B

Appendix B: Additional Figures

In This Chapter:

This appendix contains additional figures that show in greater detail the form that the Vernal Project might take as it evolved. Let me emphasize that these figures describe just one possible proposal for its development. Even if the Vernal Project proceeded the way I wished, the actual scenario that unfolded would likely be very different than presented here. I present this one possibility in detail simply to show there is at least one realistic configuration and to provide a preliminary plan.

Vernal Workshops

As I envision it, each Vernal session would include four ten-day workshops and a five-day orientation workshop held at a retreat center. All thirty students in the session would attend these workshops together. Figure B.1 shows a possible structure for these workshops.

Figure B.1: Possible Arrangements of Classes in Vernal Workshops

Five-Day Orientation Workshop

	Mon.	Tues.	Wed.	Thur.	Fri.
Morning		Class	—	*Work*	Class
Afternoon	*Intro*	Class	Class	Class	*Cleanup*
Evening	Class	Class	Class	*Party*	

Total Number of Classes = 8

Ten-Day Standard Workshop

	Tues.	Wed.	Thur.	Fri.	Sat.
Morning		Class	—	Class	Class
Afternoon	*Intro*	Class	Class	Class	Class
Evening	*Discuss*	Class	Class	—	Class

	Sun.	Mon.	Tues.	Wed.	Thur.
Morning	—	Class	*Work*	Class	Class
Afternoon	Class	*Work*	Class	Class	*Cleanup*
Evening	Class	—	Class	*Party*	

Total Number of Classes = 18

Intro = Arrival, check in, move in, and introductions
Discuss = Structured discussion and evaluation of study groups, internships, social change work, and so on
— = Free time, informal discussion, time to read, study, use computer tutorials, read the newspaper, meet informally with Vernal staffmembers, and so on
Work = Work for retreat center to offset some of the cost
Party = Partytime!
Clean up = Clean up of the retreat center and departure

As I envision it, the five-day orientation workshop would begin on Monday afternoon and continue through Friday afternoon, thus avoiding the generally more expensive weekend period. Students would travel to the retreat center Monday morning and arrive in the early afternoon. They would register, move into their rooms, and orient themselves to the retreat center. Then, in the late afternoon, students would assemble to meet each other and the Vernal staffmembers. That evening they would have their first regular class. The next day they would have three more regular classes. By Wednesday they would probably be tired and overflowing with new knowledge, so they would have a break in the morning instead of a class. Classes would continue Wednesday afternoon and evening.

On Thursday morning they would perform some work duty for the retreat center in exchange for reduced rental fees.* This work would also help strengthen bonds between the students and teach cooperation skills. That evening they would have a party instead of a class. Friday morning they would have the last class, and then in the afternoon they would clean up the retreat center, pack up their belongings, and say good-bye to the other students. Over this week, they would have attended eight regular classes, each one 2 1/2 hours long.

Each of the four ten-day workshops would begin on Tuesday and continue through Thursday of the following week (thereby spanning only a single weekend). These workshops would follow a similar schedule of classes, breaks, work for the retreat center, and a party on the last evening. Over the ten days, students would attend eighteen classes and work for the retreat center during two class periods. There would also be one class period devoted to discussion and evaluation of students' internships, study groups, support groups, and social change work. This discussion period would provide an opportunity for students to critically evaluate the session and for Vernal staffmembers to learn what changes they must make to ensure that the rest of the session was successful.

As shown in Figure B.2, a typical workshop day might have three separate classes, each one 2 1/2 hours long. Classes would start at 9:00 A.M., 2:00 P.M., and 7:30 P.M. Two staffmembers would co-facilitate each class. Each class would have a mix of short lectures, demonstrations, small- and large-group discussion, participatory exercises, and simulation games.

As I envision it, each student at the workshop would have a support buddy — another student she had paired up with for the duration of the workshop. For a half hour after lunch (right before the afternoon class), each student would check to see how her support buddy was feeling and give that person loving attention and hugs. This structured time would ensure that each student received some personal attention each day and had a chance to express fears or vent frustrations. It also would provide an opportunity for students to get to know at least one other student on a more personal and emotional level. The half-hour period after the last class, at 10:00 P.M. would also be a special structured time set aside for students to sing together, play games, or give each other massages.

Figure B.2: Possible Daily Schedule at Vernal Session Workshops

	All	Kitchen Crew
	2 Facilitators	1 Cook plus students (# of students in parens.)
7:00 A.M.		Breakfast Prep (1)
8:00	Breakfast	
		Breakfast Cleanup (2)
9:00	**Morning Class**	
10:00		
11:00		Lunch Prep (2)
Noon	Lunch	
1:00	Support Buddies	Lunch Cleanup & Dinner Prep (2)
2:00	**Afternoon Class**	
3:00		
4:00		Dinner Prep (4)
5:00	Dinner	
6:00		Dinner Cleanup (4)
7:00	**Evening Class**	
8:00		
9:00		
10:00	Singing, games, etc.	
11:00		

* If there were no work available for students to do, then this period could be used for another class, left as a free time period, or devoted to some other activity (like a group hike).

During the free times of the day, students would have a chance to individually read, study, or work through computer tutorials related to their classes. They could also walk, hike, meditate, exercise, swim, ski, bake bread, sing, converse with other students, play games, discuss politics, exchange massages, nap, and take care of their personal hygiene needs. At certain times, they might choose to make a short presentation on a topic of interest to other students or hold special interest meetings with a few other students (such as those working on a particular project). They might also meet individually or in small groups with a Vernal staffmember to discuss problems with their internships or to informally discuss social change ideas.

At certain times of the day, a few students would help the retreat center's cook prepare meals, serve them, and clean up afterwards. As indicated in this figure, half of the students (fifteen) would help each day with one of these tasks — one helping with breakfast preparation, two helping with breakfast cleanup, and so on.

VERNAL PROGRAM TIME ALLOCATION

Figures B.3, B.4, and B.5 show the amount of time students might devote to each of the Vernal Program components for each of the 52 weeks of the session. As outlined here, the five-day orientation workshop at the retreat center would take place in the first week. Then the four ten-day workshops (labeled A, B, C, and D) would occur in Weeks 10/11, 20/21, 31/32, and 41/42. In these weeks, students would attend classes and study in preparation for those classes. In the weeks they were not attending a workshop or on vacation, students would attend study group meetings and work for their internship organizations. They would also read books and magazine articles to prepare for their study groups and perform social change work and social service work. In every week of the session, students would attend support group meetings and read progressive magazines and newspapers. Together, these activities would generally take about fifty hours each week as shown in the last column of Figure B.3. Students would have a weeklong vacation at the end of every quarter (Weeks 13, 26, 39, and 52) in which they would do no Vernal activity. At the end of Week 51, students would attend a one-day graduation ceremony with their family and friends.

Overall, as shown at the bottom of Figure B.3, students would attend 80 classes (200 hours) during 45 days of workshops. They would attend 116 study group meetings (348 hours). Their internships would require 360 hours, and they would do 174 hours of social change work.

Over the year, students would spend 2,296 hours on Vernal activities. Almost one-third of this time would be spent reading and studying in preparation for study group meetings. About 15 percent of the time would be spent attending study groups and another 15 percent would be spent in internships. About 12 percent of the time would be spent attending workshop classes and reading materials in preparation for these classes.

[Text continues on page 253]

Figure B.3: Typical Time Students Might Devote to the Vernal Program by Week

Qtr	Mon	Week	Work-shop Name	Num of Days in Wrkshp	Num of Classes at Wrkshp	Hours Per Week									Total Hours/ Week
						Wkshp Classes	Outside Study for Wrkshp	Study Group	Study for Study Group	Add'l Study News	Intern-ship	Social Chnge Work	Social Servc Work	Supprt Group/ Therapy	
	1	1	Orient.	5	8	20	8			6				2	36
		2						12	24	6				2	44
		3						12	24	6		3	3	2	50
		4						12	24	6		3	3	2	50
	2	5						12	24	6		3	3	2	50
		6						12	24	6		3	3	2	50
1Q		7						12	24	6		3	3	2	50
		8						12	24	6		3	3	2	50
	3	9						12	24	6		3	3	2	50
		10	A	5	10	25	10			6				2	43
		11	A	5	8	20	8			6				2	36
		12						12	24	6		3	3	2	50
		13				Vacation									0
	4	14						9	18	6	12	3		2	50
		15						9	18	6	12	3		2	50
		16						9	18	6	12	3		2	50
		17						9	18	6	12	3		2	50
	5	18						9	18	6	12	3		2	50
		19						9	18	6	12	3		2	50
2Q		20	B	5	10	25	10			6				2	43
		21	B	5	8	20	8			6				2	36
	6	22						9	18	6	12	3		2	50
		23						9	18	6	12	3		2	50
		24						9	18	6	12	3		2	50
		25						9	18	6	12	3		2	50
		26				Vacation									0
	7	27						9	18	6	12	3		2	50
		28						9	18	6	12	3		2	50
		29						9	18	6	12	3		2	50
		30						9	18	6	12	3		2	50
	8	31	C	5	10	25	10			6				2	43
		32	C	5	8	20	8			6				2	36
3Q		33						9	18	6	12	3		2	50
		34						9	18	6	12	3		2	50
	9	35						9	18	6	12	3		2	50
		36						9	18	6	12	3		2	50
		37						9	18	6	12	3		2	50
		38						9	18	6	12	3		2	50
		39				Vacation									0
	10	40						6	15	6	12	9		2	50
		41	D	5	10	25	10			6				2	43
		42	D	5	8	20	8			6				2	36
		43						6	15	6	12	9		2	50
	11	44						6	15	6	12	9		2	50
		45						6	15	6	12	9		2	50
4Q		46						6	15	6	12	9		2	50
		47						6	15	6	12	9		2	50
	12	48						6	15	6	12	9		2	50
		49						6	15	6	12	9		2	50
		50						6	15	6	12	9		2	50
		51	Grad.	1	0	0		6	15	6	12	9		2	50
		52				Vacation									0
Total				**46**	**80**	**200**	**80**	**348**	**726**	**288**	**360**	**174**	**24**	**96**	**2,296**
Percent of Total						8.7%	3.5%	15.2%	31.6%	12.5%	15.7%	7.6%	1.0%	4.2%	100.0%

Figure B.4: Typical Time Students Might Devote to the Vernal Program by Week

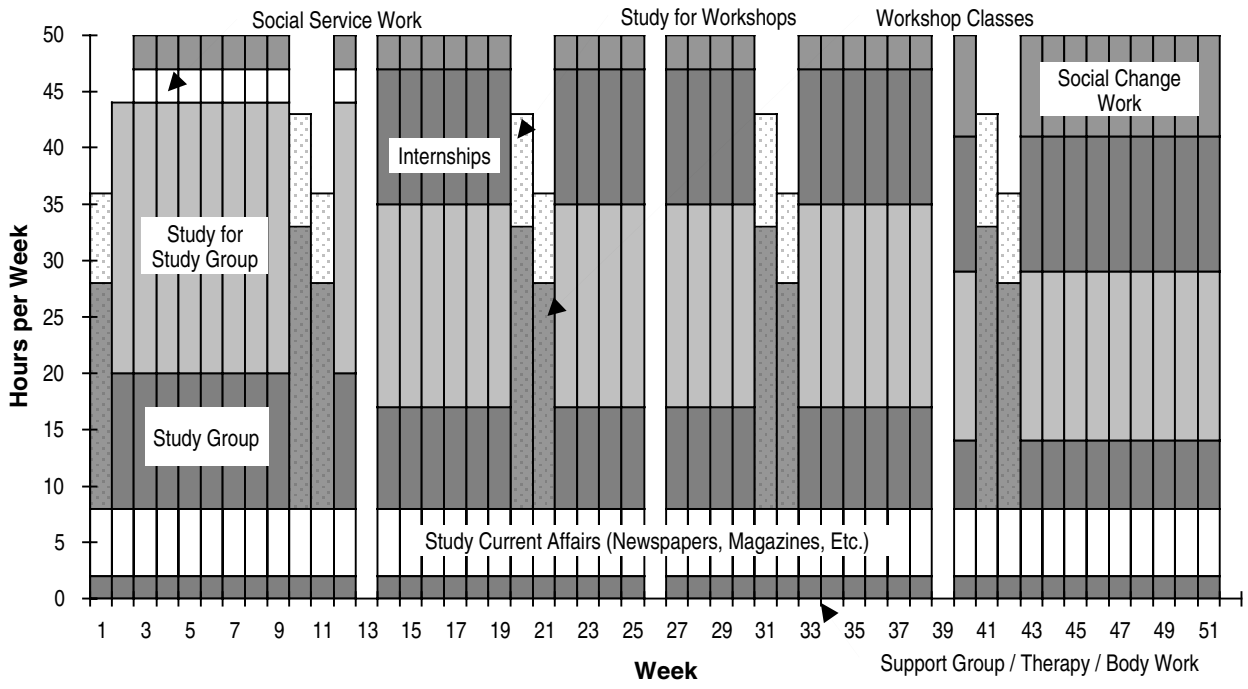


Figure B.5: Typical Percent of Total Time Students Might Devote to Different Parts of the Vernal Program

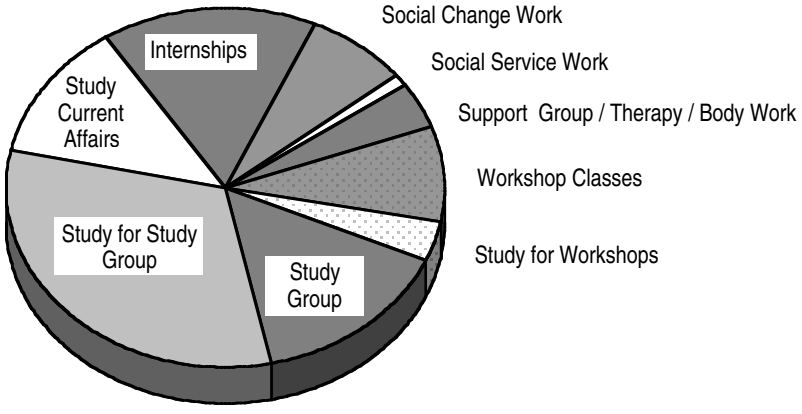


Figure B.6: Typical Vernal Team Calendar

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Week	
	2	3	4	5	6	7	8	1	**Orientation for Session 47**
January	9	10	11	12	13	14	15	2	Workshop D for Session 44
	16	17	18	19	20	21	22	3	
	23	24	25	26	27	28	29	4	
	30	31	1	2	3	4	5	5	Workshop C for Session 45
	6	7	8	9	10	11	12	6	
February	13	14	15	16	17	18	19	7	Workshop B for Session 46
	20	21	22	23	24	25	26	8	
	27	28	1	2	3	4	5	9	
	6	7	8	9	10	11	12	10	**Workshop A for Session 47**
March	13	14	15	16	17	18	19	11	
	20	21	22	23	24	25	26	12	Graduation for Session 44
	27	28	29	30	31	1	2	13	
	3	4	5	6	7	8	9	14	Orientation for Session 48
April	10	11	12	13	14	15	16	15	Workshop D for Session 45
	17	18	19	20	21	22	23	16	
	24	25	26	27	28	29	30	17	
	1	2	3	4	5	6	7	18	Workshop C for Session 46
May	8	9	10	11	12	13	14	19	
	15	16	17	18	19	20	21	20	**Workshop B for Session 47**
	22	23	24	25	26	27	28	21	
	29	30	31	1	2	3	4	22	
	5	6	7	8	9	10	11	23	Workshop A for Session 48
June	12	13	14	15	16	17	18	24	
	19	20	21	22	23	24	25	25	Graduation for Session 45
	26	27	28	29	30	1	2	26	
	3	4	5	6	7	8	9	27	Orientation for Session 49
July	10	11	12	13	14	15	16	28	Workshop D for Session 46
	17	18	19	20	21	22	23	29	
	24	25	26	27	28	29	30	30	
	31	1	2	3	4	5	6	31	**Workshop C for Session 47**
	7	8	9	10	11	12	13	32	
August	14	15	16	17	18	19	20	33	Workshop B for Session 48
	21	22	23	24	25	26	27	34	
	28	29	30	31	1	2	3	35	
	4	5	6	7	8	9	10	36	Workshop A for Session 49
September	11	12	13	14	15	16	17	37	
	18	19	20	21	22	23	24	38	Graduation for Session 46
	25	26	27	28	29	30	1	39	
	2	3	4	5	6	7	8	40	Orientation for Session 50
October	9	10	11	12	13	14	15	41	**Workshop D for Session 47**
	16	17	18	19	20	21	22	42	
	23	24	25	26	27	28	29	43	
	30	31	1	2	3	4	5	44	Workshop C for Session 48
	6	7	8	9	10	11	12	45	
November	13	14	15	16	17	18	19	46	Workshop B for Session 49
	20	21	22	23	24	25	26	47	
	27	28	29	30	1	2	3	48	
	4	5	6	7	8	9	10	49	Workshop A for Session 50
December	11	12	13	14	15	16	17	50	
	18	19	20	21	22	23	24	51	**Graduation for Session 47**
	25	26	27	28	29	30	31	52	

Figure B.7: Possible Staffing for Two Contiguous Ten-Day Workshops

|——— Workshop C for Session 45 ———| |——— Workshop B for Session 46 ———|

Tue	Wed	Thu	Fri	**Sat**	**Sun**	Mon	Tue	Wed	Thu	Fri	**Sat**	**Sun**	Mon	Tue	Wed	Thu	Fri	**Sat**	**Sun**	Mon	Tue	Wed	Thu
W	W	W	W	W										W	W	W	W	W					
			X	X	X	X	X										X	X	X	X	X		
					Y	Y	Y	Y	Y					Y	Y	Y						Y	Y
Z	Z	Z						Z	Z										Z	Z	Z	Z	Z

Assumptions:

There are four staffmembers in each Vernal team (designated here as W, X, Y, and Z).

Only two staffmembers are needed to facilitate all the classes and other activities in a day.

Vernal Staffmember Time Allocation

Facilitating workshops would be a large part of the work of Vernal staffmembers. Figures B.6 and B.7 show that it would be possible for a Vernal team to facilitate four separate sessions at the same time without being stretched too thin.

Figure B.6 shows a typical center schedule in which a new session starts at the beginning of each quarter. Structured this way, none of the workshops overlap and there are many weeks with no workshops at all. To make it easier to understand this figure, I have shaded the workshops associated with one particular session (Session 47). From Orientation in Week 1 to Graduation in Week 51, the workshops for Session 47 are intertwined with the workshops associated with the preceding sessions (44, 45, and 46) and the succeeding ones (48, 49, and 50).

Figure B.7 shows how a Vernal team with four full-time staffmembers could facilitate two of these ten-day workshops when they occurred on four contiguous weeks. In this arrangement, each staffmember would work no more than five days in a row, and there would be at least four days between their facilitation stints. This arrangement also

Figure B.8: Examples of Tuition Distributions that Produce Average Income of $3,600 from Each Student

			Percent of Students			
Situation	**Annual Tuition Paid**	**Stipend Received**	**A**	**B**	**C**	**D**
Full Tuition	$5,000		40%	50%	35%	35%
Partial Scholarship	$3,500		35%	20%	25%	30%
Half Scholarship	$2,500		15%	20%	40%	30%
Large Scholarship	$1,000					5%
Large Scholarship	$500					
Full Scholarship	$0		10%			
Full Scholarship + Stipend	$0	$1,000		10%		
Full Scholarship + Stipend	$0	$3,000				
			100%	100%	100%	100%
Avg. Income Collected from Each Student =			**$3,600**	**$3,600**	**$3,600**	**$3,600**

Note: All figures are in 1995 dollars.

Figure B.9: Examples of Tuition Distributions that Produce Average Income of $2,400 from Each Student

Situation	Annual Tuition Paid	Stipend Received	Percent of Students A	B	C	D	E	F
Full Tuition	$5,000		25%	30%	15%	10%	20%	20%
Partial Scholarship	$3,500		25%	20%	5%		15%	20%
Half Scholarship	$2,500		15%	15%	60%	80%	45%	40%
Large Scholarship	$1,000						5%	
Large Scholarship	$500		10%	5%	5%			
Full Scholarship	$0		10%	10%	10%		5%	10%
Full Scholarship + Stipend	$0	$1,000	15%	20%	5%	10%		
Full Scholarship + Stipend	$0	$3,000					10%	10%
			100%	100%	100%	100%	100%	100%
Avg. Income Collected from Each Student =			**$2,400**	**$2,400**	**$2,400**	**$2,400**	**$2,400**	**$2,400**

Note: All figures are in 1995 dollars.

allocates the same amount of work to each staffmember, pairs each of the staffmembers with each other about the same amount of time, and minimizes the number of trips staffmembers must make to and from the retreat center. Of course, real life would hardly ever be this orderly, and it would seldom be possible to satisfy all these criteria. This arrangement would require that every staffmember know how to facilitate every class and be able to facilitate with any other staffmember. Still, even given the chaos of normal life and the additional scheduling constraints required by real people, staffmembers could probably work out an arrangement that prevented them from working too much.

VERNAL PROGRAM TUITION

Figures 6.11 and 6.12 showed some typical tuition distributions that would produce an average of $3,600 and $2,400 from each student (in 1995 dollars). Figure B.8 shows four additional examples of tuition payments that produce an average income of $3,600. Figure B.9 shows six more examples that produce an average income of $2,400. In one of these examples, 50 percent of the students pay full tuition of $5,000; in other examples, as few as 10 percent do. In one example, 30 percent of students receive a full scholarship; in another one, no student does. Clearly, there are a variety of reasonable ways to achieve these levels of average income depending on the composition of the students in a session.

[Text continues on next page]

VERNAL REGIONS AND CENTERS

For the Vernal Project to transform all of society, there must be fundamental progressive social change in every part of the country to ensure most people can be directly influenced. To show this is possible, I divided the United States into ten Vernal regions and picked forty-five large and dispersed cities for the fifty Vernal centers. Because their metro areas have such large populations, Los Angeles and New York City would each have three centers and Chicago would have two. As much as possible, I chose each region so that it contains contiguous states that have some cultural kinship. I also tried to choose regions so they would all have approximately the same population — though this was impossible and the largest has three times the population of the smallest. I chose the fifty Vernal center sites so that they would span the country and each would encompass a population of more than 1.5 million people.

Figure B.10 is a map of the United States showing the ten regions and the fifty Vernal centers. I have drawn a circle with a radius of 75 miles around each center to indicate the approximate area that is within a reasonable frequent driving distance of each center.

Figure B.11 shows the population associated with each Vernal region and center.* The figure lists the fifty Vernal centers (in bold type) and indicates which Census Bureau Metropolitan Statistical Areas (MSAs) and Primary Metropolitan Statistical Areas (PMSAs) are within 75 miles of each one. Also listed is the population of each metropolitan area and its percentage of the total U.S. population. For each Vernal region, I have indicated how much of the total population is near a Vernal center. At the bottom of each region is a sum of the population in the other MSAs in that region that are not within 75 miles of a Vernal center and the rural population that is outside of MSAs. These values are shaded to indicate they are not near a Vernal center.

In some cases, where there is relatively little population near a Vernal center, I have allocated to it an MSA that is farther away than 75 miles (indicated in italic type). Figure B.12 lists these MSAs and how far they are from their associated Vernal center. Ten of these fourteen MSAs are within 130 miles of their associated center.

I assume the Vernal team at these centers would devote special effort to include students from the distant areas. In some cases, this would require that the staffmembers drive or fly hundreds of miles. To minimize trips, staffmembers would need to carefully arrange their visits to study groups and internship sites.

Overall, if these were the locations of the fifty Vernal centers, they would, on average, address a population of about three million people. Austin, Texas would address the smallest population of 1,620,436 and Philadelphia the largest population of 7,499,618. Overall, about two-thirds of the U.S. population would be within the realm of these fifty Vernal centers.

I have assumed that the one-third of the population that is outside of the listed MSAs would not be a part of the Vernal Project. I do not make this assumption because I want to exclude anyone from the Project or because I think the people in smaller cities or rural areas are unimportant. I make this assumption only because it is so difficult to design a Project that could cover all of this immense country and yet would consume few resources.

Still, even though the Vernal Project does not focus on these areas directly, it might still reach the people in the unserved areas through a number of processes:

(1) Since people in this country often move from place to place, some Vernal graduates would likely migrate to areas that do not have a Vernal center during the time they were actively working for change.

(2) As part of their efforts to expand their campaigns for change, Vernal graduates might deliberately travel to those areas that do not have a Vernal center and offer weekend workshops or consulting help to local activists.

(3) I assume that the reading lists and notes prepared by Vernal staffmembers for use in the Vernal Program would be put on the web for anyone to download and use. People in the unserved areas might create their own local educational programs using these materials.

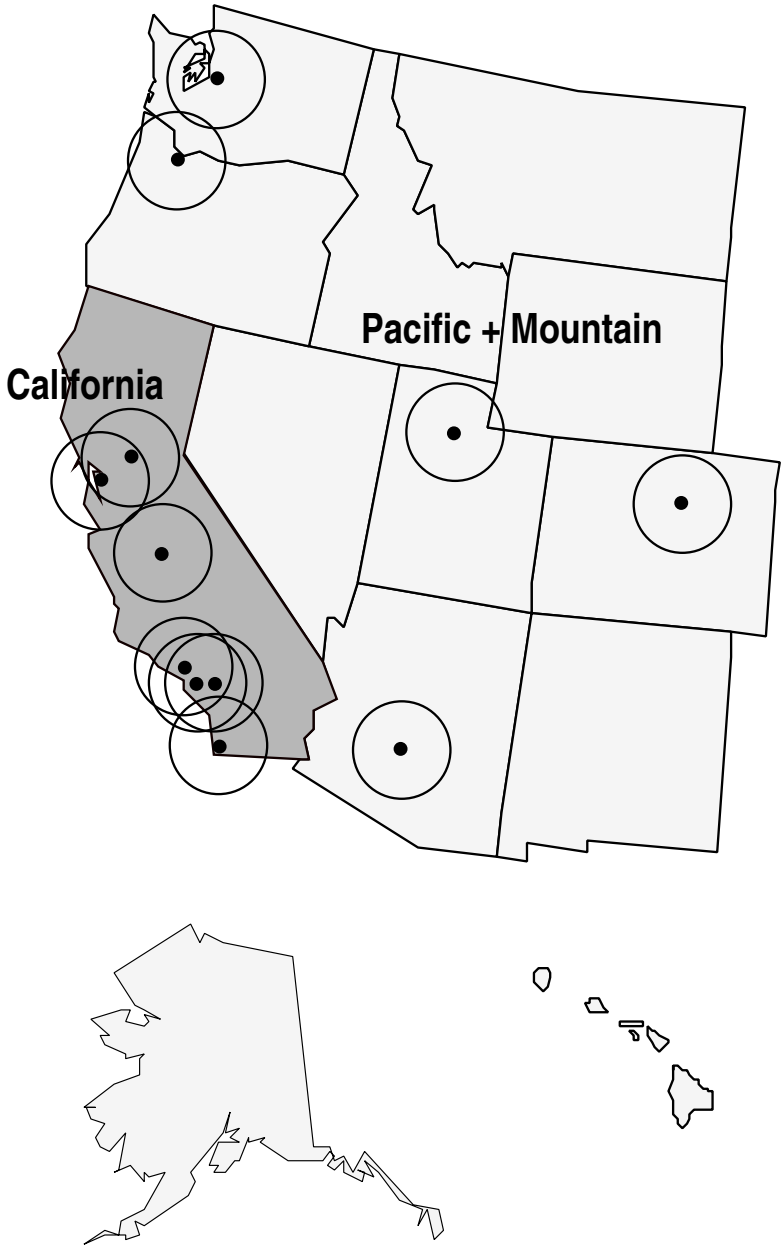
(4) I assume the ideas and practices of Vernal graduates would spread through normal activist channels to activists working in every area of the country. Activists in areas not directly served would pick up these ideas and pass them on to others through their normal change work.†

[Text continues on page 261]

* In this figure, states and cities are listed roughly in geographic order sweeping from west to east.

† Remember that the Vernal Project is merely a supplement to other activist work, not a replacement of it. I assume that most progressive activists would never attend a Vernal Education Program and many activists would never have any direct contact with a Vernal graduate.

Figure B.10: Map of Possible



Vernal Regions and Centers

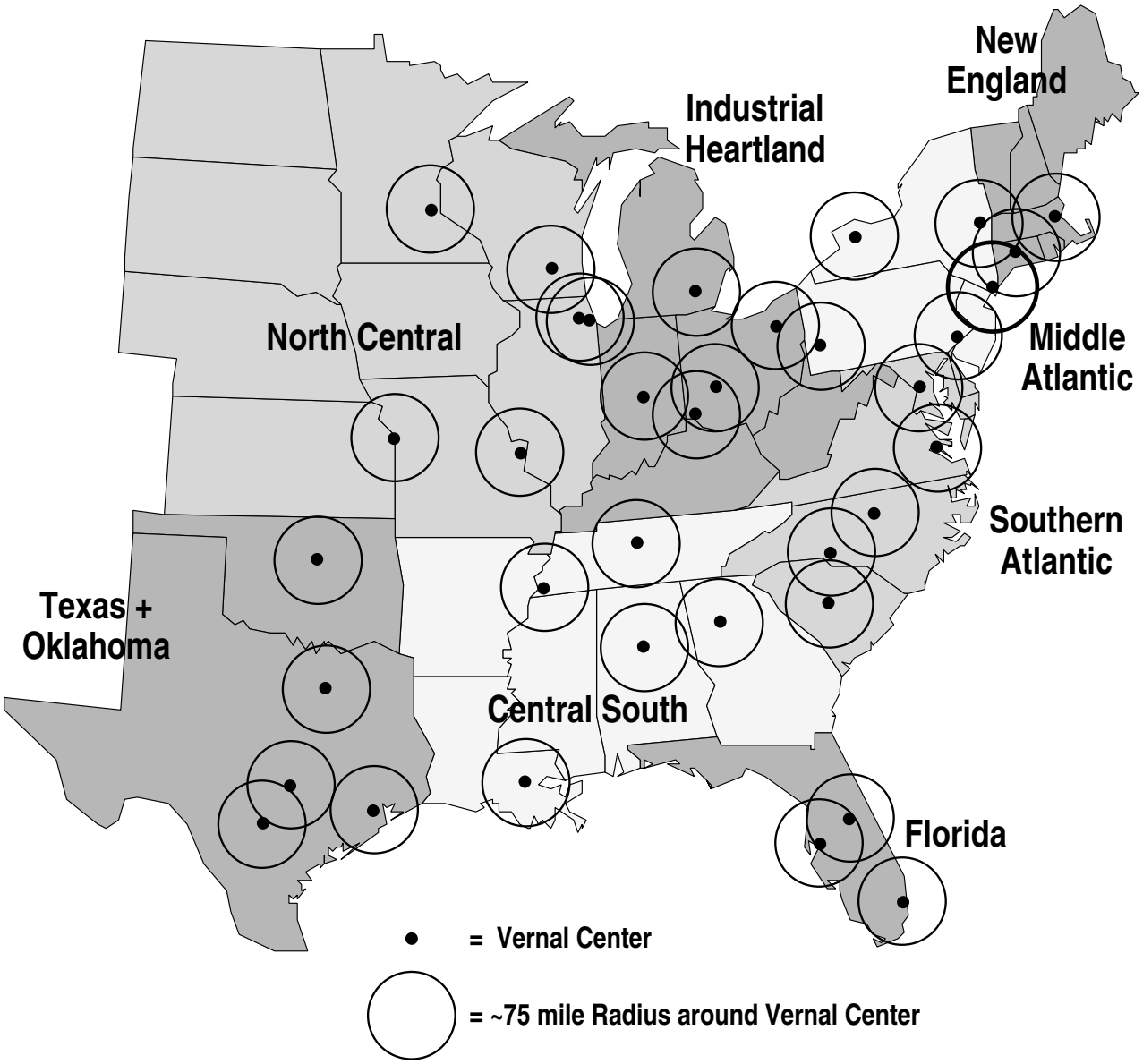


Figure B.11: Possible Vernal Regions, Vernal Centers, and their Associated Population

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
California	**28,851,864**	**91.4**	**11.0**
Oakland, CA	**6,302,933**		**2.4**
Oakland, CA PMSA	2,195,411		0.8
San Francisco, CA PMSA	1,645,815		0.6
San Jose, CA PMSA	1,565,253		0.6
Santa Rosa, CA PMSA	414,569		0.2
Vallejo-Fairfield-Napa, CA PMSA	481,885		0.2
Sacramento, CA	**2,539,563**		**1.0**
Sacramento, CA PMSA	1,456,955		0.6
Yolo, CA PMSA	147,769		0.1
Stockton-Lodi, CA MSA	523,969		0.2
Modesto, CA MSA	410,870		0.2
Fresno, CA	**2,003,071**		**0.8**
Fresno, CA MSA	844,293		0.3
Merced, CA MSA	194,407		0.1
Visalia-Tulare-Porterville, CA MSA	346,843		0.1
Bakersfield, CA MSA (112 miles)	617,528		0.2
Los Angeles Area, CA	**15,362,165**		**5.8**
Los Angeles-Long Beach, CA PMSA	9,138,789		3.5
Orange County, CA PMSA	2,563,971		1.0
Riverside-San Bernardino, CA PMSA	2,949,387		1.1
Ventura, CA PMSA	710,018		0.3
San Diego, CA	**2,644,132**		**1.0**
San Diego, CA MSA	2,644,132		1.0
Rest of Region	**2,713,616**		**1.0**
Pacific + Mountain	**13,403,760**	**51.3**	**5.1**
Seattle, WA	**3,265,139**		**1.2**
Seattle-Bellevue-Everett, WA PMSA	2,197,451		0.8
Tacoma, WA PMSA	648,994		0.2
Bremerton, WA PMSA	226,720		0.1
Olympia, WA PMSA	191,974		0.1
Portland, OR	**2,021,982**		**0.8**
Portland-Vancouver, OR-WA PMSA	1,710,260		0.7
Salem, OR PMSA	311,722		0.1
Salt Lake City, UT	**2,636,870**		**1.0**
Salt Lake City-Ogden, UT MSA	1,199,323		0.5
Provo-Orem, UT MSA	298,789		0.1
Las Vegas, NV-AZ MSA (419 miles)	1,138,758		0.4
Denver, CO	**2,916,187**		**1.1**
Denver, CO PMSA	1,831,308		0.7
Boulder-Longmont, CO PMSA	253,850		0.1
Greeley, CO PMSA	148,014		0.1
Colorado Springs, CO MSA	465,800		0.2
Fort Collins-Loveland, CO MSA	217,215		0.1
Phoenix, AZ	**2,563,582**		**1.0**
Phoenix-Mesa, AZ MSA	2,563,582		1.0
Rest of Region	**12,724,429**		**4.8**

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
Texas + Oklahoma	**14,580,005**	**66.0**	**5.5**
Stillwater, OK	**2,327,228**		**0.9**
Oklahoma City, OK MSA	1,015,174		0.4
Tulsa, OK MSA	746,500		0.3
Enid, OK MSA	57,330		0.0
Wichita, KS MSA (127 miles)	508,224		0.2
Arlington, TX	**4,548,211**		**1.7**
Dallas, TX PMSA	2,957,910		1.1
Fort Worth-Arlington, TX PMSA	1,491,965		0.6
Sherman-Denison, TX MSA	98,336		0.0
Austin, TX	**1,620,436**		**0.6**
Austin-San Marcos, TX MSA	999,936		0.4
Killeen-Temple, TX MSA	289,903		0.1
Waco, TX MSA (100 miles)	200,111		0.1
Bryan-College Station, TX MSA (105 miles)	130,486		0.0
San Antonio, TX	**1,919,737**		**0.7**
San Antonio, TX MSA	1,460,809		0.6
Victoria, TX MSA (116 miles)	79,992		0.0
Corpus Christi, TX MSA (153 miles)	378,936		0.1
Houston, TX	**4,164,393**		**1.6**
Houston, TX PMSA	3,710,844		1.4
Galveston-Texas City, TX PMSA	237,533		0.1
Brazoria, TX PMSA	216,016		0.1
Rest of Region	**7,496,245**		**2.9**
Central South	**11,730,553**	**44.7**	**4.5**
Baton Rouge, LA	**2,433,902**		**0.9**
Baton Rouge, LA MSA	563,994		0.2
New Orleans, LA MSA	1,315,294		0.5
Lafayette, LA MSA	365,857		0.1
Houma, LA MSA	188,757		0.1
Memphis, TN	**2,112,471**		**0.8**
Memphis, TN-AR-MS MSA	1,068,891		0.4
Jackson, TN MSA	83,715		0.0
Little Rock-North Little Rock, AR MSA (137 r	543,568		0.2
Jackson, MS MSA (213 miles)	416,297		0.2
Nashville, TN	**1,726,373**		**0.7**
Nashville, TN MSA	1,093,836		0.4
Clarksville-Hopkinsville, TN-KY MSA	189,477		0.1
Chattanooga, TN-GA MSA (129 miles)	443,060		0.2
Birmingham, AL	**1,891,031**		**0.7**
Birmingham, AL MSA	881,761		0.3
Tuscaloosa, AL MSA	158,732		0.1
Gadsden, AL MSA	100,259		0.0
Anniston, AL MSA	117,263		0.0
Huntsville, AL MSA (95 miles)	317,684		0.1
Montgomery, AL MSA (91 miles)	315,332		0.1
Atlanta, GA	**3,566,776**		**1.4**
Atlanta, GA MSA	3,431,983		1.3
Athens, GA MSA	134,793		0.1
Rest of Region	**14,490,067**		**5.5**

Note: Though relatively small, college town Stillwater, Oklahoma, is centrally located between three Oklahoma cities — Oklahoma City, Tulsa, and Enid — and Wichita, Kansas. Arlington, Texas, is about halfway between Dallas and Fort Worth. Baton Rouge, Louisiana is centrally located between New Orleans and Lafayette.

Figure B.11 (continued)

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
Southern Atlantic	**16,166,089**	**70.0**	**6.1**
Columbia, SC	**1,670,939**		**0.6**
Columbia, SC MSA	481,718		0.2
Florence, SC MSA	122,769		0.0
Augusta-Aiken, GA-SC MSA	453,209		0.2
Sumter, SC MSA	106,823		0.0
Charleston-North Charleston, SC MSA (113	506,420		0.2
Spartanburg, SC	**2,691,167**		**1.0**
Greenville-Spartanburg-Anderson, SC MSA	884,306		0.3
Charlotte-Gastonia-Rock Hill, NC-SC MSA	1,289,177		0.5
Hickory-Morganton-Lenoir, NC MSA	310,236		0.1
Asheville, NC MSA	207,448		0.1
Burlington, NC	**2,228,986**		**0.8**
Greensboro--Winston-Salem--High Point, NC	1,123,840		0.4
Raleigh-Durham-Chapel Hill, NC MSA	995,256		0.4
Danville, VA MSA	109,890		0.0
Williamsburg, VA	**2,467,881**		**0.9**
Norfolk-Virginia Beach-Newport News, VA-N	1,540,446		0.6
Richmond-Petersburg, VA MSA	927,435		0.4
Washington, DC	**7,107,116**		**2.7**
Washington, DC-MD-VA-WV PMSA	4,509,932		1.7
Baltimore, MD PMSA	2,469,985		0.9
Hagerstown, MD PMSA	127,199		0.0
Rest of Region	**6,911,920**		**2.6**
North Central	**18,437,359**	**52.3**	**7.0**
Kansas City, KS	**2,014,400**		**0.8**
Kansas City, MO-KS MSA	1,663,453		0.6
Topeka, KS MSA	165,062		0.1
Lawrence, KS MSA	88,206		0.0
St. Joseph, MO MSA	97,679		0.0
St. Louis, MO	**2,547,686**		**1.0**
St. Louis, MO-IL MSA	2,547,686		1.0
Minneapolis, MN	**2,994,558**		**1.1**
Minneapolis-St. Paul, MN-WI MSA	2,723,137		1.0
St. Cloud, MN MSA	158,802		0.1
Rochester, MN MSA	112,619		0.0
Milwaukee, WI	**2,430,740**		**0.9**
Milwaukee-Waukesha, WI PMSA	1,457,939		0.6
Racine, WI PMSA	182,892		0.1
Kenosha, WI PMSA	139,938		0.1
Sheboygan, WI MSA	108,326		0.0
Madison, WI MSA	393,296		0.1
Janesville-Beloit, WI MSA	148,349		0.1
Chicago, IL	**8,449,975**		**3.2**
Chicago, IL PMSA	7,724,770		2.9
Kankakee, IL PMSA	102,046		0.0
Gary, IN PMSA	623,159		0.2
Rest of Region	**16,825,979**		**6.4**

Note: Columbia, South Carolina, is centrally located between two South Carolina cities — Charleston and Florence — and Augusta, Georgia. Though relatively small, Spartanburg, South Carolina, is centrally located between Greenville, South Carolina, and Charlotte, North Carolina. Also relatively small Burlington, North Carolina, is centrally located between Winston-Salem, Greensboro, Chapel Hill, Durham, and Raleigh. And tiny Williamsburg, Virginia is about halfway between Norfolk and Richmond.

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
Industrial Heartland	**17,558,082**	**54.6**	**6.7**
Ann Arbor, MI	**6,483,941**		**2.5**
Ann Arbor, MI PMSA	522,916		0.2
Detroit, MI PMSA	4,320,203		1.6
Flint, MI PMSA	436,381		0.2
Lansing-East Lansing, MI MSA	437,633		0.2
Jackson, MI MSA	154,010		0.1
Toledo, OH MSA	612,798		0.2
Indianapolis, IN	**2,128,524**		**0.8**
Indianapolis, IN MSA	1,476,865		0.6
Lafayette, IN MSA	167,879		0.1
Kokomo, IN MSA	100,226		0.0
Muncie, IN MSA	118,577		0.0
Terre Haute, IN MSA	149,769		0.1
Bloomington, IN MSA	115,208		0.0
Columbus, OH	**2,570,078**		**1.0**
Columbus, OH MSA	1,437,512		0.5
Mansfield, OH MSA	176,154		0.1
Dayton-Springfield, OH MSA	956,412		0.4
Akron, OH	**4,032,365**		**1.5**
Akron, OH PMSA	678,834		0.3
Cleveland-Lorain-Elyria, OH PMSA	2,224,974		0.8
Canton-Massillon, OH MSA	403,695		0.2
Youngstown-Warren, OH MSA	602,608		0.2
Sharon, PA MSA	122,254		0.0
Cincinnati, OH	**2,343,174**		**0.9**
Cincinnati, OH-KY-IN PMSA	1,591,837		0.6
Hamilton-Middletown, OH PMSA	315,601		0.1
Lexington, KY MSA	435,736		0.2
Rest of Region	**14,592,979**		**5.6**

Note: Ann Arbor, Michigan, is centrally located between four Michigan cities — Detroit, Flint, Lansing, and Jackson — and Toledo, Ohio. Akron, Ohio, is centrally located between Cleveland, Youngstown, and Canton.

Figure B.11 (continued)

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
Middle Atlantic	**32,112,341**	**82.5**	**12.2**
Pittsburg, PA	**2,792,695**		**1.1**
Pittsburgh, PA MSA	2,394,702		0.9
Wheeling, WV-OH MSA	157,349		0.1
Johnstown, PA MSA	240,644		0.1
Philadelphia, PA	**7,499,618**		**2.9**
Philadelphia, PA-NJ PMSA	4,950,866		1.9
Vineland-Millville-Bridgeton, NJ PMSA	138,058		0.1
Atlantic-Cape May, NJ PMSA	332,336		0.1
Wilmington-Newark, DE-MD PMSA	546,063		0.2
Allentown-Bethlehem-Easton, PA MSA	613,466		0.2
Reading, PA MSA	349,583		0.1
Lancaster, PA MSA	447,521		0.2
Dover, DE MSA	121,725		0.0
New York, NY	**17,845,173**		**6.8**
New York, NY PMSA	8,570,212		3.3
Nassau-Suffolk, NY PMSA	2,659,476		1.0
Newburgh, NY-PA PMSA	359,744		0.1
Newark, NJ PMSA	1,936,096		0.7
Jersey City, NJ PMSA	550,183		0.2
Bergen-Passaic, NJ PMSA	1,308,655		0.5
Middlesex-Somerset-Hunterdon, NJ PMSA	1,080,450		0.4
Trenton, NJ PMSA	330,305		0.1
Monmouth-Ocean, NJ PMSA	1,050,052		0.4
Rochester, NY	**2,272,568**		**0.9**
Rochester, NY MSA	1,088,516		0.4
Buffalo-Niagara Falls, NY MSA	1,184,052		0.5
Albany, NY	**1,702,287**		**0.6**
Albany-Schenectady-Troy, NY MSA	873,361		0.3
Glens Falls, NY MSA	122,559		0.0
Dutchess County, NY PMSA	262,062		0.1
Pittsfield, MA NECMA	135,743		0.1
Utica-Rome, NY MSA (93 miles)	308,562		0.1
Rest of Region	**6,805,080**		**2.6**
New England	**10,460,300**	**78.6**	**4.0**
Hartford, CT	**4,491,528**		**1.7**
Hartford, CT NECMA	1,115,223		0.4
New Haven-Bridgeport-Stamford-Waterbury-	1,625,513		0.6
New London-Norwich, CT NECMA	250,404		0.1
Providence-Warwick-Pawtucket, RI NECMA	907,801		0.3
Springfield, MA NECMA	592,587		0.2
Boston, MA	**5,968,772**		**2.3**
Boston-Worcester-Lawrence-Lowell-Brockton	5,768,968		2.2
Barnstable-Yarmouth, MA NECMA	199,804		0.1
Rest of Region	**2,844,811**		**1.1**

Region / Vernal Center / Metropolitan Statistical Area	Estimated Population in July 1995	Near Vern %	% Total 1995 Pop.
Florida	**10,204,768**	**71.9**	**3.9**
Orlando, FL	**2,516,802**		**1.0**
Orlando, FL MSA	1,390,574		0.5
Ocala, FL MSA	226,678		0.1
Daytona Beach, FL MSA	448,904		0.2
Melbourne-Titusville-Palm Bay, FL MSA	450,646		0.2
Tampa, FL	**3,272,372**		**1.2**
Tampa-St. Petersburg-Clearwater, FL MSA	2,180,484		0.8
Sarasota-Bradenton, FL MSA	525,806		0.2
Punta Gorda, FL MSA	129,381		0.0
Lakeland-Winter Haven, FL MSA	436,701		0.2
Fort Lauderdale, FL	**4,415,594**		**1.7**
Fort Lauderdale, FL PMSA	1,412,165		0.5
Miami, FL PMSA	2,031,336		0.8
West Palm Beach-Boca Raton, FL MSA	972,093		0.4
Rest of Region	**3,979,387**		**1.5**
Population Near Vernal Centers	**173,505,121**		**66.0**
Total Population in All MSAs	**209,595,501**		**79.7**
Total Vernal Centers	**50**		
Minimum Population near a Vernal Center	1,620,436	0.6	
Maximum Population	7,499,618	2.9	
Median Population	2,667,650	1.0	
Mean Population	3,470,102	1.3	
Standard Deviation	1,601,359	0.6	
Harmonic Mean Population	2,884,822	1.1	

Note: Fort Lauderdale, Florida, is centrally located between Miami and West Palm Beach.

Source: Population estimates for July 1, 1995 are from the Census Bureau as reported on December 30, 1986.

Note: A more detailed version of this figure is available at <http://www.vernalproject.org>.

It is also possible that ten or twenty years into Vernal Phase 3 (Vernal Year 30 or 40), when the Vernal centers were strong and operating well, that the staffmembers could occasionally travel farther than 75 miles to recruit students, arrange internships, support study groups, and facilitate workshops. This might enable the Vernal Project to reach many excluded cities and more people who live in rural areas. If every Vernal center could periodically reach out 200 miles in every direction (instead of just 75 miles), then the fifty centers could reach almost all of the country. Only the states of Hawaii and Alaska and rural areas in northern Maine, the western plains, and the Rocky Mountains would be missed. If this were possible, the Vernal Project could then directly reach perhaps 90 – 95 percent of the total population.

Figure B.12: Distant MSAs Associated with Vernal Centers

Vernal Center	*Distant MSA*	*Distance (Miles)*
Fresno, CA	*Bakersfield, CA MSA*	*112*
Salt Lake City, UT	*Las Vegas, NV-AZ MSA*	*419*
Stillwater, OK	*Wichita, KS MSA*	*127*
Austin, TX	*Waco, TX MSA*	*100*
	Bryan-College Station, TX MSA	*105*
San Antonio, TX	*Victoria, TX MSA*	*116*
	Corpus Christi, TX MSA	*153*
Memphis, TN	*Little Rock-North Little Rock, AR MSA*	*137*
	Jackson, MS MSA	*213*
Nashville, TN	*Chattanooga, TN-GA MSA*	*129*
Birmingham, AL	*Huntsville, AL MSA*	*95*
	Montgomery, AL MSA	*91*
Columbia, SC	*Charleston-North Charleston, SC MSA*	*113*
Albany, NY	*Utica-Rome, NY MSA*	*93*

VERNAL CENTER REPLICATION

For the Vernal Project to be successful, it must rapidly establish fifty Vernal centers all across the country so that a critical mass of graduates are all working together and can see they are not alone in their efforts. Figures B.13 and B.14 show one possible way to propagate Vernal centers across the country. In this model, Vernal centers are first established in the largest and most progressive cities in each Vernal region* — generally in the most progressive regions first. These lead centers then establish centers in the rest of the region.†

I have assumed that the first center would be in Oakland, California to cover the San Francisco Bay Area. This would be the only center in Phase 1 of the project (Vernal Years 1 to 5). In each of the first two years, it would facilitate just a single session. The center would grow slowly over the next few years, facilitating only two sessions in Year 3 and three in Year 4. This would provide adequate time for the staffmembers to arrange retreat center rentals, establish relationships with internship organizations, attract students, and learn to work together as a team.

In the first three years, the team would comprise only three full-time equivalent (FTE) staffmembers, but in Year 4 it would have a full staff of four FTE. By the fourth year, I assume the Oakland staffmembers would feel comfortable working together and their work procedures would be well established. Moreover, by that time the center should have established a good reputation in its area, making it relatively easy to attract new students.

In Year 5, the Oakland center would reach its full capacity of four sessions. In this year, it would also initiate the process of replicating the Vernal Program to other regions. As the first center, the Oakland center would have the special responsibility of seeding all the other regions. In Year 5, the Oakland center would hire the first new staff preparer who would then hire and prepare staffmembers for a new center in Philadelphia. Oakland staffmembers would also travel to Philadelphia at the end of this year to investigate possible internship organizations and retreat centers and to transmit their experiences to the new Philadelphia staffmembers.‡

[Text continues on page 264]

* Note that some Vernal centers are located in relatively small cities that are located between large cities.

† In choosing the order and pace of replication, I had to balance the requirement that the Vernal Project expand rapidly against the imperative to minimize costs. I painstakingly adjusted the values in Figures B.13, B.14, B.15, B.16, B.17, B.18, and 6.12 to ensure they were reasonable, self-consistent, and resulted in the lowest overall cost.

‡ One of the Oakland staffmembers might become the first new staff preparer. The Oakland center would then hire a new staffmember to replace this person. Also, some of the Oakland staffmembers might decide to move to Philadelphia and become the first staffmembers there.

Figure B.13: Possible Number of Vernal Sessions Beginning Each Year by Region and Center

Pha	Vern Proj Year	Number of Vernal Sessions Each Year by Region — Region: California	MidAtlantic	NCentral	IndHeart	PacMnt	TexOkl	SAtlantic	CenSouth	NEng	Florida	Tot. Per Year
1	1	1	Philadel	Chicago	Arbor	Seattle	Houston	Washing to	Atlanta	Boston	Ft. Laude	1
	2	1						n			r	1
	3	2									d	2
	4	3									a	3
	5	4									l	4
2	6	4	1								e	5
	7	4	1	1								6
	8	4	2	1	1							8
	9	4 2	3	2	1	1						13
	10	4 4 2	4	3	2	1	1					21
	11	4 4 4 2	4	4	3	2	1	1				29
	12	4 4 4 4 2	4	4	4	3	2	1	1			37
	13	4 4 4 4 4 2	4 2	4	4	4	3	2	2	1		48
	14	4 4 4 4 4 4 2	4 4 2	4 2	4 2	4	4	3	3	2	1	65
	15	4 4 4 4 4 4 4	4 4 4 2	4 4 2	4 4 2	4 2	4	4	4	3	2	85
	16	4 4 4 4 4 4 4	4 4 4 4 2	4 4 4 2	4 4 4 2	4 4 2	4 2	4	4	4	3	105
	17	4 4 4 4 4 4 4	4 4 4 4 4 2	4 4 4 4 2	4 4 4 4 2	4 4 4	4 4 2	4 2	4 2	4	4	128
	18	4 4 4 4 4 4 4	4 4 4 4 4 4 2	4 4 4 4 4 2	4 4 4 4 4	4 4 4 2	4 4 4 2	4 4 2	4 4 2	4 2	4	154
	19	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 2	4 4 4 4 2	4 4 4 2	4 4 4 2	4 4	4 2	178
	20	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 2	4 4 4 4 2	4 4	4 4 2	194
3	21	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	22	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	23	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	24	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	25	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	26	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	27	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	28	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	29	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
	30	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4 4 4 4	4 4	4 4 4	200
Total for first 30 years												3087

Figure B.14: Possible Replication of Vernal Centers

	Vernal Region									
Yr	**Calif**	**MAtlan**	**NCentral**	**IndHeart**	**PacMnt**	**TexOkl**	**SAtlan**	**CSouth**	**NEngld**	**Florida**
1	**Oakland**									
2										
3										
4										
5										
6	**Oakland**	-> **Philadelphia**								
7	**Oakland**	----------> **Chicago A**								
8	**Oakland**	----------> **Ann Arbor**								
9	**Oakland**	----------> **Seattle**								
	Oakland	--> Sacramento								
10	**Oakland**	----------> **Houston**								
	Oakland	--> Los Angeles A								
11	**Oakland**	----------> **Washington**								
	Oakland	--> Los Angeles B								
12	**Oakland**	----------> **Atlanta**								
	Oakland	--> Los Angeles C								
13	**Oakland**	----------> **Boston**								
	Oakland	--> San Diego								
		Philadelphia --> New York A								
14	**Oakland**	----------> **Ft. Lauderdale**								
	Oakland	--> Fresno								
		Philadelphia --> New York B								
			Chicago A --> Chicago B							
				Ann Arbor --> Akron						
15		**Philadelphia** --> New York C								
			Chicago A --> Minneapolis							
				Ann Arbor --> Columbus						
					Seattle --> Denver					
16		**Philadelphia** --> Pittsburgh								
			Chicago A --> St. Louis							
				Ann Arbor --> Cincinnati						
					Seattle --> Phoenix					
						Houston --> Arlington				
17		**Philadelphia** --> Rochester								
			Chicago A --> Milwaukee							
				Ann Arbor --> Indianapolis						
						Houston --> San Antonio				
							Washington --> Williamsburg			
								Atlanta --> Baton Rouge		
18		**Philadelphia** --> Albany								
			Chicago A --> Kansas City							
					Seattle --> Portland					
						Houston --> Austin				
							Washington --> Burlington			
								Atlanta --> Memphis		
									Boston --> Hartford	
19					**Seattle** --> Salt Lake City					
						Houston --> Stillwater				
							Washington --> Spartanburg			
								Atlanta --> Nashville		
										Ft. Lauderdale --> Tampa
20							**Washington** --> Columbia			
								Atlanta --> Birmingham		
										Ft. Lauderdale -> Orlando

Note: The lead center in each region is shown in **bold type**.

In Year 6 (the beginning of Phase 2), the Oakland center would continue to facilitate a regular workload of four sessions and the new center in Philadelphia would facilitate a single session. In this year, the Oakland center and the new staff preparer would also establish a new Vernal center in Chicago. In Year 7, the Oakland center and the new staff preparer would establish a new Vernal center in Ann Arbor, Michigan. The Philadelphia and Chicago centers would each facilitate a single session, and the Oakland center would continue to facilitate four sessions.

In Year 8, the new Ann Arbor center and the Chicago center would each facilitate one session, and the Philadelphia center would facilitate two sessions. The Oakland center would continue to facilitate four sessions. By this time, the process of establishing new centers should be more routine and much easier. So in this year, the Oakland center and the new staff preparer would establish new centers in two cities: Seattle and Sacramento.

Since Sacramento is close to Oakland, and since the program in Oakland would be several years old by then and have developed a good reputation, it should be easier to arrange internships in Sacramento, find a good retreat center, and attract students. The Sacramento center would be the second center in the California region, so with its establishment, it would also be time to hire a regional administrator.

With support from the Oakland center and the regional administrator, the Sacramento center should have a big head start in getting established. So I assume it would be able to facilitate two sessions in its first year (Year 9) and four in its second year. In Year 9 there would also be a second new staff preparer to help hire, prepare, and support all the new staffmembers.

As shown in Figures B.13 and B.14, this procedure would continue until all fifty centers were established and each was facilitating a full load of sessions. The Oakland center would continue through Year 14 to establish centers in new regions (Houston, Washington, Atlanta, Boston, and Ft. Lauderdale) as well as new centers in the California region.

Each newly formed center in a region would facilitate just one session in its early years and slowly work up to full capacity. Once the first center in a region had reached full capacity, it would then help establish new centers in that region every year. For example, in Year 13, the Philadelphia center (which would then be eight years old) would help establish a new center in New York City. In Year 14, the Philadelphia center would establish a second center in New York City, the Chicago center would establish a second center in Chicago, and the Ann Arbor center would establish a new center in Akron, Ohio. In Year 15, the Philadelphia center would help establish a third new center in New York City, the Chicago center would establish a center in Minneapolis, Minnesota, the Ann Arbor center would establish a center in Columbus, Ohio, and the Seattle center would establish a center in Denver, Colorado.

As soon as there were two centers in a region, a regional administrator would be hired to provide accounting and payroll services and to coordinate cooperation between all the centers. Another 0.5 FTE administrator would be hired for each additional new center until there were twenty-five FTE in all. As the total number of Vernal staff grew, there would also be additional new staff preparers to help hire, prepare, and support the new employees. After the initial start-up period, there would be four new staff preparers. I assume that, with support from the regional administrators and new staff preparers, the second and subsequent centers in each region should be able to facilitate two sessions in their first year of operation and then jump to full capacity in their second year.

By following this rapid growth trajectory, the replication process could be fully completed in Vernal Year 21, the first year of Phase 3. The total number of sessions held each year would grow from just five in Year 6 to two hundred in Year 21. The total number of students entering each year would grow from 150 to 6,000.

Figure B.15 summarizes the number of sessions that would start in each region for the first thirty years.

NUMBER OF VERNAL STAFFMEMBERS

Figures B.16 and B.17 show the number of Vernal staffmembers and regional administrators required during the first thirty years of the Vernal Project in each region. Figure B.18 totals these values and indicates how many new staffmembers must be hired each year, assuming that an average staffmember leaves after six years (plus or minus two years). It also shows how many of these slots might be filled with Vernal graduates assuming that one graduate from each session would be available four years after that session had ended (plus or minus one year). With these assumptions, there would be more graduates available to become Vernal staffmembers than would be needed in every year after Year 14.

Figure B.18 also shows the number of staffmembers needed in the development phases. In the last year of Development Phase 1 and all three years of Development Phase 2, I assume there would be at least three people working together to promote the Vernal Project, develop the curriculum and workshop agendas, arrange internships, and facilitate the test sessions. However, I assume much of their effort would be volunteered. This figure only shows the number of paid staffmembers: one half-time person in the last year of Vernal Development Phase 1, one person in Year Prep-1, two people in Year Prep-2, and two and one-half people in Year Prep-3.

Figure B.15: Possible Number of Vernal Sessions Beginning Each Year by Vernal Region

Phase	Vernal Project Year	Number of Vernal Sessions Each Year by Region: Region Cal	MAtl	NCen	IndH	PMnt	TxO	SAtl	CSou	NEng	Flor	Total Per Year	Notes
D1													*Test workshops:1 day long*
D2	*Prep-1*												*Test workshop:10 days long*
	Prep-2												*Test workshop:10 days long*
	Prep-3	*0.5*										*0.5*	*Pilot Session: 6 mon. long*
1	1	1										1	First full session begins
	2	1										1	
	3	2										2	
	4	3										3	
	5	4										4	
2	6	4	1									5	Expand to other regions
	7	4	1	1								6	
	8	4	2	1	1							8	
	9	6	3	2	1	1						13	
	10	10	4	3	2	1	1					21	
	11	14	4	4	3	2	1	1				29	
	12	18	4	4	4	3	2	1	1			37	
	13	22	6	4	4	4	3	2	2	1		48	
	14	26	10	6	6	4	4	3	3	2	1	65	
	15	28	14	10	10	6	4	4	4	3	2	85	
	16	28	18	14	14	10	6	4	4	4	3	105	
	17	28	22	18	18	12	10	6	6	4	4	128	
	18	28	26	22	20	14	14	10	10	6	4	154	
	19	28	28	24	20	18	18	14	14	8	6	178	
	20	28	28	24	20	20	20	18	18	8	10	194	
3	21	28	28	24	20	20	20	20	20	8	12	200	Project at full size
	22	28	28	24	20	20	20	20	20	8	12	200	
	23	28	28	24	20	20	20	20	20	8	12	200	
	24	28	28	24	20	20	20	20	20	8	12	200	
	25	28	28	24	20	20	20	20	20	8	12	200	
	26	28	28	24	20	20	20	20	20	8	12	200	
	27	28	28	24	20	20	20	20	20	8	12	200	
	28	28	28	24	20	20	20	20	20	8	12	200	
	29	28	28	24	20	20	20	20	20	8	12	200	
	30	28	28	24	20	20	20	20	20	8	12	200	
Total for first 30 years		567	451	377	323	295	283	263	262	116	150	**3,087**	Note that Phase 3 continues until Project Year 60

Note: The last year of Phase D1 and all 3 years of Phase D2 are shown here, but are not included in the totals.

Figure B.16: Possible Number of Vernal Team Staffmembers Needed Each Year in Each Vernal Region

Phase	Vernal Project Year	Number of Team Staffmembers Needed Each Year (Full-Time Equivalent) Region										Total Team Staff Needed	Add'l This Year
		Cal	MAtl	NCen	IndH	PMnt	TxO	SAtl	South	NEng	Flor		
D1													
D2	*Prep-1* *Prep-2* *Prep-3*												
1	1	3.0										**3.0**	
	2	3.0										**3.0**	0.0
	3	3.0										**3.0**	0.0
	4	4.0										**4.0**	1.0
	5	4.0										**4.0**	0.0
2	6	4.0	3.0									**7.0**	3.0
	7	4.0	3.0	3.0								**10.0**	3.0
	8	4.0	3.0	3.0	3.0							**13.0**	3.0
	9	8.0	4.0	3.0	3.0	3.0						**21.0**	8.0
	10	12.0	4.0	4.0	3.0	3.0	3.0					**29.0**	8.0
	11	16.0	4.0	4.0	4.0	3.0	3.0	3.0				**37.0**	8.0
	12	20.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0			**45.0**	8.0
	13	24.0	8.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0		**57.0**	12.0
	14	28.0	12.0	8.0	8.0	4.0	4.0	4.0	4.0	3.0	3.0	**78.0**	21.0
	15	28.0	16.0	12.0	12.0	8.0	4.0	4.0	4.0	4.0	3.0	**95.0**	17.0
	16	28.0	20.0	16.0	16.0	12.0	8.0	4.0	4.0	4.0	4.0	**116.0**	21.0
	17	28.0	24.0	20.0	20.0	12.0	12.0	8.0	8.0	4.0	4.0	**140.0**	24.0
	18	28.0	28.0	24.0	20.0	16.0	16.0	12.0	12.0	8.0	4.0	**168.0**	28.0
	19	28.0	28.0	24.0	20.0	20.0	20.0	16.0	16.0	8.0	8.0	**188.0**	20.0
	20	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	12.0
3	21	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	22	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	23	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	24	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	25	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	26	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	27	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	28	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	29	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0
	30	28.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	8.0	12.0	**200.0**	0.0

Assumptions

Assume a team of four staffmembers (full-time equivalent) can facilitate four sessions and also attract new students, arrange internships, counsel and support students, research and prepare class materials, help prepare new staffmembers, and provide all necessary administration.

Assume that a team of three staffmembers can handle the workload for the first few years of each new center when it facilitates just one or two sessions.

Figure B.17: Possible Number of Regional Administrators Needed Each Year in Each Vernal Region

Phase	Vernal Project Year	Number of Regional Administrators Needed Each Year (Full-Time Equivalent) Region										Total Region Admins Needed
		Cal	MAtl	NCen	IndH	PMnt	TxO	SAtl	South	NEng	Flor	
D1												
D2	*Prep-1* *Prep-2* *Prep-3*											
1	1											0.0
	2											0.0
	3											0.0
	4											0.0
	5											0.0
2	6											0.0
	7											0.0
	8											0.0
	9	1.0										1.0
	10	1.5										1.5
	11	2.0										2.0
	12	2.5										2.5
	13	3.0	1.0									4.0
	14	3.5	1.5	1.0	1.0							7.0
	15	3.5	2.0	1.5	1.5	1.0						9.5
	16	3.5	2.5	2.0	2.0	1.5	1.0					12.5
	17	3.5	3.0	2.5	2.5	1.5	1.5	1.0	1.0			16.5
	18	3.5	3.5	3.0	2.5	2.0	2.0	1.5	1.5	1.0		20.5
	19	3.5	3.5	3.0	2.5	2.5	2.5	2.0	2.0	1.0	1.0	23.5
	20	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
3	21	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	22	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	23	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	24	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	25	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	26	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	27	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	28	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	29	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0
	30	3.5	3.5	3.0	2.5	2.5	2.5	2.5	2.5	1.0	1.5	25.0

Assumptions

Assume each region needs an additional 0.5 FTE administrator for every Vernal center in that region when there are two or more centers in a region. Administrators would provide accounting and payroll services and coordinate cooperation between the centers.

Figure B.18: Possible Total Number of Vernal Staffmembers Needed Each Year

Phase	Year	Num. of Students Enrolled	Total Sessions	Operational Vernal Centers	Staffmembers - Number of Full-Time Equivalent Required (Facilitate, Administrate, Hire/Prepare New Staff)						
					Team Staff	Region Admin.	New Staff Preparers	Total Paid Staff	New Staff Needed	Avail. Vernal Grads	Required from Outside
D1					*0.5*			***0.5***	*0.5*		*0.5*
D2	***P-1***	*30*	*0.2*		*1.0*			***1.0***	*0.5*		*0.5*
	P-2	*30*	*0.2*		*2.0*			***2.0***	*1.0*		*1.0*
	P-3	*30*	*0.5*		*2.5*			***2.5***	*0.5*		*0.5*
1	**1**	30	1	1	3.0			**3.0**	0.5		0.5
	2	30	1	1	3.0			**3.0**	0.0		0.0
	3	60	2	1	3.0			**3.0**	0.0		0.0
	4	90	3	1	4.0			**4.0**	1.0		1.0
	5	120	4	1	4.0		1.0	**5.0**	2.0	1.0	1.0
2	**6**	150	5	2	7.0		1.0	**8.0**	3.5	1.0	2.5
	7	180	6	3	10.0		1.0	**11.0**	3.5	2.0	1.5
	8	240	8	4	13.0		1.0	**14.0**	3.5	3.0	0.5
	9	390	13	6	21.0	1.0	2.0	**24.0**	10.5	4.0	6.5
	10	630	21	8	29.0	1.5	2.0	**32.5**	10.0	5.0	5.0
	11	870	29	10	37.0	2.0	2.0	**41.0**	10.5	6.0	4.5
	12	1,110	37	12	45.0	2.5	2.0	**49.5**	11.0	9.0	2.0
	13	1,440	48	15	57.0	4.0	3.0	**64.0**	19.0	14.0	5.0
	14	1,950	65	20	78.0	7.0	3.0	**88.0**	30.0	21.0	9.0
	15	2,550	85	24	95.0	9.5	3.0	**107.5**	27.0	29.0	—
	16	3,150	105	29	116.0	12.5	4.0	**132.5**	34.0	38.0	—
	17	3,840	128	35	140.0	16.5	5.0	**161.5**	41.0	50.0	—
	18	4,620	154	42	168.0	20.5	5.0	**193.5**	48.0	66.0	—
	19	5,340	178	47	188.0	23.5	5.0	**216.5**	42.5	85.0	—
	20	5,820	194	50	200.0	25.0	4.0	**229.0**	36.5	106.0	—
3	**21**	6,000	200	50	200.0	25.0	4.0	**229.0**	30.0	129.0	—
	22	6,000	200	50	200.0	25.0	4.0	**229.0**	36.0	153.0	—
	23	6,000	200	50	200.0	25.0	4.0	**229.0**	38.5	175.0	—
	24	6,000	200	50	200.0	25.0	4.0	**229.0**	40.5	190.0	—
	25	6,000	200	50	200.0	25.0	4.0	**229.0**	39.5	198.0	—
	26	6,000	200	50	200.0	25.0	4.0	**229.0**	38.5	200.0	—
	27	6,000	200	50	200.0	25.0	4.0	**229.0**	36.5	200.0	—
	28	6,000	200	50	200.0	25.0	4.0	**229.0**	36.5	200.0	—
	29	6,000	200	50	200.0	25.0	4.0	**229.0**	37.0	200.0	—
	30	6,000	200	50	200.0	25.0	4.0	**229.0**	38.5	200.0	—
Total for first 30 years		92,610	3,087						705.5	2,285.0	39.0

Note: The last year of Phase D1 and all 3 years of Phase D2 are shown here, but are not included in the totals.

Assumptions

Assume that for every 10 (or so) new staffmembers hired in a year, there is a new staff preparer to help hire, prepare, and support them.
Assume that staffmembers work for 6 years (±2 years) and then retire or move on to other work.
Assume that 4±1 years after each session, one graduate from that session is available to become a staffmember.

Assumptions about the Development Phases

Even though there would be only a single ten-day workshop in Years Prep-1 and Prep-2 and a six-month pilot session in Year Prep-3, assume that preparing for these workshops and for the rest of the project requires staffing at the levels shown.