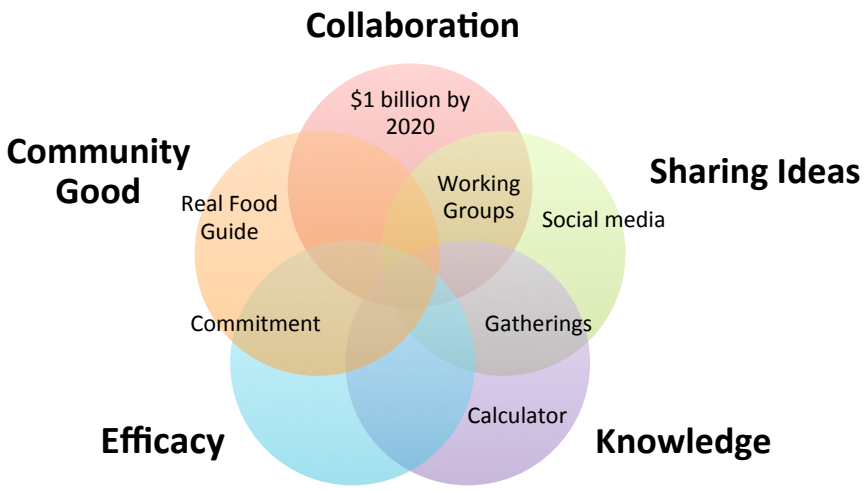

Figure 4.1: RFC components that promote dimensions of food democracy

Table 4.1: *RFC components that promote dimensions of meaningful participation*

Program/component	**Goal**	**Food Democracy dimension(s)**
National summits	To convene student leaders from around the country to learn, network, and get inspired	Knowledge; sharing ideas
Campus visits	Propel local efforts forward by guiding students through local challenges	Knowledge
Implementation gatherings	Bring together stakeholders from schools that have signed the Campus Commitment to discuss challenges of and strategies for implementation success	Sharing ideas
Regional Strategy Retreats	Convene student leaders in a particular region to learn, develop skills, strategize, and build community	Knowledge; sharing ideas
Food system working groups	Bring together diverse stakeholders on campus to coordinate the implementation of the Campus Commitment	Sharing ideas
Real Food Campus	Standardize real food policies to ease	Efficacy

Commitment	adoption and implementation	
Real Food Calculator	Equip students with the necessary information to assess their campus food system	Knowledge
Social media	Recruit, inform, and build community among member base	Sharing ideas

Knowledge

One of the core tenets of the RFC is empowering students to take responsibility for their campus food systems. This necessarily requires that students have some understanding of the

food system and why it needs to be reformed. While many of the students that join the Real Food movement already have some knowledge of the food system, the RFC provides opportunities for education at various levels. They recognize that in order to grow the movement, it is imperative to equip students with the knowledge that will inspire reform.

The national RFC staff host multiple events around the country each year to provide students with educational opportunities. The largest of these events is the annual National Summit, which brings together a wide variety of players in the Real Food movement from all over the country: from student activists to union leaders to farmers and producers. These summits include a wide variety of educational opportunities for students: speeches from movement leaders; panel discussions on issues ranging from the industrial food system to the potential of urban agriculture; field trips to local farms and "real" food organizations; and skill-based workshops on topics ranging from coalition building to campaign planning (Real Food Challenge, n.d.).

In addition to the annual National Summit, the RFC hosts Regional Strategy Retreats and campus visits around the country. Campus visits are conducted by one or two RFC staff members at the request of student leaders. These visits include educational workshops that range in topic and can be tailored to fit the needs of students on a particular campus. The point of these campus visits is to offer students the opportunity to learn about various aspects of the food system in more depth. Regional Strategy Retreats are gatherings of about 20-40 students from institutions in a given region. The RFC hosted 11 of these Regional Strategy Retreats around the country in 2014. These retreats are rich educational opportunities for students, as they include educational workshops, much like campus visits and the National Summit, as well as the opportunity to learn from other students in their region.

Another component of the RFC that facilitates students gaining knowledge about the food system is the Real Food Calculator. In order to increase the amount of "real" food on campuses, the founders of RFC recognized the need for a measurement tool that could help students track how much "real" food their campus food service was actually purchasing. A team of students and food service industry experts developed the Real Food Calculator, on online tool to track food purchases. The Calculator, which measures "real" food percentages by dollar, provides a tool for students to assess baseline-purchasing patterns, identify opportunities for improvement, and track progress in sustainable purchasing over time. Thus far, students from over 188 institutions have utilized the calculator (The Real Food Challenge, n.d.).

The Calculator tracks food purchasing and calculates "real" food percentages based on the Real Food Guide, a list of criteria that food must meet to qualify as "real."

These rigorous standards have been developed to be compatible with, and build upon, existing sustainability standards set by organization such as Business Alliance for Local Living Economies (BALLE), Association for the Advancement of Sustainability in Higher Education (AASHE) and Leadership in Energy and Environmental Design (LEED) (The Real Food Challenge, n.d.). The criteria, which are third party certifications and characteristics of producers, have been divided into four categories: local/community based, ecologically sound, fair, and humane.

Running the Calculator is a necessary component for any campus that is implementing the RFC, as it establishes where a campus is at relative to their goal. Students run the Caclulaor by auditing all of the invoices and researching all of the products their institution purchases in order to classify them as "real" or not. By auditing the invoices they learn about institutional food purchasing: from the shocking quantities of food purchased, to the complexity of planning and procuring food for thousands of people, to the types and prices of products purchased. By using the Real Food Guide to research and classify the products as "real" or not they learn about different producer practices and certifications. They learn about how much and what types of "real" food their institution is already purchasing and where improvements could be made. They gain an appreciation for how complex the system is and why it truly is a challenge to reach 20% "real" food by 2020. This type of knowledge empowers them to make informed opinions and decisions about the campus food system.

Sharing Ideas

The RFC explicitly creates space for students to share ideas with students from other campuses, so as to prevent the isolated activism that inspired the creation of the

RFC in the first place. One way that the RFC facilitates the sharing of ideas is through in-person gatherings, such as the National Summit, Regional Strategy Retreats, and Implementation Gatherings. These events bring together students leaders and other stakeholders in the food system to discuss pressing food systems topics and how to create solutions. The Implementation Gatherings, in particular, are rich opportunities for the sharing of ideas. These events gather students from schools that have signed the Campus Commitment so that they can discuss the challenges of implementation and potential solutions.

In addition to facilitating the sharing of ideas between campuses, the RFC facilitates the sharing of ideas between stakeholders on each individual campus through a food systems working group on campus, which the Campus Commitment requires of signatory campuses. By requiring that signatory schools form food systems working groups, the RFC purposefully creates space for individuals, and especially diverse stakeholders, to share ideas on a campus level.

The RFC utilizes social media to facilitate the sharing of information and ideas amongst members of the Real Food movement. With at least 7,700 combined Facebook and Twitter followers, the RFC is able to keep members of the movement up to date with news, events, and resources. The RFC also has an email listserv that allows members to share ideas with other members across the country. For example, students will use the listserv to share a particular challenge with other members and seek their advice. This type of communication has fostered a more instantaneous sharing of ideas between campuses than the in-person gatherings hosted by the RFC.

Efficacy

The RFC goes beyond raising awareness about issues of food systems sustainability—it encourages students to actually take action to change their campus food systems. Though the Campus Commitment is signed at the presidential level, it is up to students to campaign to get the it signed. Getting the Campus Commitment signed is the first step in the process of reaching 20% "real" food by 2020, and thereby contributing to the larger goal of shifting $1 billion of higher education food budgets towards "real" food. By getting the Campus Commitment signed, students demonstrate their ability to actively determine their relationship to food on campus. Thus far, students on 30 campuses have successfully gotten the Campus Commitment signed, thereby securing over $60 million towards "real" food. In other words, these students have affected $60 million worth of change in the food system.

Community Good

While the RFC may offer some personal benefits to students (e.g. food free of chemicals or antibiotics), it is mainly a movement oriented towards the betterment of communities. "Real" food is "food that truly nourishes producers, consumers, communities and the earth (The Real Food Challenge, n.d.)." The movement is not intended just to serve the interests of individuals, but is meant to contribute to the well-being of both human and non-human (i.e. the environment and animals) communities. The four categories of "real" food—local, ecologically sound, fair, and humane—may have some perceived benefits for individuals (e.g. freshness, taste, health), but some of their benefits have no effect on individuals. For example, Bird Friendly coffee and tea (which fall into the ecologically sound category) have no perceived benefits for

consumers, but are beneficial for ecological systems. Another example is the fair category of "real" food. Food produced according to fair labor practices offer no personal benefits to consumers. By promoting these types of products, the RFC encourages individuals to develop an orientation beyond themselves and towards the well-being of human and non-human communities.

The Real Food Working Group

Collaboration towards food system sustainability

UVM signed the Real Food Campus Commitment in the spring of 2012, and the RFWG was formed shortly thereafter. The RFWG is comprised of students (at least half of the members), faculty, staff/administrators, and representatives from University Dining Services (UDS). This team of people meets monthly to strategize how to move UVM closer towards its goal of 20% "real" food by 2020. The collaboration between these four stakeholder groups that is facilitated by the RFWG increases the power of the decisions that are made by the RFWG, because they have buy in and support from the majority of stakeholders on campus. Furthermore, the RFWG allows students, faculty, staff, and UDS to learn about what each are doing independently and how those aims and actions may overlap or diverge.

Another level of collaboration at UVM is between the RFWG and other groups on campus. The RFWG has partnered with three undergraduate service-learning courses in order to fulfill targeted research objectives. These class collaborations allow the RFWG to learn from students and vice versa. Moreover, it allows the RFWG to conduct research that it otherwise may not have the capacity to do. In this way, the partnership between the classes and the RFWG enhance the ability of the RFWG to affect change in the campus

food system. This type of collaboration also allows students to learn about the RFWG and the RFC and increases the number of people engaged in the movement. The RFWG has set a goal in its Multi-year Action Plan to collaborate with at least one course per semester.

One of these class partnerships happened in the fall of 2013 with an undergraduate Social Research Methods class. The class was tasked with conducting research about student awareness of the RFC on campus. They conducted observations, interviews, and a campus-wide survey of over 900 students. The RFWG did not have the capacity to conduct that scale of research without help, but establishing a baseline level of awareness on campus was important for the group's outreach strategy. In addition to the research results, the RFWG also learned a great deal about students' perceptions and values during class discussions. Prior to the class, the majority of students were not familiar with the RFC and the RFWG. By participating in the class, students gained a more nuanced understanding of the RFWG and its goals.

Another example of how the RFWG has collaborated with other groups on campus is their partnership with Eco-reps, a group of student leaders that work to promote sustainable practices and environmentally responsible behaviors on campus. During the 2014-2015 academic year the RFWG partnered with Eco-reps to audit the food budgets of dining locations in the Davis Center, the student center on campus. Previously, the RFWG had not included these locations in their calculations because Sodexo did not operate them, and it lacked the capacity to add them to their workload. As such, the collaboration with Eco-reps allowed the RFWG to achieve something they otherwise would not have been able to. Moreover, this collaboration allowed both groups

to learn more about each other and increased the number of people working towards a sustainable campus food system.

Meaningful Participation

I will now draw on my personal experience with the RFWG to consider how the structure and activities of the group promote each of the four dimensions of meaningful participation: knowledge, sharing ideas, efficacy, and an orientation towards community-good. Table 4.2 outlines the components/activities of the RFWG and which dimensions of meaningful participation they promote. Figure 4.2 illustrates the dimensions of food democracy that the activities of the RFWG promote.

Table 4.2**:** *RFWG activities that promote dimensions of meaningful participation*

Activity/component	**Goal**	**Dimension**
Monthly meetings	Gather diverse stakeholders to discuss ideas and make decisions to coordinate the implementation of the Campus Commitment	Sharing ideas
Real Talks	Create a space to engage UVM students in the Real Food movement	Sharing ideas
RFP process	Leverage the new dining contract to institutionalize RFC values	Knowledge; Efficacy
Sponsor campus workshops	Provide opportunities for UVM students to develop skills and learn about the food system and RFC	Knowledge
Sponsor attendance at summits/conferences/ trainings	Provide opportunities for UVM students to develop skills and learn about the food system	Knowledge; sharing ideas
Decision Flowchart	Guide product shifts based on RFWG's values	Community good
Real Meals	Make "real" menu items consistently available across campus	Efficacy
Real Food Campus Commitment	Institutionalize Real Food policies at UVM	Community good
Internships	Build students' knowledge and skills while contributing to the RFC	Knowledge

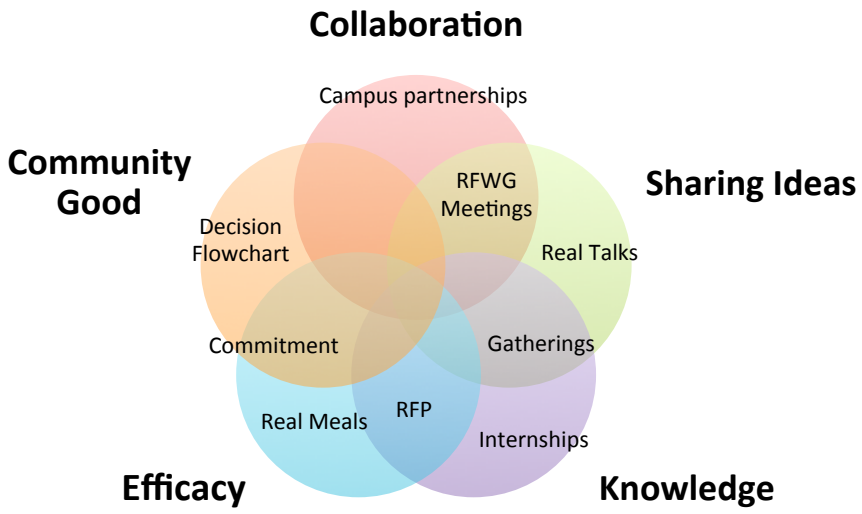

Figure 4.2: RFWG activities that promote dimensions of food democracy

Knowledge

The RFWG facilitates the acquisition of food systems knowledge by students in a variety of ways. It offered UVM students the opportunity to learn about food systems issues and the RFC in the fall of 2014 by sponsoring a RFC campus visit, which included a series of educational workshops. The workshops, which were led by national RFC staff members, covered topics such as the corporate food system, dining services in higher education, and oppression in the food system. These workshops preceded the formation of the student club, Real Food Revolution, and were intended to educate students so that they could meaningfully participate in both the club and broader movement.

The RFWG has reserved money in their budget and made it an explicit goal in their Multi-year Action Plan to send members of the RFWG or RFR to relevant conferences and summits. The group has sponsored students to attend the RFC National Summit and other RFC gatherings around the country. For example, in April of 2015 a group of RFWG and RFR members attended the Farm-to-Institution New England

Summit, where they learned about a wide variety of topics related to regional food systems. These conferences and summits offer students valuable opportunities to learn about food systems and the RFC in a range of different contexts.

The outreach conducted by the RFWG is more focused on raising awareness about the RFC on campus rather than educating students about the food system. This is partly because there is already a strong presence of food system education opportunities on campus. UVM has formally prioritized transdisciplinary food systems research and education through the Food Systems Initiative, which is "a community of university professionals, researchers, students and local partners who generate, teach, and apply new knowledge while contributing to the present and future viability of small scale, regional food systems" (The University of Vermont, 2015). Table 4.3 outlines the curricular elements of food systems education at UVM that are available to students. In addition to educational opportunities for students, the Food Systems Initiative supports faculty members who conduct food systems research and sponsors the annual Food Systems Summit, which draws scholars, practitioners, and food systems leaders to engage in dialogue on food systems issues.

Much of the knowledge about food systems that RFWG students have gained has been obtained simply by actively participating in the group. The RFWG can be thought of as a living laboratory for food systems change—students are learning by doing. From my own experience as a student member of the RFWG, I can attest to this. By attending monthly meetings and being immersed in the implementation process, I have learned an extraordinary amount about food systems, including: institutional foodservice; dining contracts; the local food economy; and social justice issues in the food system.

Table 4.3**:** *Curricular elements of food systems education at UVM*

Curricular Element	**Description/Goal**
Graduate program	Research and professional M.S. tracks that focus on the breadth and complexity of contemporary food systems issues and transdisciplinary research
Undergraduate minor	Interdisciplinary program that gives students the knowledge and skills necessary to understand our complex interdependent food system of food production, processing, distribution and consumption
Internship program	Places undergraduate students in high quality food system internships where they can make a meaningful contribution to Vermont businesses and organizations while building essential knowledge and career skills for their future
Sustainable Food Systems Leadership Certificate	A three-week combination of online and on-campus cross-disciplinary learning that addresses the social, environmental, economic, and diet and health (SEED) impacts of our food system
Food Hub Management Certificate	An innovative blend of hands-on, community-based, online, and on-campus learning that will prepare students for effective management of food hubs
Farmer Training Program	A six-month, hands-on program for aspiring farmers and food-systems advocates that provides experiential, skills-based education in sustainable farming.

A good example of how students learn about the food system by participating in the RFWG has been the process of securing a new university dining contract that has unfolded since January 2014. UVM's dining service provider's contract is ending in June 2015, so the university released a request for proposals (RFP) for a new dining contract in 2014. In the winter of 2014 the RFWG recognized this process as an opportunity to legally build more sustainable practices into the UVM food system and institutionalize the Real Food movement.

In the winter of 2014 the RFWG held a series of meetings about this process without members who represented University Dining Services. The purpose of these meetings was to create a document of recommendations for the committee that was in charge of writing the Request for Proposals (RFP) for the new dining contract. In order to meaningfully participate in this process, students needed at least a basic understanding of dining contracts and corporate foodservice companies. Much of this knowledge was gleaned along the way, as things came up. Two invaluable sources of knowledge for RFWG students were the RFC Campaign Director and Northeast Regional Coordinator, both whom joined the RFWG for a meeting to help the group develop a vision for the UVM food system and identify potential leverage points in the contract. Both of these RFC staff members had extensive experience with corporate foodservice companies and contract negotiations, which they could share with RFWG members.

During these meetings, members brainstormed what the ideal dining contract would look like for UVM and identified the most important components to build into the RFP. The Assistant Dean for Business Operations, who is both a member of the RFWG and the RFP committee, also assisted the group during the process by explaining what components would and would not be possible to include in the contract. This process of envisioning a different food system, learning what type of things can be written into dining contracts, and how contracts can be leveraged was extremely educational for students, who had no prior experience with contracts or the business of institutional foodservice.

Another way the RFWG provides experiential learning opportunities for students is through internships. During the 2014-2015 academic year the RFWG created thee

different internship opportunities through the UVM Food Systems Internship Program: calculator internships, research internships, and communications/outreach internships. The calculator internships were created in the fall of 2014, when the RFWG identified a potential conflict of interest in having Sodexo sponsored interns audit Sodexo's purchases. Between 2008 and 2014, Sodexo funded interns were managing the Real Food Calculator. In 2014, the RFWG offered two students credit for running the calculator, and in the spring of 2015 they paid two students to run it. During the spring of 2015, one student received credit for conducting research directly with the national RFC organization. The RFWG will pay two communications/outreach interns in the summer of 2015 to create promotional materials and develop the RFWG's social media presence. The funding for these internships comes directly from the RFWG's budget. These internships allow students to develop professional skills (e.g. research and communications skill) while learning about the RFC and the food system in a hands-on manner.

Sharing Ideas

At UVM, the RFWG meets monthly, with various sub committees meeting in between. These monthly meetings encourage the regular sharing of ideas among members. All decisions made by the group are subject to group discussion and are reached by a group majority. Many of the meetings in the past two years have been devoted to discussion about what product shifts should be made and how to prioritize the values included in "real" food. These discussions are ultimately a discussion of values, and they have been crucial in the group's decision-making process. As a group, the RFWG has had to deliberate about which values promoted by the RFC are most

important for UVM to focus on. As a result of these discussions, the Policy Committee created the UVM Real Food Decision Flowchart, which captures the group's values and provides formal instruction for making product shifts based on them. For example, the Flowchart indicates which product categories are of the highest priority to focus on finding "real" alternatives (e.g. meat and poultry), and then indicates which Real Food values (i.e. local, ecologically sound, fair, or humane) should be prioritized when choosing alternative products. The flowchart could not have been created without the sharing of ideas, for the discussion of individual's values was a necessary step in creating a document that reflected the RFWG's values as a whole.

While the RFWG creates a regular space for its members to share ideas with each other, it does not necessarily facilitate the sharing of ideas among the larger UVM community. The exclusive nature of the RFWG became a concern for some of its members in the spring of 2014. As such, the students of the RFWG decided to host a series of monthly "Real Talks," which were open forums for any UVM student to share his or her ideas about food on campus. At these Real Talks, RFWG members introduced the RFC to students and started a discussion about how the greater student body could participate in the Real Food movement on campus and what direction students wanted to the Real Food movement to move in at UVM. It was at the Real Talks that the idea to create a student club was developed. As a result, Real Food Revolution (RFR), the student club, was launched in the fall of 2014. The idea behind the club was to create space for students to join the Real Food movement and have a space to share their ideas.

The RWFG also promotes the sharing of ideas outside of UVM. By sponsoring members to attend relevant conferences, summits, and retreats, the RFWG provides

students with the opportunity to connect and share ideas with food systems leaders across the country. More specifically, RFWG members have been sharing ideas about the implementation process with food systems leaders on other campuses that have signed the Campus Commitment. RFWG members attended the Multistakeholder Signatory Gathering at the Farm2Campus Conference, held in Louisville, KY in November 2014; the Northeast Implementation Retreat, held in Boston in November 2014; and the Signatory Gathering at the Farm-to-Institution New England Summit, held in Amherst, MA in April 2015.

Many productive conversations have come out of these gatherings for signatory schools. Since UVM was one of the first schools to sign the Campus Commitment, we have been in the implementation process longer than most other schools. As such, we have more experiences and lessons learned to share with other campuses. Sometimes, at these gatherings, members from the RFWG end up sharing resources we have created with other schools, such as our Multiyear Action Plan or letter of recommendations to the RFP Committee. The sharing of ideas with other campuses is a crucial way for the RFWG to stay connected to the larger Real Food movement.

In addition to sharing ideas with other signatory schools, the RFWG has created space for students to share ideas with other schools in the region that have either an established or budding Real Food movement on campus. In February 2014, the RFWG hosted a Regional Strategy Retreat, at which six universities from northern New England and New York were represented. The retreat was intended to create space for student leaders to learn from one another, share ideas, and create alliances that could support their work. Students discussed strategies for growing the Real Food movement on their

respective campuses, such as how to engage the student body and develop students' leadership skills. Some of the schools represented had a common foodservice provider and could share strategies or challenges related to that foodservice provider with each other. By sharing ideas with other student leaders in the region, RFWG students are able to give and receive fresh perspective on challenges related to the RFC specific to the Northeast.

Efficacy

Students who were part of the effort to bring the Real Food movement to UVM first demonstrated their efficacy by getting the Campus Commitment signed by the President. The campaign to get the Campus Commitment signed took about a year. In 2011, the President of Slow Food UVM decided to invite members of that group to attend a Food Justice Summit at Northeastern University sponsored by RFC organizers in the Northeast. Three sophomore students were eager to launch a broader UVM campus food movement, and returned from this summit with the energy and connections needed to further develop the presence of the RFC at UVM.

These three students assumed leadership of Slow Food UVM in the fall of 2011, and became part of the first cohort of recognized "grassroots leaders" with the RFC. Through garnering the energy and commitment of their Slow Food club members, and partnering with regional organizers from the RFC, they used the first national Food Day (October 24, 2011) as a launching point for a strategic campaign to bring the Real Food Campus Commitment to UVM. The event brought together members of the UVM community who, through participation in petitions, photo campaigns, and an eat-in, demonstrated their interest in establishing this formal commitment to bettering the food at

UVM. The next four months were spent relaying the case to faculty and administrators, before the commitment was officially signed by interim President on March 22, 2012. These student leaders demonstrated their ability to influence their relationship to their campus food system by getting the university to formally commit to purchasing food based on their values.

Once the Real Food Campus Commitment is signed, it needs to be implemented. The dining service provider on campus could easily assume this responsibility and coordinate it with little to no input from students. For example, the dining service provider could just identify the cheapest products to shift to "real," without considering what types of product shifts would be meaningful for students. It is the responsibility of students to make sure that the implementation process moves forward in accordance with their values and in a way that is meaningful to them. At UVM, students have demonstrated their efficacy by directly influencing the way that UVM reaches 20% "real" food by 2020.

Through a discussion with an undergraduate class, RFWG members learned that students wanted to see entire meals that were "real," rather than just having random "real" ingredients sprinkled throughout menus. Students expressed that they wanted to see entire meals, and especially center-of-the-plate products, be "real." This inspired the RFWG to launch "Real Meals," which are made entirely of "real" products. The RFWG brought this idea to University Dining Services (UDS) and the first set of "Real Meals" was launched during Earth Week in 2014. For the entire week, each dining location on campus offered a "Real Meal" at each mealtime. "Real Meals" were also offered across campus on Food Day in October 2014 and again for Earth Week in 2015. The meals were

devised by UDS based on what products were available and the menu was approved by the RFWG. An example of one of the meals is Winter Pizza, which was made with organic dough and local goat cheese, butternut squash, kale, and onion. By having the capacity to implement the Campus Commitment in a meaningful way based on student input demonstrates that students on the RFWG have efficacy in shaping their campus food system.

In addition to seeing their vision of "Real Meals" realized, the RFWG has been effective in moving UVM's "real" food percentage towards 20%. Table 4.4 highlights product shifts that were made in the fall of 2014, along with the category of "real" food they fall into, the impact on purchasing in dollars (when available), and the corresponding estimated percent change in UVM's "real" food percentage (when available). These product shifts demonstrate that the RFWG has been able to affect significant changes in UVM's dining system.

Table 4.4**:** *Highlights of dining procurement changes made in the fall of 2014*

Product	**Category**	**$/semester**	**Estimated % change**
All breakfast sandwiches made with certified humane and cage-free eggs or egg patties	Humane	52,500	1.57%
Naked Juice (Rainforest Alliance certified) introduced at four retail locations	Ecologically Sound	50,000	1.5%
All grilled cheese sandwiches made with VT Bread Company organic bread and Cabot cheddar cheese	Local; organic	30,000	0.9%
Thomas Dairy in retail	Local	25,000	0.75%
All granola is organic	Organic	10,000	0.3%
All tofu is organic and local, from Vermont Soy	Local; organic		

All shell eggs are certified humane	Humane		
All tea bags are organic, Fair Trade or Rainforest Alliance certified	Ecologically Sound; Fair		
Move to all Green Mountain Creamery cream cheese	Local		

As mentioned above, UVM was in the process of seeking a new dining contract between 2014 and 2015. The process of writing an RFP and assigning a new contract based on it offered a critical leverage point for redefining the UVM food system. The students of the RFWG wanted to participate in the process, but were not invited to join the RFP committee. As such, the RFWG developed a strategy for influencing the process without sitting on the committee. The RFWG created a set of recommendations for the RFP committee regarding what they wanted to see reflected in the RFP. This was an extensive document, detailing various ways that the campus food system could be made more sustainable. The resulting RFP incorporated many of the ideas outlined in this document, reflecting students' values and vision for a campus food system. Students demonstrated their efficacy by successfully influencing the RFP process, which has a profound impact on the campus food system.

Community Good Orientation

Student leaders in the Real Food movement have some personal incentive to change their campus food systems, as they are consumers of the food. However, at UVM, the majority of upperclassmen live off campus and do not have a meal plan. Therefore, they have less personal incentive to work towards campus food system change. Furthermore, students graduate and are often not around long enough to reap the personal

benefits of the change they work towards. For example, the students who campaigned to get the Campus Commitment signed graduated before any significant product shifts were made. Their effort to get the Campus Commitment signed was motivated by their desire to improve the food system for everyone, rather than just themselves. The dedication of students to bring the RFC to UVM and work towards a more sustainable campus food system demonstrates their orientation towards community good.

Of the four categories of "real" food, the local attribute is most valued at UVM. In a series of focus groups conducted with UVM undergraduate students (see table 4.1 for results), the local attribute was often valued above the other attributes of "real" food. The reason most often cited for valuing local food was support for the local community; students cared about supporting producers and business in their community. The values of the RFWG reflect the values of the student body, in that it values the local attribute above others as well. In the Real Food Decision Flowchart, a document created by the RFWG that outlines how product shifts should be made based on the group's values, the local attribute is prioritized in most product categories. By leveraging the Campus Commitment to increase the amount of local food the university purchases, the RFWG demonstrates their commitment to the community good.

Real Food Revolution

Collaboration towards food system sustainability

Real Food Revolution (RFR) is a student club that was created by a group of RFWG student members to increase student engagement in the RFC on campus. The idea to form the club started at one of the Real Talks that RFWG students hosted in the spring of 2014 to engage with the greater student body around the campus food system and the

RFC. The president of RFR is a member of the RFWG, and serves as a liaison between the two groups. While the two groups are separate entities and have different activities and roles on campus, they ultimately share the same goal of building a more just, and sustainable food system on campus. The RFR has collaborated with the RFWG towards this goal by conducting outreach on campus about the RFC. For example, RFR students have tabled about the RFC and relevant food systems issues or events on campus and they helped the RFWG promote the open-forum presentations given by the foodservice providers that bid on the RFP for a new dining contract. The RFWG has fewer student members than RFR and limited capacity to conduct outreach with the student body, so by collaborating with RFR they are able to reach more students than they would be able to alone.

The students of RFR have also been collaborating with community partners to support causes that align with Real Food values. One community partner they have been collaborating with is Migrant Justice, an organization that supports and empowers migrant farmworkers in Vermont. RFR students started collaborating with Migrant Justice in December 2014 to support their Milk with Dignity campaign, which is building a movement for dignified livelihoods for dairy farmers and farmworkers in Vermont. The goal of the movement is to support farmers that comply with farmworker-defined social responsibility and human rights standards by providing a financial incentive. RFR students have attended Milk With Dignity Alliance meetings to represent the student voice and have bolstered student support for the campaign on campus.

Another cause that RFR has been collaborating with community partners on is community-based fisheries in the Northeast. A group of students from RFR attended the

RFC Northeast Implementation Retreat in November 2014 for schools who have signed the Campus Commitment. At the retreat they participated in a coalition-building workshop with the Northwest Atlantic Marine Alliance (NAMA), Red's Best (a distributor), and Slow Fish, in which they laid the groundwork for a collaborative effort to support community-based fisher folk in the Northeast. Since then, the RFR has been collaborating with these groups to spread awareness about issues in the fishing industry and how universities can be part of the solution by tabling on campus. In the spring of 2015 they got over 100 student signatures on a letter to the New England Fisheries Management Council, voicing support for fleet diversity and better management of the catch-share system.

Meaningful participation

I will now analyze how participation in Real Food Revolution promotes each of the four dimensions of meaningful participation for students. Table 4.5 outlines the components and activities of RFR and which dimensions of meaningful participation they promote. Figure 4.3 illustrates the dimensions of food democracy that the activities of RFR promote.

Table 4.5**:** *RFR activities that promote dimensions of meaningful participation*

Activity/component	**Goal**	**Dimension**
Community partner collaborations	Support causes that align with Real Food values	Knowledge; community good
Weekly meetings	Create a space for student body to engage with the Real Food movement	Sharing ideas

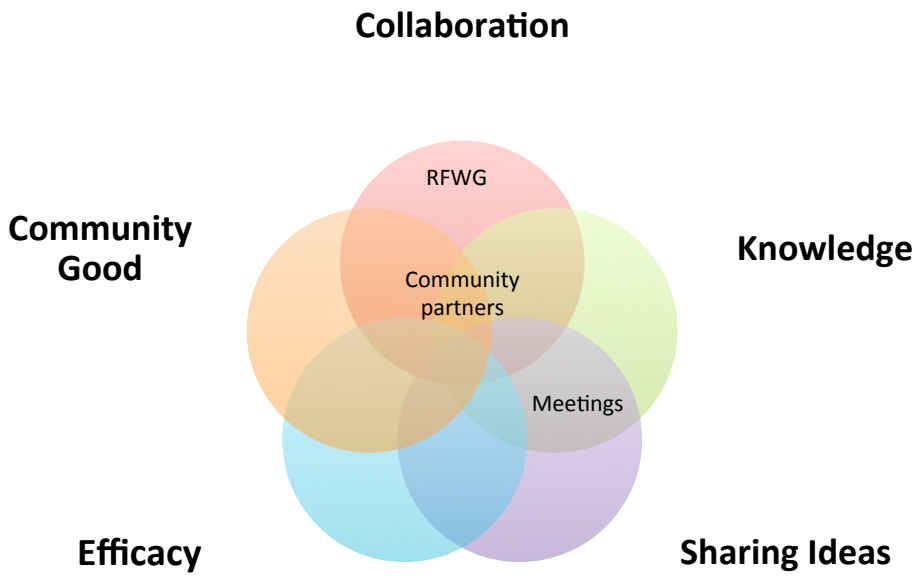

Figure 4.3: RFR activities that promote dimensions of food democracy

Knowledge

Like the students on the RFWG, students in RFR have gained knowledge about food systems through experiential learning. For example, students had no prior knowledge about fisheries or issues in the fishing industry prior to RFR's collaboration with organizations supporting community-based fishermen in the Northeast. This alliance was started at a RFC Northeast Implementation Retreat in November 2014. It was at the retreat that students first learned about issues in the fishing industry through conversations and workshops with organizers and workers in the fishing industry. Since then, RFR students have continued to learn about fisheries through independent research and by reading materials recommended by fisheries activists and organizers. Through this process of collaborating with community partners, the students of RFR gained knowledge about the food system that enables them to make informed opinions and decisions with regard to the food system on campus.

Sharing Ideas

The weekly RFR meetings provide a regular space for students to share ideas with each other about the food system. The meeting structure is much less formal than that of the RFWG, in that it is more discussion based. The informal atmosphere allows students to speak their minds about the food systems and discuss whatever topics or issues are on their minds. At one of their meetings, RFR members drafted a letter to the New England Fisheries Management Council, voicing support for fleet diversity and better management of the catch-share system. The writing of the letter was a group process, and involved much discussion about the group's values. All members were given the opportunity to edit the letter before they signed it. This process exemplifies how the RFR meetings are a forum for students to share ideas and discuss their values with each other.

Efficacy

This dimension of meaningful participation is currently absent from the experience of students in RFR. This may be due to the fact that the group is still relatively new—it was only formed in the fall of 2014. To date, the club has focused on outreach activities and creating a space for students to discuss food systems issues. While important, this work is not directly aimed at developing students' ability to actively determine their relationship to food.

Community Good

The students in RFR have demonstrated their orientation towards community good through their support for migrant farmworkers in Vermont and Northeast community-based fishermen. The students have created an alliance with Migrant Justice

in Vermont to support their Milk with Dignity campaign. They have also built relationships with Slow Fish, the North Atlantic Marine Association, and Red's Best in order to do outreach and education around issues in the Northeast fishing industry. Students gain no personal benefits by supporting these causes, but do so because they care about the well being of workers in the food system. By focusing their efforts on these causes, the club promotes an orientation to the community-good.

4.5 DISCUSSION

The Real Food Challenge—a national movement

At first glance, the transformative potential of the RFC lies in its ability to leverage higher education's market share in order to send a signal to the market that there is a significant demand for "real" food. The goal of shifting $1 billion of higher education food budgets by 2020 is often considered a tipping point. The movement is considered to have transformative potential because if a tipping point is reached, the demand for "real" food could switch from being a containable force to overwhelming. That is, "real" food could become the norm, rather than a niche market.

It would be easy for the RFC to just require schools to purchase locally produced food or food with certifications for environmentally sound practices (e.g. Certified Organic or Rainforest Alliance Certified), humanely raised animals (e.g. Certified Humane), or fair labor practice (e.g. Fair Trade Certified). This would create the same type of market demand for the characteristics of "real" food. It would be fairly simple for dining services just to substitute these products in for conventional ones. All of this could be done without challenging the power structure of the system or redefining the role of

consumers in the system. Essentially, we could see the $1 billion goal reached, without much change in how campus food systems, or the food system in general, function.

While this simple increase in demand would transform the market for "real" food, it would not truly transform the food system in a significant way. The same traditional, capitalistic market structures would prevail. Consumers would still be passive and the power would still come from the top-down. A closer analysis of RFC reveals that the power of the movement is two fold. While it is, on the one hand, a market mechanism, it is also a social movement that is redefining the role of consumers in the food system and equipping a new generation with the knowledge, skills, and connections needed to push the food system in a more just and sustainable direction.

My analysis reveals that the RFC embodies the five components of food democracy at the broadest level. The movement was fundamentally built on the concept of collaboration towards a sustainable food system. Furthermore, it is structured to facilitate meaningful participation, as defined by the four dimensions, by students in their campus food systems. By promoting food democracy, the potential of the RFC to significantly change the food system is much greater than if it simply aimed to create market demand for "real" food.

By moving towards food democracy the RFC has potential to transform the food system, because it is contesting the traditional model of passive consumerism and top-down control. Traditionally, universities provide food for students (though, now the majority of universities outsource this responsibility to foodservice companies) with little to no input from the students themselves. Students have typically been passive consumers

of food at universities. The RFC is changing that by empowering students to take an active role in defining their campus food systems.

The RFC is redefining how students interact with the food system by promoting the five dimensions of food democracy. It is transforming passive consumers into concerned, educated, active citizens that will eventually graduate college and bring that same active citizenship into the greater community. Eventually, the students that sought to change their campus food systems will seek to change the larger food system. Universities are a powerful leverage point for food systems change because they are somewhat of a training ground for the next generation of citizens. The knowledge, efficacy, and orientation towards the community-good that students develop through participation with the RFC will stay with them after they graduate.

One controversial issue with the RFC, with regard to the promotion of an orientation toward community good, is the guidelines for the local category of "real" food. According to the Real Food Guidelines, in order to qualify as local, the producer must be privately-traded or cooperatively owned and gross less than 1% of the industry leader. Moreover, at least 50% of the ingredients must be grown within 250 miles of the institution. These restrictions have caused controversy at UVM, because some of the local companies UVM purchases from have been disqualified because of the restrictions.

UVM has been purchasing dairy products from Hood and Cabot Cooperative Creamery for many years, both of which qualified as "real" when the RFC started. The two companies stopped qualifying as "real" when the Real Food Guide was created, because they grossed more than 1% of the industry leader, Dean Foods. This is despite

the fact that all of the milk they use can be traced to farms within 250 miles of UVM's campus.

The RFWG has discussed this issue at great length. Some members of the group feel that it is unfair to penalize local companies for being too successful. The RFWG feels that despite grossing more than 1% of Dean Foods, both Hood and Cabot support the local economy. In fact, they are both pillars in the Vermont food system. Furthermore, the group has questioned the arbitrary 1% threshold created by the RFC. It is arbitrary to say that just because Cabot and Hood gross slightly more than 1% of Dean Foods that they no longer are local, community-based companies. Dairy is the most important agricultural commodity in the state of Vermont, and as a state institution, the RFWG wants UVM to support local dairies. By disqualifying Cabot and Hood, the RFWG may be incentivizing UVM to purchase milk from out of state, if it is cheaper. While the guidelines for local food are meant to promote an orientation toward the community good, in some cases they may impede it. This issue has highlighted the challenges with creating national standards.

The Real Food Challenge—on the ground at UVM

The RFC promotes food democracy at a national level, but the bulk of the work in the movement is happening on individual campuses across the country. My analysis of how the RFC is manifested on the ground at UVM reveals that the five dimensions of food democracy are present for students on the RFWG, which has been the primary presence of the Real Food movement at UVM thus far. The RFWG is a space explicitly created to foster collaboration towards food systems sustainability between students and other stakeholders on campus. The group also provides students with opportunities to

gain knowledge about food systems through both formal and experiential avenues; share ideas with each other, other stakeholders on campus, and students at other institutions; develop efficacy by affecting real change at UVM; and develop an orientation toward the community good by supporting the local food economy and creating lasting change for future students. By providing these opportunities, the RFWG is equipping students with the knowledge and skills necessary to meaningfully participate in the process of defining their relationship to the food system.

Similar to students on the RFWG, students in RFR gain knowledge through experiential learning and have a dedicated meeting space within which to share ideas with each other. In addition to orienting themselves towards community-good by supporting the RFC, the students of RFR also orient themselves toward community-good by aligning with causes that support marginalized worker populations in the food system. The only dimension of food democracy absent from the experience of RFR students is the development of efficacy with respect to food and the food system. As a new club, RFR has yet to demonstrate that they are effective in defining their relationship to the food system. Thus far, they have focused their efforts on raising awareness about the RFC and food systems issues, like fisheries management and migrant farm labor, on campus, rather than focusing on affecting concrete changes in the campus food system. This may be because the RFWG students started the club to engage a greater segment of the student body in the Real Food movement, almost like an outreach arm, rather than as a group intended to make changes to the campus food system (which is what the RFWG was created for).

In addition to RFR and the RFWG promoting dimensions of food democracy, the university is also making strides to promote dimensions of food democracy. The various curricular components outlined in Table 4.1 provide opportunities for students to gain knowledge about food systems. The Food Systems Initiative seeks to promote collaboration and the sharing of ideas across disciplines and the Food Systems Internship Program fosters the development of efficacy through hands-on experience working in the food system. The university's commitment to the research and development of sustainable food systems promotes an overall orientation toward the community-good. By promoting dimensions of food democracy on campus, the administration enhances the transformative potential of the RFC at UVM.

For the few students actively involved with the RFC at UVM, through the RFWG or RFR, the five dimensions of food democracy (or most of them, for RFR students) are significant aspects of their experiences. These aspects, however, are largely missing for the average UVM student. The opportunities exist for students to experience most of these dimensions, but the majority of students are not accessing them. This lack of student engagement on campus could be due to the fact that the RFC has only had a presence at UVM since 2012 and students may not be aware of it. A survey conducted in the fall of 2103 found that only about 30% of students on campus had heard of the RFC, and of that 30%, most did not know much about it, besides the name or the tagline, "20% by 2020."

Since 2013, the RFWG has attempted to increase student awareness by conducting outreach on campus through a variety of avenues, such as tabling at events, promotional signs, social media, and a video segment on UVM Extension's television

show, *Across the Fence*. The success of meeting UVM's goal of 20% "real" food by 2020 is not dependent on the level of student engagement on campus. However, a more engaged student body could make the implementation of the Campus Commitment more meaningful and worthwhile.

Future Directions

In this section I will outline recommendations for the future of the RFC at UVM. These recommendations would increase the transformative potential of the movement on campus by enhancing the five dimensions of food democracy.

1. Expand stakeholder participation

Though the RFWG facilitates collaboration between students, faculty, dining services, and staff/administration, it excludes other stakeholder groups, such as community allies, producers, and kitchen staff. By including these voices in the dialogue about Real Food at UVM, the implementation of the commitment could be more collaborative, inclusive, and ultimately, more democratic. By collaborating with more stakeholders the RFWG can enhance their ability to affect change that they could not achieve independently. The more stakeholders involved in implementing the Real Food Campus Commitment, the more support and buy-in it will have on campus.

The RFWG has considered adding stakeholders to the group, but has yet to take action in this regard. There are logistical challenges to adding more stakeholders to the group; it is already nearly impossible to get all members of the RFWG together on a monthly basis and adding more stakeholders would just exacerbate this challenge. One proposed solution to this problem would be to create an advisory board for the RFWG that only met once a semester or annually. That way, stakeholders who are less involved

in the daily activities of implementing the Campus Commitment could still have a voice in the process and could provide unique perspective. Additionally, this Advisory Board could be called upon during the year when important decisions or particular challenges arise.

2. Collaborate with student groups on campus

The RFWG includes student stakeholders, but it could involve more students on campus by collaborating with student organizations whose mission aligns with the RFC. There are numerous student organizations on campus whose mission is tangentially related to that of the RFWG, such as Campus Kitchens and Slow Food UVM. By collaborating with each other, the RFWG and other student groups can learn about each other's missions and activities, involve more people in the movement for a more sustainable food system, and increase each groups' power.

3. Collaborate with other RFC schools in Vermont

UVM has been actively sharing ideas with other RFC institutions by participating in the various workshops, retreats, and conferences sponsored by the RFC. While the RFWG has connected with some RFC schools in Vermont at a Regional Strategy Retreat in 2012, they have not explicitly collaborated with other schools in the region. There are multiple schools in Vermont that have signed the Campus Commitment. Among them are, Marlboro College, Middlebury College, Sterling College, and Lyndon State College. If one of the goals of the RFC is to strengthen the local food economy, then it only makes sense for local institutions working towards the same goal to collaborate towards that goal. For example, multiple institutions could collaborate to create enough of an incentive for local producers to adjust their practices or products in order to get them to qualify as

"real." Or, institutions could join forces to guarantee a producer a minimum order so that they can get wholesale prices. By collaborating with other Vermont schools towards building a more sustainable local food system, UVM could affect change that it may not be able to as a single institution. This type of collaboration could be facilitated by regular meetings, where stakeholders from each school gather to determine what type of collaborative effort could move each school's goals forward.

4. Share ideas with other RFC schools in Vermont

In addition to collaborating towards local food systems change, UVM could share ideas with other local institutions. UVM has a wealth of locally contextualized knowledge that is potentially valuable for other institutions pursuing the RFC. For example, we have already researched many potential "real" food products, and particularly local products. This type of information could be shared amongst local institutions, so that each group does not have to go through the same research process. Additionally, sharing ideas with other local institutions could help UVM decide how to move forward with particular issues or obstacles presented by the RFC, such as the issue with local dairy products mentioned previously. Since the issue with dairy products is locally contextualized, other institutions in Vermont are likely dealing with the same obstacle. By sharing ideas about problems like these with each other, UVM and other schools in Vermont may be able to make better decisions with regards to the local food system. This type of idea sharing could be facilitated by something as simple as an email listserv or as involved as regular meetings. By keeping up on what each institution is doing with regards to the RFC and food system sustainability, students and other

stakeholders could learn new strategies, insights, and perspectives that could help them make decisions at their own institution.

5. Expand food systems education across campus

To increase the amount of student engagement on campus the RFWG could take efforts to expand food systems education across campus. The results of a survey conducted by a Social Research Methods class in the fall of 2013 indicate that students in the College of Agriculture and Life Sciences (CALS) and the Rubenstein School for Natural Resources (RSNR) were more likely to prefer "real" food than students in other colleges. This suggests that students who have been exposed to food systems issues or topics are more likely to prefer "real" food, as most of the food systems related courses are housed in those two colleges. The Real Food movement, then, could be grown at UVM if more students were aware of food systems issues. UVM has created many opportunities for students to learn about food systems issues, as outlined by Table 4.3, but a next step could be for those educational opportunities to be expanded across campus. For example, incorporating food systems curriculum into college or disciplines that do not traditionally address the topic.

The RFWG has already partnered with three classes in a service-learning format, but all three of those classes were in CALS and two of them were food systems classes. One way that the RFWG could expand education about food systems issues across campus is to partner with service-learning courses that are typically considered unrelated to food systems. For example, they could partner with a marketing course in the School of Business Administration to develop new marketing strategies for the RFWG.

Another way to expand food systems education across campus would be to incorporate it into required coursework for all students. For example, the university administration could require all students to take a basic food systems seminar, or a seminar that incorporated food systems curriculum. Or, food systems material could be incorporated into already required courses for students. Alternatively, the summer reading book for incoming first years could be about food systems. The goal of these efforts would be to ensure that all UVM students had at least a basic understanding of the food system. Doing so would equip students with the necessary knowledge to meaningfully participate in a food democracy.

6. Support Real Food Revolution (RFR)

The opportunities provided by participation in the RFWG are fairly limited to members of the group. This exclusivity was one of the motivating reasons RFR was created. The club provides a much more inclusive space for students to join the Real Food movement. Support for this club and its educational opportunities should be, at the very least, maintained, and, ideally, expanded. If the Real Food movement is to grow at UVM, there needs to be an outlet for students to plug in to. RFR provides all UVM students the opportunity to engage with the RFC and experience the dimensions of food democracy. As my analysis demonstrates, RFR is already providing both experiential and formal educational opportunities for members, facilitating the sharing of ideas among members, and orienting members toward the community good. Though the club has not yet demonstrated its ability to develop efficacy with respect to the food system amongst members, continued or expanded support for their activities could help them to do so. By supporting RFR, UVM can expand the promotion of all five dimensions of food

democracy. Ideally, RFR would see expanded financial support from UVM's administration, leadership support from faculty and/or staff members, and continued support from the RFWG (i.e. funding RFR students to attend conferences, summits, or retreats).

7. Utilize open forums for the sharing of ideas

One practice that could facilitate more sharing of ideas amongst the UVM community—especially between students and other stakeholders on campus—is the use of open forums to aid decision making. The Request For Proposals (RFP) Committee hosted open forums during the process of selecting a vendor for the new dining contract, and they were immensely useful for letting UVM community members express their concerns for the type of food system they wanted to see at UVM. These forums were attended by students, faculty, and staff, alike. They empowered UVM community members to join the discussion of what the future UVM food system should look like. This open sharing of ideas ultimately enabled the RFP Committee to make more informed decisions about the future of UVM's food system. This model could be replicated when important decisions need to be made about the UVM food system with regards to the RFC.

8. Focus outreach on the public-good benefits of the RFC

One way that the RFWG could promote students to develop an orientation towards community-good is to focus its outreach efforts on how the RFC benefits communities (human and non-human) rather than, or in addition to, how it benefits individuals. Studies have found that more altruistic consumers are willing to pay more for food with public good attributes, suggesting that consumers purchase food with public-

good attributes to affect the community-good and not simply as a result of individuals' perceptions of privately appropriable benefits (Lusk, Nilsson & Foster, 2007). College is typically an impressionable time in student's lives, during which they question their values and beliefs. As such, universities have the opportunity to develop altruism, or an orientation towards the community-good, in students. By focusing outreach efforts on the public-good benefits of "real" food, the RFWG could orient students towards a food system that values the public good rather than just the private benefits of food. Outreach efforts could concentrate on informing students about how "real" food benefits communities, producers, and the environment and how conventional food has negative impacts on these groups.

9. Provide service opportunities in the food system

Another way in which the RFWG and RFR could promote students to develop an orientation towards the community-good is to coordinate service opportunities in the food system for students to learn about and contribute to the community-good. For example, the groups could organize service events with community partners, such as hunger relief organizations, community gardens, farms and producers, and labor advocacy organizations. Better yet, would be a campus-wide service day, where all UVM community members participated. These service events would provide students with the chance to actively orient themselves toward the community good as well as gain experiential knowledge about the food system.

4.6 CONCLUSION

The purpose of this piece was to critically reflect on my two years working with the RFC in order to comment on the transformative potential of the Real Food movement

and identify opportunities to enhance the potential of the movement to make significant food systems change. Following Hassanein (2008), I applied the framework to the activities and components of the movement to examine the extent to which each of the five dimensions of food democracy are present. I analyzed the RFC on two levels—as a national movement and as it is being realized on the ground at UVM.

I found that the RFC, as a national movement, is promoting all five dimensions of food democracy. As such, the movement has true potential to transform the food system. By targeting college students, the RFC is training the next generation of consumers to interact with the food system in a new way. By equipping them with the necessary knowledge and skills, the RFC is elevating students from passive consumers to engaged citizens that demand a say in their relationship to food. Herein lies the true power of the RFC to transform the food system—it is moving towards food democracy, which, according to Hassanein (2003), is the only way we will build a truly sustainable food system.

I also analyzed the Real Food movement at UVM to determine if the on-the-ground, daily reality of the movement was also promoting food democracy. I found that for students on the RFWG, all five dimensions of food democracy are present and for students in RFR, the only missing dimension was the development of efficacy within the food system. Though the dimensions of food democracy are present for students involved with these two groups, they are not present for the majority of students at UVM. Therefore, my recommendations for the future of the Real Food movement at UVM are focused on expanding those dimensions to the campus community. Despite the limited reach of the food democracy dimensions currently at UVM, I believe the movement has

the potential to reach more students on campus and transform the relationship students have with the UVM food system.

As one of the first institutions to sign the Campus Commitment and one of the leaders in the implementation process, UVM can be a model for other institutions with regards to how to implement the RFC in such a way that promotes food democracy. By analyzing how the RFC is being played out on the ground at one institution, I demonstrate that the dimensions of food democracy being promoted by the national movement are also being promoted on a local level. Other institutions looking to enhance the transformative potential of the RFC can learn from the activities at UVM that have promoted the dimensions of food democracy.

My analysis focused on the activities and components of the Real Food movement, both nationally and locally at UVM. Future research at UVM could focus on student perceptions of the food democracy dimensions, such as the extent to which students perceive these dimensions to be part of their experience. I also only analyzed the presence of these dimensions with respect to students' experience. Future research could focus on how the RFC promotes these dimensions for other stakeholders on campus or in the food system.

While I may have begun my tenure with the RFWG as a skeptic, this analysis has convinced me of the transformative potential of the RFC. That is not to say the movement is perfect—in fact, it is far from it. Movements, by nature, are dynamic and so the extent to which any of the dimensions of food democracy are present will constantly be in flux. What is important, however, is that the RFC is moving towards food democracy by supporting programs and activities that promote collaboration, knowledge, sharing ideas,

efficacy, and an orientation towards community good. Above all, the most important recommendation I could make to the RFC actors at UVM is to keep the dimensions of food democracy in mind when thinking about the future of the movement.

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Chapter 5: Dual Strategies for Food Systems Change

I have utilized two very different frameworks to analyze the RFC, a national movement that is trying to create a more just and sustainable food system. In chapter 3 I utilize Lancaster's theory of consumer demand to analyze what factors influence students' economic decision making with regards to "real" food and in chapter 4 I utilize a food democracy framework to analyze the transformative potential of the Real Food movement. The RFC is a unique social movement, in that it is simultaneously attempting to transform the food system is two different ways, hence the different frameworks. On the one hand it is trying to leverage the market share of higher education to signal to the market a significant demand for specific attributes of food—namely, the attributes associated with the four categories of "real" food. On the other hand it is trying to empower, mobilize, and connect students to redefine their relationship to the food system. These are very different goals, and they each contribute to the transformative potential of the RFC in different ways.

The flagship goal of the RFC is to shift $1 billion of campus food budgets towards "real" food by 2020, thereby creating significant demand for the "real" attribute. This strategy utilizes existing market structures by relying on traditional supply and demand logic to shift the type of food that the system provides. By generating enough demand for the attributes of "real" food, the logic is that new supply chains will be created to meet that demand and will shift the food system towards one that produces food with the attributes of "real" food. This strategy will theoretically change supply chains in the near future, but will not fundamentally alter power dynamics in the food system.

The way by which the RFC creates significant market demand for "real" food does not rely on traditional market structures. Economic theory assumes that consumers will demonstrate their preference for particular attributes in the marketplace by purchasing goods with those attributes over goods without them. Students are not typical consumers, however, in that they often do not have the freedom to purchase the goods they wish to because they are constrained by a meal plan and/or limited options. The RFC has found a way for students to demonstrate their preference for "real" food despite these constraints. By campaigning to get their university to sign the Real Food Campus Commitment students signal to their university administrators and dining service provider that they have a preference for "real" food, despite being able to demonstrate those preferences in the marketplace.

The mission of the RFC is not simply to create more market demand for the attributes of "real" food. It also seeks to empower students within the food system and redefine power structures in campus dining systems. Typically, students have very little power in determining their relationship to their campus food system. Empowering students to campaign for the Real Food Campus Commitment is one way in which the RFC is redefining power dynamics in the food system, because it empowers students to demand a say in defining their campus food system.

By promoting the dimensions of food democracy, the RFC is creating more lasting change in the food system. Promoting food democracy will neither change the food system quickly, nor ensure the provision of "real" food in the short run. Rather, the promotion of food democracy will begin to shift the power dynamics in the food system over time, while creating market demand for "real" food will shift supply chains more

quickly. The RFC may not have the power to move our food system towards food democracy single handedly, but it can empower a generation of students to rethink their relationship to food and the food system. Promoting dimensions of food democracy amongst students is particularly influential, because students are a large part of the next generation of consumers.

These two strategies for food systems change—creating market demand for "real" food and empowering student to redefine their relationship to the food system—are not disparate from each other, but work synergistically. By empowering students to rethink their relationship to their campus food system and pressure their institution to sign the Real Food Campus Commitment, the RFC is utilizing student power to create a signal to the market. The movement is able to create such significant market demand because it transforms students from passive consumers to active citizens in the food system.

I believe that the dual strategies of the RFC will enable the movement to make a much more significant impact on the food system than either one of them alone. Had the RFC just focused its efforts on the economic piece of the puzzle—creating market demand for "real" food attributes—the movement may have been coopted by corporations, much like we have seen with organic food. By promoting food democracy, the RFC protects itself from cooptation, because it creates engaged consumers that can regulate the trajectory of the movement. Had the movement just focused on promoting dimensions of food democracy, it would likely not make any tangible change in the short-run. Creating demand for "real" food is changing what type of food is supplied in the short-run.

It is the promotion of food democracy that differentiates the RFC from previous sustainable food initiatives, and it is this defining feature that makes the movement so powerful. While the fulfillment of the Real Food Campus Commitment—the market-based strategy of the RFC—often takes center-stage and demands significant time and resources, it is important that the other mission—empowering students within the food system—not be swept aside. For it is the promotion of the dimensions of food democracy that will move our food system towards food democracy in the long-run, which is one of our best hopes for creating a sustainable food system.

Chapter 6: Conclusion

I started this graduate program in food systems, because, quite simply, I wanted to change the food system. I wanted to change it for the better—for the betterment of the environment, of people, and of communities. I was not unique in this desire of mine, and nor was it unique that I had not the slightest idea how to fulfill that desire. What has been unique, however, is the opportunity I have had to immerse myself in a national movement that is actively trying to change the food system. Prior to starting this program, I had little understanding of social movements and social change. After being immersed in the Real Food movement for two years now, I have come to understand how social movements can foster change in the food system. Moreover, as an active participant in the movement I have gained first hand experience in what it means to change the food system.

The purpose of this thesis was to examine how the RFC is being played out on the ground at one university. UVM is a leader in the Real Food movement, so it is a particularly rich setting to analyze the realities of the movement. I analyzed survey data to explore student demand and preference for "real" food at UVM and I drew on two years of participant observation to analyze the extent to which the RFC promotes food democracy both nationally and locally at UVM.

In my first article, I find that the majority of students at UVM prefer "real" food, but that most of them are currently unwilling to pay the premium that "real" food commands. The factors most strongly associated with preference for "real" food are attitude about origin of food and membership in a college that promotes awareness of environmental and food systems issues. This suggests that students who are aware of the

impacts of the source of their food are more likely to prefer "real" food. While not surprising, this finding has significance for leaders of the RFC and schools that are implementing that Campus Commitment. If the Real Food movement is to gain momentum and grow student demand for "real" food, increased education about food systems will be crucial. Fortunately, college is a time when most students question their values and beliefs, so the RFC is well-positioned to influence students' food-related values. By influencing students' preference for "real" food, and the associated attributes, the RFC can train the next generation of consumers to demand those attributes after they graduate.

My second article reveals that the RFC, as realized nationally and on UVM's campus, is moving our food system towards food democracy. The structure of the national movement and the tools its provides students (e.g. the Real Food Calculator and the Real Food Campus Commitment) promotes the five dimensions of food democracy—collaboration towards food systems sustainability, knowledge of the food system, sharing ideas, development of efficacy, and an orientation towards the community good. The activities and components of the Real Food Working Group (RFWG) and Real Food Revolution (RFR) at UVM also promote these dimensions of food democracy on a local level. The only exception is that RFR has not yet demonstrated the development of efficacy among its members, but that is likely due to the fact that the club is still within its infancy. By promoting all five dimensions of food democracy, the movement has the potential to truly transform the food system.

While I offer multiple suggestions for the future of the movement in both articles, one unifying theme between the articles is the call for increased education about the food

system. My survey analysis reveals that education will be necessary to grow demand for "real" food on campus. My analysis of how the RFC promotes the dimensions of food democracy reveals that the RFWG and RFR provide educational opportunities for the few students who are actively involved with the groups, but that the student body is largely excluded from the educational opportunities those groups provide. As the acquisition of food systems knowledge is a key component of promoting food democracy, I suggest that the RFWG and RFR take steps to promote food systems education for the entire UVM student body. Educating students will both increase the likelihood that they will prefer "real" food and equip them to meaningfully participate in the process of determining their relationship to food and the food system.

There has yet to be any published literature examining the Real Food movement, so it is my hope that this research will serve as a starting point for a body of literature to be developed around the RFC. While contributing to the body of knowledge about the Real Food movement, this research also serves as a jumping off point for a deeper analysis of the RFC. Like all research, this thesis was limited by time and scope. Most significantly, it was conducted only at one university, so it may not be generalizable at other institutions. UVM is located in a state with a strong local and sustainable food movement, so its student body may not be representative of other institutions in the Real Food movement. Future research could examine the demand for "real" food at other institutions or on a national scale. It would also be interesting to explore which attributes of "real" food are most preferred and why.

My analysis of how the RFC promotes food democracy was limited to an analysis of the components and activities of the movement, as understood by my experience as a

participant observer. Additional research could explore how members of the RFWG and RFR perceive each of the dimensions of food democracy as part of their own experiences. Furthermore, it would be interesting to consider how the RFC promotes dimensions of food democracy for other stakeholders on campus, such as faculty, staff, and dining service workers.

My research suggests that the RFC, as a national movement and as realized on the ground at UVM, has the potential to transform our food system. Additional research could explore *how* the RFC is transforming the food system by analyzing the economic and social impacts the movement has had on producers and consumers. For example, it would be interesting to understand how the RFC has affected the supply and demand for food with the attributes of "real" food, in terms of what types of products have been affected and to what extent. It would also be interesting to understand how producers and consumers perceive the RFC to have affected them as individuals.

The RFC is a relatively new movement that is gaining momentum across the country. It has the potential to significantly transform our food system, and therefore warrants additional research. By analyzing the movement, I aim to contribute to its success by providing insight and direction. Moreover, I hope that this thesis inspires other researchers to explore the movement and start of a deeper conversation about it.

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Appendixes

APPENDIX A: CHAPTER 3 SURVEY

Part 1: Dining Preferences & Behaviors

1. At which location do you most often eat? (Circle one)
    a. Harris Millis
    b. Alice's
    c. Marche
    d. Given Atrium
    e. Cook Commons
    f. Cyber Café
    g. Waterman Café
    h. Waterman Manor
    i. Redstone Market
    j. Ben & Jerry's
    k. Marketplace
    l. New World
    m. Brennan's
    n. Henderson's
    o. Cat Paws
    p. Northside Café
    q. Redstone Unlimited

2. What meal plan do you have? (Circle one)
    a. Unlimited with 300 points
    b. Unlimited with 100 points
    c. Points plan
    d. Off campus plan
    e. None

3. How important are the following factors in deciding where you eat (check one box per row).

Factor	Not at all important	Of little importance	Moderately important	Important	Very important
Location					
Availability of to-go options					
Atmosphere					
Price					
Dietary needs (gluten free, vegan, vegetarian, kosher, etc.)					
Variety/selection of food					
Origin of food (local, organic, fair trade, humane, etc.)					

Part 2: Real Food Challenge

4. Have you heard of the Real Food Challenge?
    a. Yes
    b. No

5. If yes, what do you know about the Real Food Challenge?_____
    _____
    _____
    _____
    _____
    _____
    _____

6. If you have heard of the Real Food Challenge, how did you hear about it? (Circle all that apply)

a. Word of mouth
b. Signs (poster, table tent, napkin insert)
c. A friend
d. Other: _____
e. E-mail
f. Event
g. Class
h. I have never heard of it

CLARIFYING STATEMENT:

UVM has signed on to the Real Food Challenge, pledging to source more food from the following categories:

- **Local**: Food from independently/cooperatively owned producers, that gross <1% of the industry leader annually, and are also <250 miles from UVM.
- **Humane**: There are many qualifying certifications for this category (like Cage Free, Grass Fed or Free Range) that ensure the animal was well treated.
- **Ecologically Sound**: Includes organic products and sustainable seafood that aim to minimize environmental impact.
- **Fair**: Any product where the workers involved are paid and treated well. Common items are coffee, tea, chocolate, and exotic fruits.

7. Consider the resources you and your parents/guardians have to pay for your meals at college. How much more would you be willing to pay for your meal plan if over 20% of the food was defined as "Real" using the qualifications above? (Circle one)
    a. Would not pay any more

b. < 1%
c. 1%
d. 3%
e. 5%
f. 10%
g. > 10%

8. Consider the resources you and your parents/guardians have to pay for your meals at college. How much more would you be willing to pay for your meal plan if over 20% of the food was defined as "Real" using the qualifications above? (Circle one)
    a. Would not pay any more
    b. > $18.00/semester
    c. $18.00/semester
    d. $56.50/semester
    e. $94.17/semester
    f. $188.35/semester
    g. > $188.35/semester

9. Currently, what percentage of food on campus do you think is considering "real," according to the categories above?
    a. 0-5%
    b. 6-10%
    c. 11-15%
    d. 16-20%
    e. 21% or more

Part 3: Demographics

10. What year are you?
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
    e. Other: _____

11. What college are you in? (Circle college of your major)
    a. College of Agriculture and Life Sciences
    b. College of Arts and Sciences
    c. Rubenstein School of Environment and Natural Resources
    d. School of Business Administration
    e. College of Education and Social Services
    f. College of Engineering and Mathematical Sciences
    g. College of Nursing and Health Sciences

12. What gender do you identify with?
    a. He
    b. She
    c. Zee

13. Are you considered an in-state student?
    a. Yes
    b. No