# Human Practice Centered Design

Service Designing Practice Transition -Community Supported Agriculture as a Case Study

by Christiana Lackner

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Thesis document submitted to the School of Design, Carnegie Mellon University for the degree of Masters in Interaction Design

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To my talented classmates, for keeping me sane, healthy, happy, and productive. Their feedback, guidance and company over the last two years have made this a transformative experience.

# Abstract

Designers study human behavior in order to create products and services that respond to human needs. However design also works to support the emergence of different ways of living, beyond the needs or desires uncovered with more traditional human centered design research approaches.

This project takes an approach to understanding human behavior that is relatively unexplored in the field of design. Using *social practices* I explored new ways for designers to model human behavior.

I extended the use of social practice models into the space of service design, exploring a new kind of tool and approach to help designers create services that develop and support social practices.

I used Community Supported Agriculture (CSA) —a system where community members buy shares from a group of local farmers in exchange for weekly produce—as a case study for testing these new approaches.



# Introduction

In this thesis project I set out to understand what role design and designers might play in helping people to transition to new ways of everyday living, ways of living that make people feel they live better, but without increasing negative impact on natural and social environments. In short, how can design significantly shift collective behavior and perspectives? Some approaches exist for achieving behavior change through design: the use of scripts-designed into objects or tools-that direct behavior; persuasive technology, which designs using triggers to make small adjustments in behavior (Fogg 2003); or the use of information to change opinions and beliefs and thereby behavior. These approaches rely on an understanding of behavior based primarily on models of human cognition, which leads to only incremental changes in individual behavior. For design to expand its scope and help support the emergence of collective new ways of living, models that incorporate social and material influences on behavior are needed.

The theories of *social practices* provide such models. Taken from sociology, the concept of a social practice helps to frame human behavior not merely as driven by what individuals think or desire, but by the intersection of individual cognition, social conventions, products, and infrastructures at any given moment. The discourse on social practices has recognized the value that this broad perspective has for the design of products in particular, proposing design as an expertise that should create "interventions that foster innovation in practice" (Shove 2007, 138). Social practices are a useful unit of analysis that can help designers to understand the intricate dynamics of existing behaviors and to design for new behaviors on a collective scale. In trying to translate social practice concepts into useful frameworks for design, I experimented with combining social practice modeling and service design as an approach to configuring or "designing human practices." Services could provide a good structure for coordinating the various elements that drive practices, yet the role of services in configuring or coordinating practices has not been widely explored. This project attempts to explore this space.

Through a case study with a local Community Supported Agriculture group, I applied an approach of designing service concepts aimed at configuring practices. In the process I discovered the ways in which designers might use social practice models as a valuable tool in the research and design process. This document is meant to share these discoveries and to pose new questions that could be explored in future design projects with the goal of helping new ways of living emerge.

The document is divided into four parts:

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## Part I: Social Practice Models for Design

### Part I: Social Practice Models for Design

Design is about understanding humans and things and how they interact. In order to coordinate these interactions, designers look for ways to model what exists and what could be. In human centered design, the scope of these models is often narrowly focused on interaction between one person and one object or system. However, the concept of social practices, borrowed from sociology, provides a robust framework for understanding human behavior. It provides a valuable perspective for design because it enables looking beyond an individual's interactions with an object or system and examines the social and infrastructural context surrounding human actions. This section outlines how social practice theory can be utilized by designers to frame human behavior, and in turn how design could play an important role in configuring human practices. In my exploration, I drew from the work of Elizabeth Shove who has written extensively about social practices, including on the intersection of social practices and design.

Theories of social practice describe human behavior as a series of *practices* or groupings of activities that are performed by people in everyday life. For example the practice of bathing, or the practice of cooking. Practices require certain components in order to be performed: meanings or identities for *why* a particular practice is performed, practical knowledge or skills for performing a practice, social understanding or "know-*how*" about the norms of a social practice, and physical things - objects and infrastructures - that are the tools for performing a practice. Often these groupings of activities become so routinized that they become only semiconscious; each action is no longer a conscious decision. A practice is formed when it has become a commonly held "way of doing."

Practices require certain components in order to be performed: meanings or identities, practical knowledge, social "know-how," and physical objects and infrastructures. For example the practice of cooking is a series of actions—chopping, mixing, measuring, tasting—set in the context of a kitchen. It is driven by personal meanings around food; it requires certain skills (handling a knife, following a recipe), certain tools (knives, pots), and certain infrastructures (plumbing, gas or electric stove). The methods used and decisions made in cooking are influenced by a particular set of social norms around eating and food preparation. All of these factors taken together explain why people do what they do when they cook. As Shove explains, "social practices are ordering and orchestrating entities" (Shove 2010, 471). They provide an invisible framework for everyday behavior that makes behavior resistant to change. However, for design, knowing the framework can help to understand how behaviors evolve.

Most user-centered design approaches examine individual experiences through isolated interactions with products (Shove et al. 2008). User centered research methods aim to gather the individual needs, desires, and motivations of users when pursuing a particular goal. From this perspective the users' needs and desires drive his behavior. A social practice perspective, however, considers behavior to also be driven by collective, social convention and by systems of things - from objects to physical of digital infrastructures - used in "performing" a practice. This perspective grants individual human agency less weight in affecting behavior, or rather distributes agency to a wider set of entities. Human needs are still a factor, but as practice theory-based accounts of human consumption have argued, even "needs" are themselves driven by practices (Warde 2005). For example, one may "need" to buy certain exotic ingredients because a recipe calls for them. Social practices provide a more comprehensive understanding of behavior, one that acknowledges

that behavior is emergent and ever-evolving depending on the constellations of social norms, physical things and practical "know-how" at the time the practice is performed.

If a role of designers is to help new ways of living emerge, practices become a powerful unit of analysis for how these ways of living develop and how they might change. Using a social practice model of behavior, designers can visualize more complex systems of factors that facilitate transitions in practice or even enable the development of new practices altogether.

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### Modeling Social Practices

#### PRACTICE COMPONENTS

Designers seeking to facilitate new ways of living can use social practice models as a way to visualize what influences human behavior and how behaviors form and change. A social practice model maps the three main components of a practice: meanings, skills and things.<sup>1</sup>



Meanings describe a person's motivations and goals for performing a practice. They also describe the identities that a person may form around particular practices.

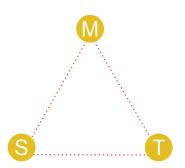


Skills refer to the practical and social "know-how" for enacting a practice. Practical skills enable a person to perform certain actions; social understandings guide what is considered the "norm" for the practice.



Things are the physical or digital tools or infrastructures utilized in performing a practice.

In order for a practice to exist, certain practice components must not only exist, they must be integrated or linked. For example a person must have the skill to use a particular thing, or he may develop a certain identity through the acquisition of particular skills. Ultimately, the repeated performance of a practice – the act of integrating the same components in similar ways – results in the emergence of a recognizable practice (Shove 2012). The model provides both a way of visualizing what constitutes human behaviors (a combination of particular meanings, skills and things) as well as a general understanding of how these routines are held together (the repeated integration of particular skills, meanings, and things).



1. From Elizabeth Shove's interpretation of theories of social practices.



An example of a social practice model for the practice of cooking, produced from research for the Community Supported Agriculture Case Study. Research methods used included indepth interviews, with activities around food meanings, and a diary study.



my creative time, home cooked meal, eating healthy, feeding my family, commitment, celebration, sharing a meal.

knowing what to make, how to prep items, how to cook items, having the right ingredients, combining random ingredients ingredients, utensils, pots/pans, Kitchen Aid, dehydrator, recipe, stove, refrigerator, oven



Thus, the model can be used as a framework to drive user research inquiries and to organize the findings from research activities such as interviews, observations and diary studies into the components of a practice. Because it gives a visualized understanding of what constitutes a practice, it provides points of focus for where design interventions might play a role in (re)configuring the practice, through the introduction and integration of practice components.

#### CHARACTERISTICS OF PRACTICES

The components of practices and their linkages alone do not fully capture the intricacies of how practices form, persist and change. A number of characteristics discussed in social practice literature help qualify these dynamics of practices. I elaborate on four characteristics in particular that provide useful insight for designers in using social practice models. In order to guide thinking towards how design could take advantage of these characteristics, I present an implication for design from each characteristic. These implications suggest ways that design might support an existing practice or facilitate transitions in practices.

#### Practices are Social

A central characteristic of practices is that they are socially influenced. People observe others performing a practice and adopt the same approach; a process that Alan Warde calls "collective learning" (140). Once certain ways of doing have spread to a wide community of people, they become "normal" or understood as the "appropriate" way of practicing. Periodically, people may make small modifications in the way they enact a practice. If the modification persists in future enactments, the practice may be re-configured, and the social convention around the practice evolves accordingly. Because of this social dynamic, practices develop a common-ness to them that in turn (re)shapes the behavior of the community of practitioners. For example in the practice of cooking, people use common tools like knives and bowls and recipes; they rely on commonly held sets of knowledge in order to cook certain kinds of foods.

### Ó.

Facilitate interaction among members of a practice community to enable practice sharing.

### Practices are personal

Encourage personal innovation in practices, and facilitate the sharing of these innovations with the practice community.

While practices are highly social and thus clearly identifiable across a community, individuals may also develop particular ways of practicing. In a sort of appropriation of the "common" practice, people adjust practice components to fit personal contexts: they may have slightly different meanings around the same practice, or they may have limited access to certain tools or infrastructures and thus develop other skills or tools to perform the same practice. These personal ways of practicing might ultimately be adopted by other people in the same practice community; if they become widely adopted, the common practice has evolved and an innovation in the practice has occurred. People may also have varying levels of competence required for the practice. Thus, the interaction between practitioners within a community becomes important, so that competencies may be learned by all.

### Practices are embodied

Facilitate continual enactment of the practice to develop, maintain or modify it.

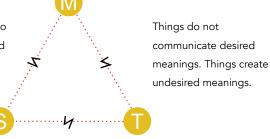
Practices do not exist unless people actually perform the actions that make up that practice. Repeatedly performing a practice reinforces links between components and develops necessary competencies or embodied knowledge in practitioners (Shove et al. 2008); repeated enactment strengthens the practice of the individual as well as the existence of the practice as an entity. Because knowledge about a practice is embedded in enactment, and because with each enactment the practice may be modified slightly, practices are never completely captured into a set of explicit guidelines. Only continual enactment develops and maintains the "way of doing" or the conventions that in turn guide how people practice.

#### Practices break down

Breakdowns represent moments when a stable practice is not completed as intended. Practices have a teleo-affective quality - they comprise chunks of actions that people seek to complete together, in sequence. People gain satisfaction that they have performed a practice "successfully" when they fulfill the total sequence of actions at an acceptable level of quality. A broken or incomplete sequence causes frustration. Breakdowns can result from lack of skills or proper tools required to carry out a practice. In this case, they occur mid-practice, and a person may look for ways to cope with the breakdown. He may find a new tool or a "way of doing" that is not conventional for the established practice, but that still allows him to perform a practice. If the way of coping enables a person to complete the practice satisfactorily, he may discover it is actually a better way to perform the practice and thus adopt the modification permanently.

Utilize breakdowns as opportunities to introduce new ways of practicing.

Skills do not exist to support established meanings.



undesired meanings.

Things do not enable skills. Required skills to interact with things do not exist.

Social practice models are a robust way for designers to understand behavior, especially in "ordinary" ways of life where many factors influencing behavior intersect. But the real value of human practice centered design is in *configuring* practices and developing them to the point that they become accepted, normal routines; in other words, making practices "stick."

The suggestion that designers can use social practice models to guide designing for new ways of living is not new. Practice-Oriented Product Design contends that designers can configure practices through products (Shove et al. 2008). Other projects have looked at how practice theory models can inform a co-design process for transitioning to more sustainable practices (eg. Scott et al. 2009). However, no projects have looked explicitly at the role of *services* in configuring practices. Services can play a role in helping practices emerge and evolve, and service design could provide a way to make these practice configurations happen more deliberately.

## Part II: Modeling Social Practices in Service Design

### Part II: Modeling Social Practices in Service Design

Practices have inertia that make them difficult to change, but as a result of this inertia, when practices do change they are resilient to forces that might otherwise have caused a change in behavior to fade away. Thus, practices are a powerful tool for designing new ways of living that might require a fairly serious shift in everyday behavior. How can design make the emergence or the configuration of practices more deliberate? How could one deliberately introduce and coordinate practice components?

Services provide one answer. Service design recognizes that experiences - like practices - are made up of multiple interactions with various people and things over time. Practices can similarly be described as systems of things (objects) and interactions (thingspeople, people-people). Many smaller actions over time make up a practice, and the repetition of these series of actions – with small modifications each time – influences the development of the practice. Most of the time, practices emerge and change randomly, molded by the unintentional introduction of new practice components (and their inter-connections) by people performing the practice, or *practitioners*. Service design, however, *actively* examines all of these moments of action and carefully considers the introduction of meanings, skills and things to a service user. As Lucy Kimbell discovered in her research on service designers:

"...their work is not so much concerned with designing artefacts, but rather on arranging entities into sets of relations...and thinking about the practices of users and stakeholders" (7).

Though Kimbell's observation of the roles and activities of service designers reveals that service design is implicated in the design

of practices, the current tools and approaches of service design do not make use of social practice modeling. An examination of the characteristics of practices and services reveals a potential for symbiosis: services could be a well-suited framework for configuring and transitioning practices. This section lays out an approach for designing for practice configuration through services. Ultimately, the goal is to explore another way that designers can try to help new ways of living emerge: by facilitating the configuration of practices through the design of services.

#### Characteristics of Services and Practices

A defining characteristic of services is that value or outcomes are co-created by the provider of the service and the customer or user; the experience emerges and can be unique each time based on the actions of the users. A network of channels, or modes of interaction with the service, and the series of touchpoints, or unique moments of interaction, makes a platform for the customer to have an experience. The tone of communication, quality of interaction, and consistency of quality provided by the service affect the type of experience a customer can co-create. Coordination of these elements requires a different design approach than that of creating specific product features that respond to user needs and that more narrowly script outcomes. Practices work much the same way. A series of interactions with tools and infrastructures and, perhaps, other practitioners make up the experience of practicing. The practice requires active participation in order to exist. As Shove explains: "practices are maintained by actions from all involved including material infrastructures" (2010, 475). The enactment of a practice by multiple people is a sort of co-creation process;

practitioners contribute their personal "ways of doing" which may in turn become part of the common practice.

Because services are co-created, their value is produced through multiple moments of interaction. Without interaction between the service channels and customers, the service does not exist. Similarly, practices do not exist unless they are actually performed. Thus, services and everyday practices can be mutually reinforcing. A service draws people to interact with it through various service tools and infrastructures and for various meanings. The set of suggested meanings and tools provided by the service contribute to the configuration of a particular practice that the customer performs in interacting with the service. Services provide a platform for customers to develop their practice, but customers are still free to bring their own meanings, skills and even things to their interactions with a service. This continual interaction where services prompt and customers respond with their engagement results in a co-creation of a practice. Both the service and the customers have agency in configuring the practice: the service through the components of practice that it introduces, and the customers through the way they appropriate these components and link them together.

Services have a visibility to them whereas practices exist more implicitly. Practices, in particular everyday practices like cooking, do not have a structured process for establishing and sharing certain "ways of doing," slowing the diffusion of these conventions. Welldesigned services, on the other hand, are particularly aware of establishing and diffusing certain conventions. Through branding and repeat experiences with a service, people come to recognize the service and the "way of doing" that it structures. The community of people who use the service is visible through the identification of people as "users" or members of the service. By building up a user base, services strengthen conceptions of what is "normal" for certain ways of doing. Further, services often encourage their community of users interact with each other to share personal experiences and spread ideas about how to interact with the service. In everyday practices, the sharing of "ways of doing" is left to chance interactions between practitioners.

Finally, services understand that, while they establish certain conventions, not all of their users will fit within these conventions. As a result, many services provide some degree of personalization, acknowledging the varied life contexts of their users. Similarly, people personalize ways of practicing while still maintaining the conventions that make it a recognizable, common practice. If personalizing a practice enables someone to maintain the practice, services could help people discover the personalization that works for them.

Despite the strong parallels between practices and services, no tools or approaches exist to help make these connections visible. A brief review of existing service design tools illustrates this, and prompts an exploration of where practice models and service design tools might come together to fill this void.

### Modeling Services and Practices

While service design is good at recognizing systems of things and people, a social practice perspective can provide still more insight to the interactions of customers with services. Service models Despite the strong parallels between practices and services, no tools or approaches exist to help make these connections visible. explain how services work, but social practice models can explain why customers will or won't engage with a service. Modeling both services and practices together provides a framework for designing services that facilitate practice configuration - either developing new practices or transitioning a practice from one "way of doing" to another through the introduction of new practice components and the links between components.

Existing service design models focus on service structure and process (service blueprints) on relationships between stakeholders (service ecology map, value flow models), on emotional experience of the customer or on goal fulfillment through various channels (customer journey maps). All are valuable for designing services, but none fully capture the web of components that influence human behavior and thus affect how people interact with services. A new type of model is needed, one that visualizes practices in the context of services, pointing to how they influence each other and to their potential for symbiosis.

<sup>1.</sup> Similar to the way Indi Young charts "things" that support a user's step by step process for completing a task or goal (Young 2008).

#### Service-Practice Maps

The service-practice map visualizes practices in the context of interactions with a service. It combines social practice models with the customer journey model used in service design.<sup>1</sup> By examining the components of practices that relate to interactions within a service, a designer can see how the service supports existing practices and where the service could introduce new components to strengthen or shift practices.

#### SERVICE TOUCHPOINTS & INTERACTIONS

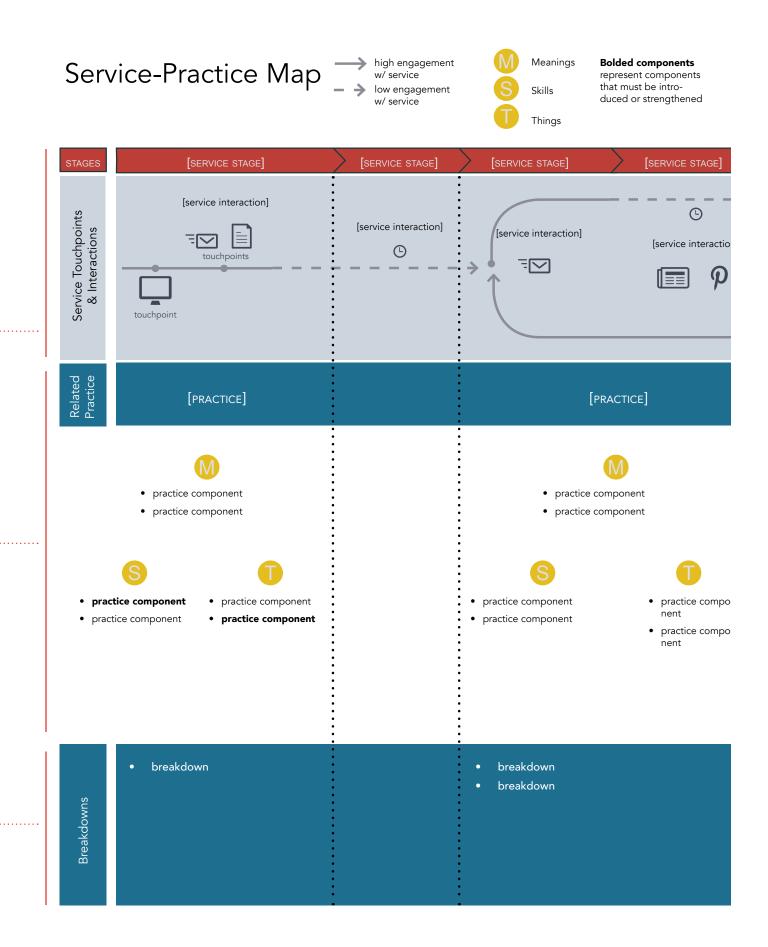
The top section of the service-practice map is a customer journey, showing the phases of the service and customers' interaction with service touchpoints.

#### RELATED PRACTICES

The middle section maps the practice(s) related to each stage of the customer journey. In some cases multiple steps of the service may relate to the same practice. These practices models are composed of the skills, meanings and things of a practice that are uncovered through user research. The models should include components possessed by both novice and experienced practitioners. Bolded components indicate those which novice practitioners do not yet possess, highlighting opportunities for the service to develop the practices of new or inexperienced users.

#### **BREAKDOWNS**

The bottom section of the map describes breakdowns experienced in performing the practice at that stage. Breakdowns may indicate missing or weak practice components or inadequate links between components. These are opportunities for service interactions to intervene.



The service-practice map highlights what components of practice are missing at what stages of the service. It opens up directions for designing the service to introduce or develop practice components of its customers. However, the map does not describe *how* to design for developing practice components. The four characteristics of practices—social, personal, embodied, and breakdowns—provide a useful guide to designing service interactions that are founded on an understanding of how practices form and develop.

The questions posed below provide jumping-off points for ideation of new service interactions that focus on building up missing or weak practice components as revealed by the service-practice map.

### **Practices are Social**

How might a service increase the interaction among service users and their sharing of the practice, particularly to support weak or missing practice components?

### **Practices are Personal**

How might a service increase provide personalization to help customers build a version of the practice that fits them, or to bring customers up to a certain level of practice competence?

### **Practices are Embodied**

How might a service facilitate the regular enactment of related practices?

### **Practices Break Down**

How might a service introduce new practice components or links at the moment when customers seek to cope with a breakdown in a practice?

The service-practice map and ideation questions are tools for designers to think about facilitating new ways of living through services. Existing service design models like the customer experience journey map a user's interaction with service touchpoints, but fail to consider what drives user behavior beyond the "walls" of the service - in other words the practices in which the service may be implicated. Understanding the social and contextual factors in the spaces between service touchpoints can provide insight to where else the service might play a role in configuring practices.

Part III: Case Study

Service Designing Practice Transition in Community Supported Agriculture

# Part III: Service Designing Practice Transition in Community Supported Agriculture

To explore these themes of practice configuration and the role of services in this process, I studied a Community Supported Agriculture group in Pittsburgh called Penn's Corner Farm Alliance. I selected Community Supported Agriculture (CSA) because I think it represents a glimpse of what "normal" could look like for daily food routines. In a CSA group, people from a community join together to buy shares from local farmers in exchange for fresh, local produce throughout a growing season. CSAs create an infrastructure that enables food-related practices centered around locally sourced, chemical-free, and seasonal food. Members of CSAs could be viewed as "lead users" (Von Hippel 1986) at the forefront of an alternative way of procuring food.

Penn's Corner has set up a system that appears to be working well in many ways for all stakeholders. However, joining a CSA often requires a transition by members of their food-related practices before the CSA can become their "normal" way of sourcing food. From a design perspective, there is opportunity to build on this infrastructure and create new interactions within the CSA service in order to facilitate this practice transition. Perhaps with well-designed interactions that amplify (to use Ezio Manzini's word) the experience, CSAs could become the new dominant food system. Viewing the CSA from this perspective requires examining the CSA service in the context of its customers' practices around food and requires designing service components targeted at practice transition.



Formed in 1999, Penn's Corner is an alliance of more than 30 farmers and food producers within an approximately 150 mile radius of Pittsburgh. Penn's Corner staff provides coordination, marketing and distribution services for the farmers. People from the community sign up with Penn's Corner at the beginning of the season (winter or summer) for a "share." The Penn's Corner staff plans with the farmers to develop a full season of weekly boxes containing a variety of produce. In the Penn's Corner warehouse in East Liberty, the staff brings all of the food items picked up from farms, boxes food into individual shares, and then delivers boxes to a network of porches throughout the city.



Penn's Corner distribution system

Penn's Corner has also started to produce value-add products like salsa and the highly popular Dilly Beans using excess produce grown over the summer.

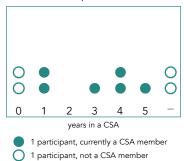
### **Empirical Research**

Over the course of three months (Sept.-Nov.), I conducted research on CSA models and Penn's Corner. Penn's Corner provided a good concrete example of a particular CSA model as well as access to interview various stakeholders in the CSA model. I interviewed the Penn's Corner founder (himself a former farmer), the Penn's Corner CSA member coordinator, and six current Penn's Corner members ranging in experience from first-year members to five-year members. I also interviewed two people who were formerly members of a CSA but had stopped and two people who had considered joining a CSA but never done so. I did not focus on any particular demographic group as I wanted to see a range of people and their food-related practices. The only requirement was that they had some connection with a CSA. I also choose not to focus on recruiting new members to join CSAs. I narrowed the focus of my design investigation to facilitating practice transition of those already aware and initially motivated; I was not designing to motivate people unaware of local food systems or CSAs.



Penn's Corner value-add products

#### Interview Participants



One of my initial discoveries is that many CSAs struggle with member retention. For example Penn's Corner had 760 members in 2012, but in 2013 only 41% of the same members returned. This is a common challenge of many CSAs across the US, and as a result CSAs spend a good amount of time recruiting new members to join each season. One study conducted in 2004 of 276 CSA shareholders in the mid-atlantic region revealed that people who have been CSA members for more consecutive years were more likely to continue joining in the future (Oberholtzer 2004). (Seventy five percent of CSA members in the study were within the first two years of membership.) From my own interviews and informal conversations, I discovered that most people had either been members for four to five years or fewer than two years, suggesting that, somewhere between year two and four, people either make a transition in food practices or not.

Examining the behaviors of CSA members as a series of food-related practices provided insight into the change in practices that happens with more experience as a CSA member.

### Modeling Food-Related Practices

In order to understand food-related practices and the difference between newer members and more experienced members, I conducted hour-long interviews with CSA members as well as a diary study.

The interviews covered why people joined the CSA in the first place and drew out members' ideas about food and its meaning in their daily lives. I also asked people to discuss how they decided what to make with CSA share items, if and where they found recipes, and what kinds of weekly routines they had for grocery shopping. The diary study prompted members to record what they prepared for dinner each night for one week. It asked about the meal planning, the ingredients used, and whether the experience was overall satisfactory or unsatisfactory. The diaries revealed diverse routines, from highly organized planning, to approaches much more like "winging it."

In the end I gathered a robust set of data about a rather intricate eco-system of motivations, meanings, tools, and above all skills (or in some cases coping mechanisms) that members employed in the process of eating from their weekly CSA share. For some members the system worked quite well, for other members the weekly share felt, at times, like a burden.

To make sense of all of my findings, I broke down the activities I observed into two sets of food-related practices: food planning & provisioning, and food preparation & eating.

This allowed me to sort out the various activities I observed into manageable chunks. I then categorized my findings into the components of a practice. As I categorized, I began to recognize which components belonged to someone with a well-developed CSA routine. Certain meanings and skills were present in these CSA members, while some other CSA members did not exhibit these elements. Further, while certain activities were present in both the currently dominant, "normal" food-related practices (buying food staples, deciding what to make) and CSA food-related practices, other activities were exclusive to a CSA (selecting seasonal recipes, combining items from the share into one dish). Organizing my



diary study



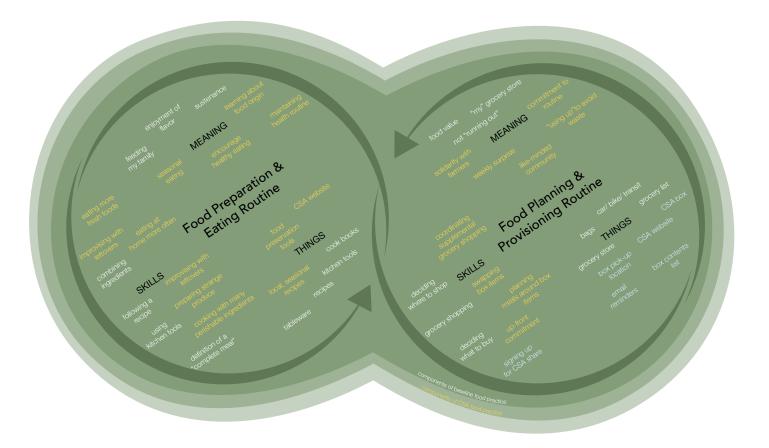
interviewee's shopping list system



interviewee's favorite kitchen tool

findings in this way, the outlines of different practices became clear. I color-coded components of the food-related practices to show normal versus CSA-related components. Thanks to the handful of CSA members who had developed their own "best-practice" for using a CSA I now had a good idea of what newer CSA members needed to develop.

I recorded moments of frustration with the CSA that I uncovered in my interviews as breakdowns in the routine. For example a frequent frustration occurred when CSA food went bad because the member did not know what it was and/ or how to prepare it.



A social practice model of interrelated practices of CSA members:

components of the currently dominant or "normal" food practice components of a CSA food practice components controlled by the current scope of a CSA service



### Service Designing for Practice Transition in Community Supported Agriculture

"Some people just don't know how to be CSA members."

~CSA manager

How are people expected to pick up these new components of practices required for successful participation in CSAs? As with any practice, there is no official rule book, yet people will struggle to develop the practice unless they learn the "rules." How could the service design of the CSA play a role in helping people pick up the requisite components of certain food-related practices?

Penn's Corner currently provides parts of the infrastructure required for a CSA food-related practice: coordination with farmers, the food distribution system, and the payment system. They begin to touch on the meal planning routines by providing a list of the weekly share ahead of time as well as some recipe suggestions. But interviews with members reveal that more could be done to support the practices needed to be a successful member of a CSA. What does successful mean? It appears, based on trends of CSA member retention and my interviews, that members either develop particular components of a CSA food practice and continue to be CSA members year after year, or they build up frustration and stop their CSA membership. Successful members are those who continue membership. Thus the goal of any new service design for Penn's Corner is to develop the CSA-related practices of its members so that they return as members year after year.

### Service-Practice Map for Penn's Corner Community Supported Agriculture Group

A service-practice map of the Penn's Corner service journey and related practices makes visible the gaps in infrastructure and interactions to build up CSA-related practices.

### SERVICE TOUCHPOINTS & INTERACTIONS

Penn's Corner has a series of existing service interactions with its customers. The customers' experience continues beyond these service interactions, once they have their box of food items and must prepare something with the items.

#### **RELATED PRACTICES**

At each stage, CSA members are performing various practices. Without the proper components of practice, members will have an unsatisfactory experience. This can lead to frustration and disinterest in rejoining the CSA again the following season. I chose to focus on the food-related practices in my service designs.

#### **BREAKDOWNS**

Breakdowns during each stage provide insight into which components of practices might be missing or underdeveloped.

## Service-Practice Map | Community Supported Agriculture

CSA member service journey CSA member practices

STAGES	SIGN UP FOR SHARE	WAIT FOR SEASON TO STAR	GET SHARE INFO	WAIT FOR SHARE	PICK UP SHARE	PREP/ C
Service Touchpoints & Interactions	Receive confirmation & CSA contract email contract website Purchase CSA membership	wait for season to start	Receive email with share contents list	wait for box Reference recommended recipes blog pinterest	Pick up box and sign out [transfer share items to bag]	Reference recorrecipe
Related Practice	FINANCIAL PLANNING SCHEDULE PLANNING		MEAL PL GROCERY	anning/ shopping	SCHEDULE PLANNING	FOOD PRE COOKIN
• pre	<ul> <li>e committing to a schedule</li> <li>committment to quality (\$\$)</li> <li>ying online e-planning pick oroutine</li> <li>website/ computer/ email</li> <li>credit card/ bank</li> <li>calendar</li> <li>neighborhood</li> </ul>		•	• grocery list • grocery store	<ul> <li>feeling prepared/ organized</li> <li>feeling in control of schedule</li> <li>feeling in control of schedule</li> <li>coordinating schedule</li> <li>backup plan for pick up</li> <li>bag for box it</li> <li>porch/ pick up</li> <li>refrigeration feggs</li> </ul>	tems • prep items for future means p host • "wing it"
Breakdowns	<ul> <li>not enough money up front</li> <li>no convenient pick up location</li> </ul>		<ul> <li>don't know what to do tion</li> <li>don't know what else to</li> <li>miss the email</li> <li>dismiss email</li> </ul>		<ul> <li>schedule change, cannot pick up</li> <li>forget to pick up box</li> </ul>	<ul> <li>box</li> <li>don't know what s</li> <li>don't know what t</li> <li>don't know how to</li> <li>don't know how to</li> <li>don't know what to</li> <li>don't know what to</li> <li>don't have ingredied</li> </ul>



 $\rightarrow$  high engagement w/ service - > low engagement w/ service



**Bolded components** mean the component is absent in a new CSA member's food practice



With the service-practice map, the full extent of members' activities related to the CSA becomes visible. By bolding items that represent new, uniquely CSA-related practice components, it became clear at each phase in the customer journey what kinds of support the practices need. The components missing from most new CSA members' practice were the skills to prepare meals with items from the CSA box. Skills both in terms of how to cook certain food items as well as the understanding that, for example, sharing recipe ideas and tips is part of what CSA members do - these social "understandings" are integral to the practice. Most members, by virtue of electing to join a CSA, already had a set of "meanings" in line with Community Supported Agriculture. "Things" or objects directly related to preparing and cooking food did not, overall, represent a barrier to the CSA practice. Elaborate kitchen tools are not a prerequisite for cooking with CSA produce.

Having established that new CSA members needed to develop certain skills—both in terms of practical, cooking know-how with a new set of ingredients, and in terms of the social understandings of CSA membership—I turned to the characteristics of practices to help me detail out specific approaches to building these skills.

### Service Concepts

I produced four scenarios showing new CSA service interactions that aim to develop practice components—particularly skills—utilizing the characteristics that affect how practices develop and change.

## Community of Practice (Practices are Social)

Facilitate interaction among members of a practice community to enable practice sharing.

The community of practice concept examines the idea that practices are socially created and recreated. People learn the skills and meanings of a practice by observing others' performance of the practice. Community Supported Agriculture is precisely a community of people agreeing to coordinate their actions for a common goal of supporting local farmers and eating local foods. The activities of the practice - committing up-front, picking up the weekly share, planning meals around given share items, sharing recipe ideas for a deluge of certain vegetables - are different from the current dominant practice, which entails full control over the 'what,' 'where' and 'when' of food. Thus, when people join a CSA, they must learn from the community of practitioners how to adjust their activities to the new practice.

Currently the Penn's Corner CSA service does not make the community of members visible; nor does the service encourage interaction between members. Facilitating this interaction - making it part of the service and the "way of doing" a CSA - will provide exposure to other members' ways of practicing. With exposure, particularly for new members, comes understanding of how to practice. Potentially, this exposure can accelerate the transition of new members into the practice. The Community of Practice scenario introduces the concept of a season kick-off party. The party would be volunteer-hosted by a CSA member for each pick-up spot community at the beginning of a CSA season. An email invitation from the host invites other from the pick-up community to an open, potluck style party where members bring dishes made with local ingredients. At the party, community members meet each other and hear various experiences with the CSA. They also are exposed to dishes made with local foods, which provides inspiration for what can be made with CSA share items.

A digital forum for each community provides a platform for ongoing interactions among community members throughout the season. Recommendations for recipes, cooking tips, and personal stories from people in the same community make visible peoples' foodrelated practices in everyday life. These hyper local communities bring the scale of interactions to a more human level versus a purely digital platform where people might never know each other personally. This communication about practices-in-action enables members to develop and shape their own practice.

### Community of Practice

Hi Rachel, Thanks for joining Sunnyhill CSA! You joined the Mountain Spring pick up location. You're invited to the Mountain Spring community kick-off dinner! Stay tuned for more details. 511

Rachel gets confirmation of her membership and gets invited to a season kick-off dinner for her pick-up community, a new event this year.



At the dinner, Rachel is happy to meet others in her neighborhood who are committed to local food. She talks to Peter who's been a member of a CSA for five years.



A few weeks later, Rachel sees a message on her pick-up community forum. Peter is having a cooking party to use up items from that week's share.



Rachel has a great time and learns how to make a recipe that quickly becomes a favorite at home. She shares her success on the community forum.

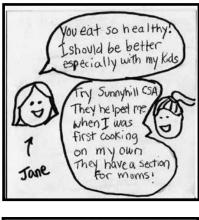
### Personalizing Practices (Practices are Personal)

While practices are heavily influenced by social forces, they can also be highly personalized. The Personalizing Practices scenario examines how practice transitions can be guided by facilitating the personalization of practices based on customer archetypes. While there are common skills needed for a CSA practice, a family with young children and a busy couple cooking for two will likely develop different ways of practicing. Acknowledging this and providing tailored information would help these different groups build up skills appropriate for their needs. The tailored information provided in the scenario also includes nutrition information. This tested how people view the CSA's role in their food routines.

In the same way that people are open to transitioning their practice when they join the CSA for the first time, life transitions from one archetype to another may again open people up to new ways of practicing. A CSA service aware of these life changes can help make members' practices resilient and flexible.

Asking people to join a sub-community of practitioners - a CSA mom or a CSA diabetic - is another way to make the community visible and relatable for members. Special interest groups could form within the CSA community for sharing context-specific tips and resources. As in the scenario, a mother with young children finds new kid-tested recipes via the community of mothers who find ways to cope with the same challenges. Encourage personal innovation in practices, and facilitate the sharing of these innovations with the practice community.

### Personalizing Practices



Jane is concerned about the nutrition of her kids, but she's not sure how to prepare healthy things that her kids will like.

ſ	June 6, 2014	١	
	Hi Jane!		
1	Share items this week:		
	Rutabaga	۱	
	Contains Vitamin B, Fiber, Calcium	۱	
	Kid-friendly Rutabaga Puree		
	What you need:		
	Onion		
	Salt	-	
1		1	

At the suggestion of her friend, Jane joins Sunnyhill CSA. When she signs up, she indicates that she is a mother with young kids. Jane's weekly email tells her what nutrients the share items provide and how to prepare them in ways her kids will like.



Jane's kids start to like vegetables from the CSA and Jane feels confident that she is feeding her family the right food.



The next season, Jane can see the recipes that her kids loved last year.

### Routine Shifter (Practices are Embodied)

This concept examines the understanding that practices must be performed continually in order to exist and evolve. In the same way that we might join a gym to train our bodies, the routine shifter concept encourages people who join a CSA to try out one new recipe per week to begin to train the skills needed for a CSA practice. Language in the weekly share announcement asks people to try the featured recipe, and provides the information needed to plan for cooking that meal. A "recipe repertoire" tool collects recipes "mastered" by the CSA member throughout the season. The following year, recipes are highlighted for the member to remind him/her of what was learned previously. Over time, a set of recipes would become ingrained, arming the member with a set of skills to easily plan and cook with items from each share.

In addition to testing the idea of skills training over time, the Routine Shifter concept probes whether CSA members should be made conscious that joining a CSA means accepting that one will need to shift his/her food routine. The advertisement for the CSA and the welcome language frames joining a CSA as a commitment to changing ones food routine. Moments of conscious skill building and meaning making must occur before the practice slides back into the more semiconscious daily routine that persists over time. Facilitate continual enactment of the practice to develop, maintain or modify it.

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### **Routine Shifter**



Ray wants to start eating better to improve his health, but he's worried a CSA will be too much to handle. Then he sees an advertisement for Sunnyhill CSA, which helps people make a transiiton in the way they cook and eat.

Hi Ray,

Make a commitment to cook one night this week! We'll teach you to make a fail-proof zucchini lasagna.

June 6, 2014

Prep time: 30 min Cook time: 45 min

Here's what you need:

Mozarella Ricotta Garlic

Ray signs up and learns that Sunnyhill CSA will teach him recipes and cooking tips with items from the weekly share. Every week, Ray learns to make a new recipe. Committing to cooking once a week slowly helps him develop a healthier routine.



By the end of his first season, Ray knows how to make a handful of dishes without even thinking about it.

### June 8, 2015

- Welcome back Ray!
- Last season you mastered these recipes:
- Zucchini Lasagna
- Beet & Apple Salad
- Pea Shoot Pasta

See more recipes in your recipe repertoire>

Next season, Sunnyhill CSA reminds Ray of the recipes in his "repertoire." He realizes cooking a healthy meal from the CSA share is now part of his normal routine.

### Community as Resource (Practices Break Down)

Breakdowns in a practice represent moments when actions rise to a conscious level. The practice becomes "present" when it breaks down, and the person seeks a way to cope with the breakdown. The coping is, in effect, a new way to practice. The person may discover that this new way to practice is in fact better than the previous way. Thus breakdowns are opportunities to insert new ways of practicing by designing in suggested ways of coping.

In the Community as a Resource scenario, the community forum platform becomes the answer for a couple's not being able to pick up their CSA share. The couple uses the community as a resource to help them take care of their share while they are away. (Penn's Corner does have a vacation policy, but it requires significant advance notice. This does not align with how people *actually* plan for trips.) Another community member gains value, the food is not wasted, and the couple gets some satisfaction knowing someone else got to benefit from their share. Instead of feeling burdened by the share, the couple feels like they have a good support network. Perhaps when they find a challenging item in the box one week, they now think to ask the community. They realize they aren't alone in this practice and it becomes normalized for them.



Utilize breakdowns as opportunities to introduce new ways of practicing.

## Community as a Resource



Ned & Carol have been members of a CSA for a couple of years, but due to their busy schedules they aren't sure they'll continue. This year, Carol notices the new pick-up community forum, and signs up for the text alert service.

Hi Carol & Ned!				
		his week: green onion	eggs	
Can't pick up your box? Notify your pick-up community!				
		NOTIFY		

A few weeks into the season, Carol realizes the night before pick-up day that she and Ned will be away that weekend. She sends a message to her pick-up community to see if anyone wants their share.



Arlene, another member of the pick-up community sees the messge and decides to pick up the extra share.



Carol sees that her weekly share went to good use. She's inspired by Arlene's dish and is excited to get her share next week.

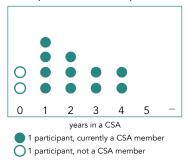
## Service Concepts Feedback

I created an online survey that presented the scenarios and prompted people for feedback. For each scenario I asked questions around how respondents could see themselves engaging with the service interaction, what they liked or disliked about the interactions, and anything they thought would improve the concept for them.

I also conducted in-person speed dating sessions with three couples. One had been in a CSA for two years. The other two couples had considered trying a CSA but never done one before.

Feedback was helpful in seeing what kinds of service interactions people would be willing to participate in, and how the concepts could be improved. Without prototyping the service interactions proposed in the scenarios over the course of a CSA season or even seasons, it is impossible to conclude whether these concepts actually result in practice transition. However, I interpret positive reactions to the scenarios as a sign that people would at least engage in the service interaction. Given a theoretical understanding of how practices are formed and developed, and that these service concepts were designed based on those understandings, a number of insights about designing services for practice transition emerged. These should be considered hypotheses about service designing practice transition that could be validated through further experience prototyping.





### **Community of Practice Feedback**

Most participants were interested and enthusiastic about attending a season kick-off party. Members cited interest in getting to know like-minded people and putting faces to the names of people they see on the other boxes at the pick-up location as reasons for wanting to attend a dinner. Those not interested in the kick-off dinner were concerned about the time commitment.

A few respondents reported that they already cook with friends or neighbors periodically. Otherwise response was tepid on cooking with other CSA members. A few didn't think it would fit into their schedule, or thought that it was weird to take vegetables to someone else's house.

Speed dating revealed there is a general interest in knowing the community of CSA members better, though regular, in-person interaction between members would be challenging due to individuals' divergent schedules. Making the initial introduction, and providing at least a form of a digital communication platform could be a start to making the community more visible and thus seeding the understanding that CSA members are part of a community of practitioners.

Enthusiasm for the kick-off party concept cannot be interpreted as confirmation that this concept will lead to practice transition. However, because of the understanding that practices develop from observation and from sharing ways of enacting, one could reasonably conclude that providing more opportunities for these interactions to interested people will lead to some kind of practicebuilding exchange.

"I would attend a kick-off dinner to get to know people and share ideas; I couldn't host due to lack of space."

### **Personalizing Practices Feedback**

A majority of respondents were enthusiastic about receiving nutrition information and getting recipes that matched their life stage. Eight respondents identified with the category of "couple wanting to eat healthier." These respondents cited "recipes for two" and "information about how to prep and store items so they do not go to waste" as important to them. Three respondents identified as "mothers with young children." They were very excited to learn nutrition information and get recipes to prepare items that their kids would eat.

A few respondents were concerned about the validity of the nutrition information and wanted to know the credibility of the CSA to provide this. A few respondents also felt that this was not a role the CSA should play.

Most respondents who were interested reacted very positively to this concept. Generally, more information to help them utilize the CSA better was desired.

As with the Community of Practice concept, enthusiasm for the Personalizing Routine concept cannot be conclusively interpreted to result in practice transition. However, building sub-communities of practice around similar life contexts can increase exposure to certain personalized ways of doing. This exposure to practice styles that fit with personal contexts has the potential to accelerate development of a practice that "fits." "I don't think this is a role the CSA needs to fulfill."

"This would be really helpful in not letting food go to waste!"

### **Routine Shifter Feedback**

Six participants felt they were already in control of their food routine and indicated that this concept overall would not appeal to them. Four out of these six respondents have been CSA members for at least three consecutive years.

Six participants said they would appreciate having the guidance that this sort of CSA service would provide. Four of these six respondents had been CSA members for two years or fewer.

"When you know how to cook something well it becomes your go to."

These results aligned with the audience toward whom the service concept was geared. Framing joining the CSA as a commitment to changing food routines would appeal to new members who are at a moment of interest or motivation to change, while longer-term members likely don't need this explicit routine building. The CSA can advertise to attract new members and use welcome language that provides encouragement to new members or members still trying to develop their routines. Longer-term members who don't need conscious practice development may have the skills to maintain their practice without the explicit support of the CSA.

On a higher level, insight gained from this scenario is that people joining a service for the first time are at a moment of openness to change. They have made a (mostly voluntary) choice to try something new. Inserting the right guidance via service interactions at these moments can facilitate development of a new practice.

### **Community as a Resource Feedback**

Most respondents saw some value in having a network of people to help them pick up their box when schedules shifted or to learn what others are making with share items. Some people were concerned about having "another thing to read" and were not sure they'd use the community for lack of time.

I included text message alerts in the scenario to test people's interest in this form of communication. People were not eager to receive CSA-related information to their phones. I ultimately moved to email for the next iteration of the concept as this is already part of the CSA service touchpoint network. Also, people reported checking the CSA email most frequently out of all the forms of communication provided by the CSA.

Feedback for this concept was less enthusiastic than for other concepts. People seemed to be unsure that they would actually use the community as a resource in practice. Perhaps only in the event of experiencing a breakdown would people be pressed to turn to this resource. An experience prototype of this concept would be valuable to test if and how people would use the community and if it would become a natural part of the CSA practice. Further iteration should examine the best way to make the community the first place people turn when they have a breakdown.

Research through experience prototyping would be an important next step for designers to learn the potential of breakdowns as a catalyst for developing new practice skills. It will be important to design service interactions for at the right moment and through the right touchpoints. The service practice map can help a designer to identify the appropriate moments and touchpoints. "There are often times when the boxes don't have enough of one ingredient to make a recipe, so it would be cool to combine with a neighbor and share a cooking session and meal together." "Lack of time" came up frequently as a factor that tempered interest in the service concepts proposed. Had I researched and modeled my findings from a traditional user-centered design approach, one of my design guidelines might have been something like: "reduce time commitment." However, from a practice perspective I view the bundle of activities around food as a meaningful set of behaviors that provide satisfaction to CSA members. The challenge of continually developing new and more advanced skills and the level of commitment to the practice both strengthen the practice. This perspective sees the role of design not as always making things easier for humans, but rather as shaping our behaviors so that we learn and gain satisfaction from these experiences.

### Concept Development

The concepts proposed in the scenarios tested with CSA members are less like independent concepts and more like a series of service components that, when knitted together creates a system of service interactions that is the infrastructure for practice transition. The system includes several touchpoints throughout the CSA member customer journey as well as tools to facilitate the development of the practice.

The CSA can prototype and implement these service interactions in phases over time. The tools and interactions proposed are purposely not totally novel, but rather they rely on existing platforms and networks for their implementation. This allows the CSA to do low-risk trialing of the new interactions.

Based on feedback from scenario speed dating, and on the potential for impact of particular service interactions, I selected two components to detail further: the season kick-off party and the CSA digital weekly share guide.

### Season Kick-off Party

A toolkit for the season kick-off party provides the host with the language for the invitation and the interactions to facilitate at the party.

An email invitation from the host invites other from the pick-up community to an open, potluck style party where members bring dishes made with local ingredients.

At the party, members make name tags and labels for their dishes to highlight the local ingredient used. Members also mark on a large map where in the neighborhood they live. The maps visualizes the number and proximity of CSA members in the community and serves as encouragement that members are part of a living community.

After the party, the host sends a follow up email listing all of the dishes served and the member's name who prepared the dish. The email is sent via a listserv or group email list, which becomes the platform for community interaction throughout the season. Members are encouraged to respond with the recipe for the dish they brought to the party, kicking off discussion on the listserv. The listserv can be used to ask for help picking up shares, giving the share away, sharing recipe ideas, and anything else the community wants to communicate regarding the practice.





pick-up spot community map

Housdain Spring Kick-off disease recipes	
Recipienta	
Vountain Epring Hak of dinner reapes	
He ada	
Thanks to those who joined us fast Sunday for the the Mountain Summery emaking dishes with local regretance. Here is the last of what	
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I have everyone's session has been off to a good start. See you are	und the pide-up porch/

### **Digital Weekly Share Guide**

A set of high-level communication and visual design guidelines for the weekly share guide provides the right language and information to help members build skills. Consistency of form will help members use the information regularly.

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#### CSA Blog (Proposal) O Follow



Hydroponic Bibb Lettuce (1 head) Harmony Grove Farm

Prep: Wash in cold water and spin dry

Store: Refrigerate in airtight bag for up to 1 week

Bibb Lettuce & Herb Salad with Vinaigrette



Watermelon Radish (1.5 lbs), OG Clarion River Organics

**Prep:** Scrub skin with water. No need to peel! Slice or chop, depending on recipe.

**Store:** In a moist towel or plastic bag in the crisper drawer for up to 5 days.

#### Watermelon Radish Chips

- Provide images, preparation tips and storage suggestions for share items
- Include recipes for each share item or recipes that combine multiple share items.
- Use language that encourages members to try a new recipe

### CSA Manager Feedback

After input from CSA members, I presented the re-designed share guide and the community kick-off party concept to the Penn's Corner CSA manager. I showed my research process and described my discovery that CSA members must go through a practice transition in order to commit to a CSA over time. This framing resonated with her own experience of CSA members, though she also thought that some people are simply not cut out to be members of a CSA.

Aside from discussing how the concepts might be trialed this CSA season, we spoke about the role of the CSA in creating CSAcompatible members. I asked whether she viewed the CSA's role as including the development of members' food-related practices, or if this was outside the scope of the Penn's Corner services. She responded emphatically that Penn's Corner does see itself playing a role in shaping peoples' food routines and that they *should* play this role. She views this as part of the work that they do in creating a viable local food system.

The scope and timeline of this project did not allow for further testing of the service design concepts proposed. However, Penn's Corner is eager to test out the redesigned CSA blog and weekly share guide. They will also consider piloting the kick-off dinner with a couple of more dedicated CSA members. A future phase of this project would seek to conduct experience prototypes of the proposed concepts and measure outcomes: Do new CSA members feel they have been able to shift their food-related routines? After multi-year pilots of these concepts, the question becomes: Are CSA member retention rates higher after implementing these concepts? For CSAs this might be the true test that the service is successfully transitioning practices.

## Part IV: Significance and Future Considerations

## Part IV: Significance and Future Considerations

In this project, I explored ways that theories of social practices could be turned into useful framing tools for designers. The core concept of social practices — that human behavior results from configurations of certain meanings, skills and things— has clear utility for design. It balances the agency of influence on everyday human actions among individual goals, social conventions, physical and digital infrastructures, and particular objects, broadening the designer's attention to the variety of elements that must be considered when designing for new ways of living. Already this provides a more comprehensive framing for human behavior than traditional user centered design perspectives. But the dynamics of social practices are complicated, and there are many nuances that affect why and how practices form and persist. Through researching and designing for food-related practices in Community Supported Agriculture (CSA), three factors emerged that bring to light new considerations for designing with social practices.

### Practices are social and personal?

First, I have drawn out two seemingly contradictory characteristics of practices: Practices are Social and Practices are Personal. The core benefit of using social practices as a unit of analysis is that they provide a way for designers to factor in the social elements that affect peoples' behavior. Behaviors are not practices unless they have become common enough to be recognizable across many individuals, with (implicit) conventions that guide behavior. When a practice shifts, it begins from modifications to the existing conventions within a community—a change in meaning, a new tool. Once the modification becomes widely adopted, the practice may have evolved in some perceptible way. However, once practices have a core set of conventions, small modifications of the components will not significantly change the identity of the practice. Cooking would still be recognized as the practice of cooking, even with variations of techniques or ingredients or kitchen tools. Thus, individuals can develop personalized ways of practicing: they may associate different meanings, use unique skills, or adopt unconventional objects in their performance of a practice. In my research, one CSA member highly valued her broad collection of kitchen tools that enabled her to dehydrate vegetables or make soups. Many other CSA members reported needing only the most basic kitchen tools to cook with CSA share items. Personalizations mostly do not turn a practice entirely into something else. They do, however, enable people to commit to a practice because it has been made to fit with personal beliefs, needs, levels of competence and means. But this raises a question: At what point does the personalization of a practice render it so unique that it could no longer be considered a shared social practice? And what is the set of behaviors called, when they are unique to one person? It is valuable to consider these dynamics, for highly unique "ways of doing" could be excellent sources of innovation in practices, if they can be brought to light.

Two factors frequently influence how practices become unique to individuals despite remaining recognizable across a community: level of competence, and level of commitment. Newer practitioners may still be developing skills of the practice where more experienced practitioners will have highly developed competencies around the practice. This diversity within a practice is constant as people engage in a new practice and thus join the community of existing practitioners. It is a healthy diversity, as those more experienced can model the conventions of the practice for the "uninitiated." On the other hand, new practitioners may bring a new perspective on how to practice, introducing new meanings, skills or things, potentially leading to innovation.

Practitioners also fall along a spectrum of commitment to a practice: highly committed people will pursue excellence in the competencies required, while other people may seek to simply maintain an acceptable level of practice (Warde 141). These different levels of commitment are important as they affect the development of the common practice. Highly committed people may contribute to innovation in a practice as they seek to improve the quality and competence of their performance. Too few committed people, and a practice may fade away entirely.

These interplays between commitment and competence might provide useful characterizations of practitioners: people who are committed but not yet competent are in a learning phase of practice; they may realize they are not yet full practitioners, but are striving to build components and inter-connections. People who are competent but not especially committed are in a coasting phase of practice; the practice is semi-conscious, and maintains a steady level through consistent enactment. People who are competent and committed are in a building phase of practice; they are striving to be expert practitioners and perhaps developing innovations in their practice. Further exploration of what these various phases entail will add to the understanding of the dynamics of how practices emerge, spread, and change. In a CSA community, having a mix of committed and competent members with newer members who may be less competent or not yet as committed provided a valuable opportunity for practice sharing. One highly committed CSA member, who happened to have young children, noted that friends often asked her "how she does it?" She expressed a desire to share her recipes and tips with these people, but noted that she didn't really have a good system for sharing this information. The diversity of a practice community can be a good resource for design. A designer can use different levels of competence and commitment of practitioners to support and develop the practice. It requires designing good mechanisms for people to share or model their "ways of doing."

### Breaks, breakdowns, transitions

The second dynamic that I explored is that practices can break down. In my case study I focused on the breakdowns that occur mid-practice, when someone in the flow of a practice is kept from completing the flow of activity, as well as the breaks that occur when people transition into a practice. I considered these opportunities to introduce new components in order to shift a person's practice. Disruptions can happen on several different levels, which present different kinds of considerations for design.

Practices can feel disrupted because, though the individual actions taken may be only semi-conscious, there is still an end goal that drives the practice. If people don't reach this sense of completion they get frustrated.

Not only do practices beg for completion, but there is also a sense of doing it "right." The sense of completing the practice in an "acceptable" manner versus completing it "well" varies depending on a person's commitment to the practice; but, whatever relative sense of quality exists for a practitioner, it very much affects whether the performance feels broken or complete. Perhaps too high expectations for a practice—maybe by a practitioner seeking excellence in practice—lead to more instances when the practice is considered not completed "well" and thus more frustration and discouragement. On the other hand, if breaks in a practice cause people to reassess and work to shift their practice, too low expectations—maybe by a "coasting" practitioner—will never produce innovation. These dynamics are only observations, but could be important considerations when designing to configure practices.

Another type of break occurs when life changes cause an old practice to stop and require starting a new practice altogether. A person may transition to living with another or moving out on his own, for example. In the case of a CSA, joining requires a change in food-related practices for most people. But often the reasons people joined in the first place represented another kind of break or blockage. One member did not have any sort of cooking practice before joining the CSA as she had just graduated from school and was for the first time buying ingredients and preparing her own food. Other members had joined the CSA when they became mothers; they had to transition from cooking for themselves to cooking for young children who have different food requirements in terms of nutrition and taste. While I found that the act of joining a CSA signaled a state of openness to change, other types of practice transitions happening in parallel in the background also factored into the success of a person's making the transition.

Further research and categorization of these sorts of breaks in practices can lead to a better understanding of which kinds of breaks provide better opportunities for practice transition.

### Services as models, replacements, guides

The third dynamic that emerged as particularly significant is that developing practices demands modeling practices, and services are an excellent framework for this. Because practices are embodied - they exist only when performed - any sort of attempt to develop or reconfigure them requires their performance. When trying to develop a practice in other people, it is through performing the practice for them that the conventions of the practice are transferred. This act of modeling a practice for others establishes conventions, teaches competencies, and introduces tools needed to practice.

A challenge with this dynamic, however, is that especially in everyday practices, there are not frequently occasions for the practice to be showcased in a way that others can observe and learn. As Shove notes, "Since any one practitioner has limited first-hand experience of how a practice is reproduced by others, it is nearly always the case that elements... are quite literally mediated" (2012). Shove then refers to representations of products in advertisements as the mediating force for establishing new practices. But services could play this mediating role as well.

Services can provide a framework for modeling a practice either through expertise provided by the service or through providing a platform for service users to model their practices to each other. Because people interact with services via multiple touch points over time and in different physical contexts, there are multiple opportunities to share expertise about a practice. This may occur directly through a service agent—perhaps an "expert on call." Services may provide digital or physical tools either with expertise designed into them or that teach users certain competencies. Finally, platforms that make the diverse community of practitioners visible and enable exchange of expertise among these practitioners might be seen as a form of collaborative practice modeling.

These are suggestions of how services might train new practices, but further research is needed to explore their validity. What is the balance between having the service do the practice for customers versus training customers to develop the practice themselves? Could there be a mix of the two? Can services develop practices and then disappear? Or is the framework of the service integral to the practice to allow it to continue?

Though my exploration discovered value in using services to develop social practices, it also raised many more questions about how the dynamics would actually play out. These questions can provide new starting points for future design research projects. As we move from a product-based to an experience-based economy, services will play a much more significant part in how we work and play and live life. But designers must consider what kind of life these services will guide us to live. Will they respond solely to our perceived needs and work to "make life easier" for us? Or will they work with us to help us develop practices that both improve our perceived quality of life and improve social and natural environments?

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