



# SYMBOLIC SYSTEMS PROGRAM

STANFORD UNIVERSITY

FY 2008 BUDGET  
PROPOSAL

Nikhila Pai  
PA 730 Public and Non-Profit Budgeting  
Spring 2007, SFSU MPA Program

STANFORD  
UNIVERSITY



Ivan Sag  
Symbolic Systems Program Director  
Stanford University  
Building 460  
Stanford, CA 94105

May 17, 2007

Dear Professor Sag,

The following documents contain the proposed FY 2008 budget for the Symbolic Systems Program as well as supporting analysis of actual and budgeted data for the program dating back to FY 2005. The proposed budget is aligned with our current goals of promoting the new Masters degree as well as supporting the current needs of our highly successful undergraduate degree program.

The specific strategic plan goals emphasized by the budget include recognition of the popularity of our introductory core course, a need for more resources to support our external MA, as well as the mandates of the Dean's Office. Financially, the budget illustrates these goals as follows:

- An increase in the teaching assistant budget for both salary and tuition for our Introduction to Cognitive Science Symbolic Systems 100 core course.
- An increase in our Replacement Teaching allocation from the Dean's Office.

While we may appear to have a lot of money in our savings and gift accounts (over \$100,000), as you know most of this money is restricted. We can draw some of it for operational costs, but the majority is in reserve under the discretion of the Associate Director and yourself for one-time program development.

While this budget assumes basic increases in our allocations over all, these proposed base budget increases (5% to the Lecturer Pool, 3.5% to the Staff Salaries, and 3% for non-salary expenses) reflect the rate of previous years' increases. It is our hope that you will be able to take these documents to the Senior Associate Dean for Undergraduate and Graduate Studies, Susan Stephens, and use them to justify the requests bulleted above.

Sincerely,

Nikhila Pai,  
Department and Program Manager

## Overview of Symbolic Systems at Stanford University

*Symbolic Systems attacks age-old questions about the relation between mind and the world, questions like the following. What is information? What is intelligence? How are they related? Is intelligence more than information processing? Does intelligence require a mind? For that matter, what is a mind? How are minds related to brains? Does intelligence require some sort of biologically-based brain? Or is it possible to create artifacts that process information in a way that we can call them intelligent? [...] What is consciousness? Does intelligence require consciousness? And how does language and meaning fit into the picture? Does thought require language or some other form of representation, or vice versa? What is it that makes language meaningful? And what is the meaning that language is so full of<sup>1</sup>?*

The Symbolic Systems Program (SSP) focuses on computers and minds: artificial and natural systems that use symbols to represent information. SSP brings together students and faculty interested in different aspects of the human-computer relationship, including

- **cognitive science:** studying human intelligence, natural languages, and the brain as computational processes;
- **artificial intelligence:** endowing computers with human-like behavior and understanding; and
- **human-computer interaction:** designing computer software and interfaces that work well with human users.

The Symbolic Systems program is an undergraduate and master's interdisciplinary major combining studies from philosophy, psychology, computer science, and linguistics, as well as optional concentrations in neuroscience and education. Its goal is to prepare students with the vocabulary, theoretical background, and technical skills to understand and participate in contemporary interdisciplinary research into questions about language, information, and intelligence—both human and machine.

Symbolic Systems' affiliated faculty come from several departments at Stanford University, including Computer Science, Linguistics, Philosophy, Psychology, Communication, and Education. Our students are exposed to the tools of these disciplines -- formal methods, philosophical analysis, computer programming, and empirical research -- with the aim of being able to apply the appropriate tool(s) to a chosen area of specialization.

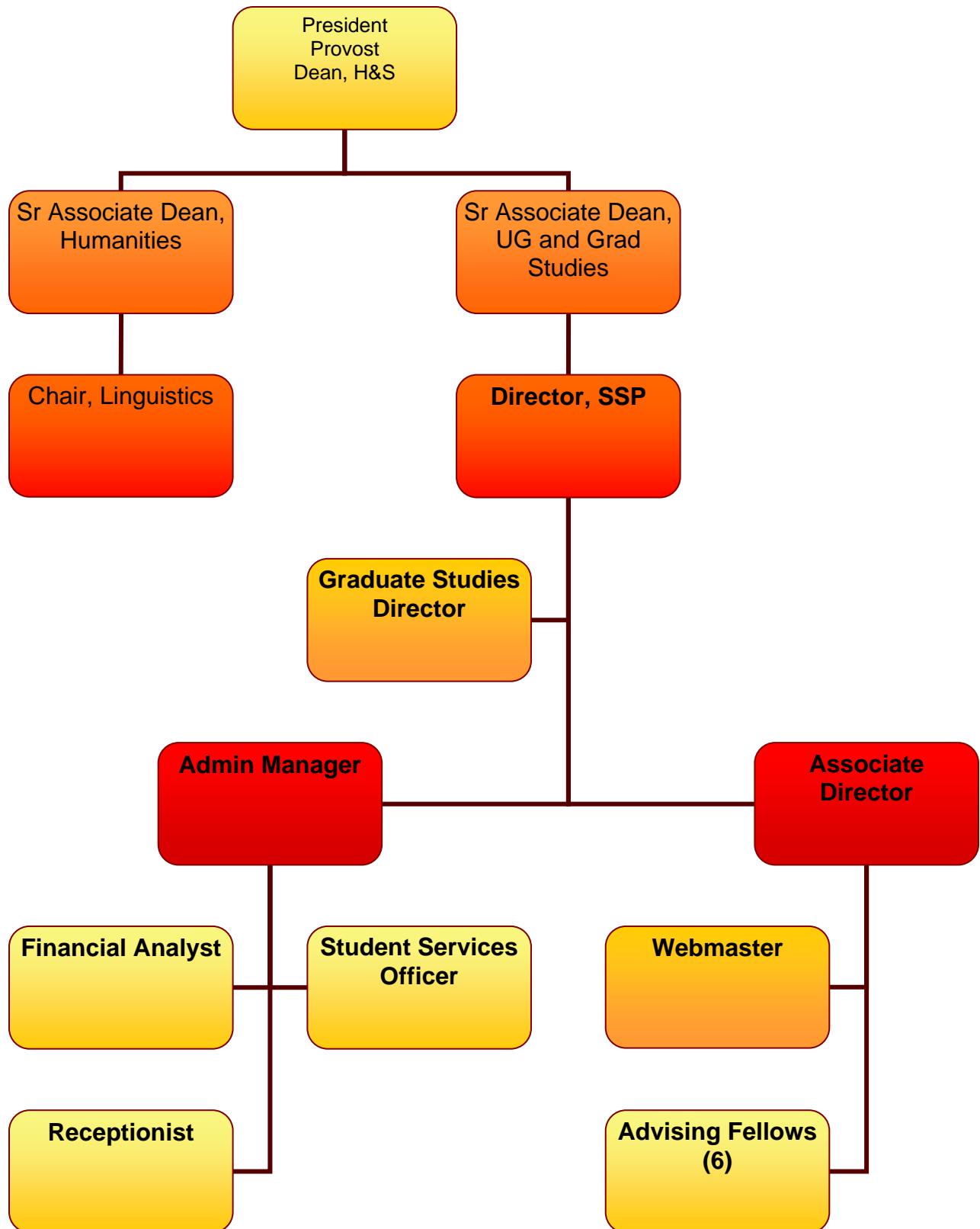
The curriculum offers a combination of traditional humanistic approaches to these questions asked above as well as a training and familiarity with exciting contemporary developments in the science and technology of computation. Majors in Symbolic Systems are prepared to enter any of these fields, as well as industry and most other cognitive-science related areas. SSP alumni are found in various occupations, including software design and applications, teaching and research, law, medicine, and public service.

All of the degree programs offered by SSP require prior admission to the university as an undergraduate or graduate student. Amongst the interdisciplinary programs offered across the university, SSP is the second largest in undergraduate student majors/minors with 100 students moving through its coursework at any time. The program graduates approximately 45 students per year—far more than many traditional departments.

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<sup>1</sup> From SSP Web site link **What is SSP?** entitled “A Science of the Mind.”

# Symbolic Systems Organizational Chart



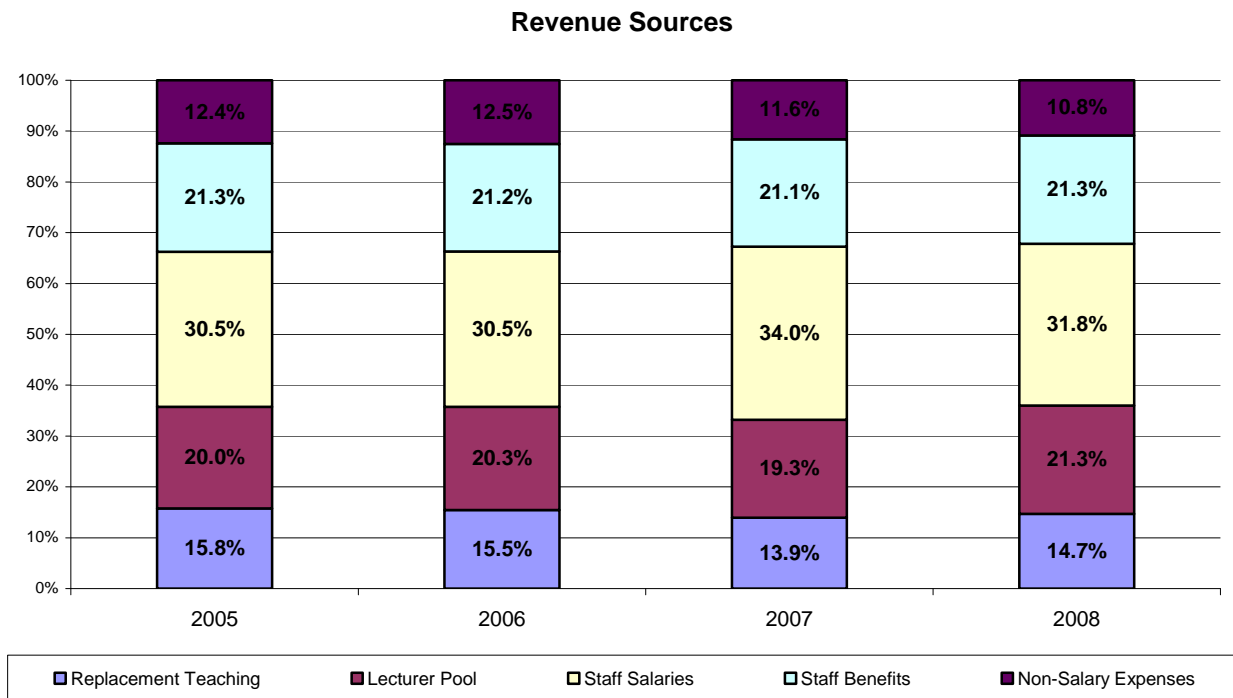
## Budgets Issues: An Overview

As its popularity grows amongst undergraduates and with its new external Masters degree, the Symbolic Systems Program finds itself in need of additional teaching resources in the form of teaching assistant salaries and tuition both to assist in the teaching load and to attract faculty to cover our introductory course. The program could also use additional funds to encourage visiting faculty to teach mini-courses while they conduct research at the university.

### Allocated Revenue:

The majority of the SSP operating budget comes from general funds allocated to us by the Dean's Office for the School of Humanities and Sciences. Every year we are given funds for staff salaries (~30%) and benefits (~21%), non-salary expenses (~20%) and lecturer pool (~11%). The dollar amounts are increased incrementally based on previous year's allocations. These funds are given solely at the discretion of the Dean's Office and can be taken away or decreased at any time; it is rare to have these funds taken away.

The chart below illustrates the breakdown of our allocated revenue by percentage and fiscal year.



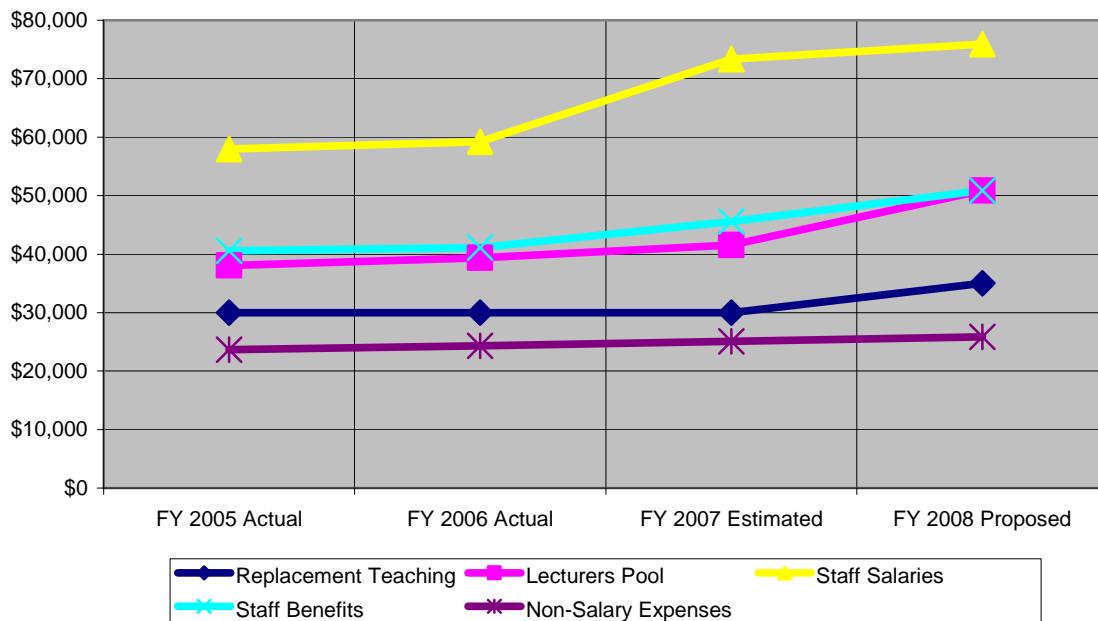
Unlike these base budget dollars, replacement teaching (~15%) comes from a special commitment made by the Cognizant Dean several years ago to the Director of the program. It is considered part of our IDP (Inter-Department Program) governance. The amount, \$30,000+benefits, is fixed and is promised to us through 2009. However, as the Director of our program intends to negotiate with the Dean's Office for additional funds, we believe an increase to \$35,000 + benefits in replacement teaching special commitment dollars is possible.

An increase of \$5,000 in replacement teaching funds can be justified based on an opportunity to offer special courses to our students. The recent creation (in FY07) of the Tom Wasow Visiting Scholar Fund allows the program to invite 2 visiting faculty every year to perform research and study with our students here at Stanford University. This fiscal year, one of these faculty members offered to teach a cutting edge course to our students. In addition to the research funds, we paid an additional \$5,000 for her teaching efforts.

In order to entice other visiting faculty to teach during their time here, we would like to increase our replacement teaching commitment by \$5,000. This amount could easily cover the cost of one of these courses. In addition to this increase in funding, we would also like to have this special commitment extended to 2012. A five year commitment to our program is a standard length of time and will guarantee this level of funding will be made to us annually.

In addition to this increase in replacement teaching money, we would like to request an increase in our base budget as well. As illustrated by the chart below, SSP has received almost no increases in funding to our lecturer pool or non-salary expense allocations. True, we have received large increases in staff funding and benefits, but both were made to accommodate the hire of the SSP Associate Director into an official staff position. As a result the overall revenue increase from the FY 2005 to the FY 2006 budgets is only 2% and even with the addition of the Associate Director to the operating budget, the overall increase from FY 2006 to FY 2007 is only 11.1%.

Trend Line of Revenue



We would like to request an increase to our lecturer pool to accommodate our need for additional Teaching Assistants (TAs). Our Symbolic Systems Core course, SYMSYS 100, has grown in popularity and regularly attracts over 100 students per year. As a result, we now need at least 3

teaching assistants to cover the course. Typically, we have been able to recruit TAs from the Linguistics department and, given their hefty graduate aid budget, have not had to cover the cost of these teaching assistants.

However, given the make-up of the incoming cohort of the Linguistics department PhDs over the last few years, SSP has been forced to recruit TAs from other units and bear the costs. In FY 2005 and FY 2006 we covered the cost of one TA (salary + tuition) for SYMSYS 100 (as well as a 25% TA in FY05 for another course), but this year we had to pay for 1.5 TA salaries and 1 TA's tuition.

	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>
	<b>Actual</b>	<b>Actual</b>	<b>Estimated</b>	<b>Proposed</b>
<b>Teaching Assistants</b>	9,035	6,685	10,451	14,510
<b>Grant/Fellowship/Tuition</b>	6,480	6,790	7,180	15,140

After discussions with the Graduate Advisor in Linguistics, we are concerned that we may have to recruit TAs from other departments and cover the cost of salary and tuition for at least 2 TAs next year. Despite the loss of Linguistics TAs, with the creation of our new external Masters degree program, we may well create a viable pool of teaching assistants for SYMSYS 100—but this pool will cost us.

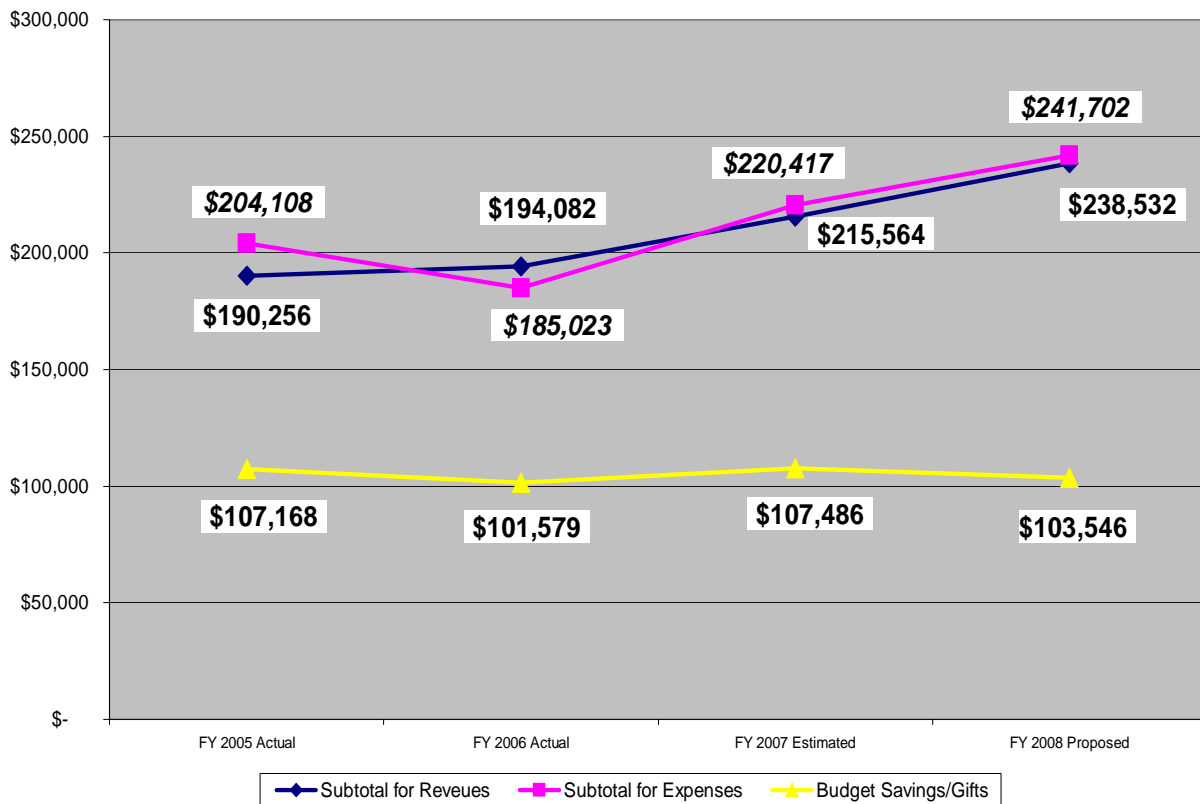
In addition to our Teaching Assistance concerns, our program has been having difficulty recruiting faculty from other departments to teach this large lecture course. Introduction to Cognitive Science is challenging and many faculty feel less rewarding than a smaller sub-topic seminar. We believe that by offering a (paid) TA appointment, we may be able to entice faculty to teach this course by offering a paid position to a PhD candidate in that faculty member's home department.

In our FY 2008 proposed budget, we assumed an incremental increase in base funding of 5% (less than last year's 5.5%) and request an additional \$7,725 to cover the salary of one TA. Overall, with the cost rise increase and these additional requests, the difference between the FY 2007 allocated revenues and the FY 2008 allocation is 10.7%.

**Budget Savings/Gifts:**

The Symbolic Systems Program appears to have a great deal of money in budget savings and gifts funds according to the data supplied in this document. In fact, our allocated revenues and budget savings/gift accounts appear to be in an almost 2:1 ratio as illustrated by the chart below.

### Revenue vs Expenses vs Savings



While we have been able to cover some of our deficits through budget savings in the past, most of our savings and gift money is restricted to certain purposes and can not be used for operational expenses, such as salaries for staff, lecturers or TAs as well as expendable materials and services (EM&S). In order to better explain to the Dean’s Office why this money is not available for annual operating expenses, we will list the accounts that make up the savings and gift funds, their (irregular) sources, and what the accounts are designated to cover:

- **Budget Savings** (FY07 starting balance: \$2,611) is meant to cover overages from our operating budget, but typically it does not hold very much money. Its income stream depends on unused revenue allocations from the Dean’s Office. The Dean’s Office itself determines if we can keep this money and in recent years, as in FY 2006, it is pulled back.
- **Director’s Discretionary Fund** (FY 07 starting balance \$9,530) is designated to fund any research interests of the Director or Associate Director of the program. Typically it covers the cost of research assistants, travel outside of SSP business (for research or conferences), and equipment for the personal research use of the Director and Associate Director. As part of our IDP governance package, we have a special commitment from the Dean’s Office which grants this account \$7,000 every fiscal year.

- **T. A. Wasow Visiting Scholar Fund** (FY 07 starting balance \$3,200) is designated to fund visiting faculty at \$5,000 per faculty member, per quarter. The program started in FY 2007 and its revenue source is an endowment interest payout. We hope it will cover the costs of 2 visiting faculty at one per quarter (or \$10,000 per year). Should the money not be forthcoming this year, we may have to fund the difference of \$6,800 for the two visiting faculty we awarded stipends in FY 2007.
- **Richard Weiland Fund** (FY 07 starting balance \$47,942) is considered unrestricted by the Dean's Office, but is considered restricted by the Symbolic Systems program Director and Associate Director. After discussions with Richard Weiland, both believe the money is designated to develop undergraduate programming and is reserved for course development, special talks and conferences. With the death of Mr. Weiland in 2006, we don't expect to receive any more donations.
- **Srinija Srinivasan Fund** (FY 07 starting balance \$11,860) is considered unrestricted by the Dean's Office, but is considered restricted to course development by the SSP Director and Associate Director. The remaining balance is from a one time donation and we don't expect to receive any further money.
- **Symbolic Systems Program Gift Fund** (FY 07 starting balance \$6,653) is unrestricted and can be used for any expenses we incur. However, the revenue for this account is intermittent as it is based on donations given directly to the program.
- **Dean's Office Undergraduate Programs Account** (FY 07 starting balance \$25,690) is also unrestricted, but meant to cover programs and coursework to support undergraduate education. Every year the Dean's Office allocates between \$1,000-6,000 from a general fund, depending on returns on certain investments. The Director and Associate Director prefer not to use this money for operating expenses, but make it available to cover unforeseen costs associated with SSP courses (student research or course development).

### **Expenditures:**

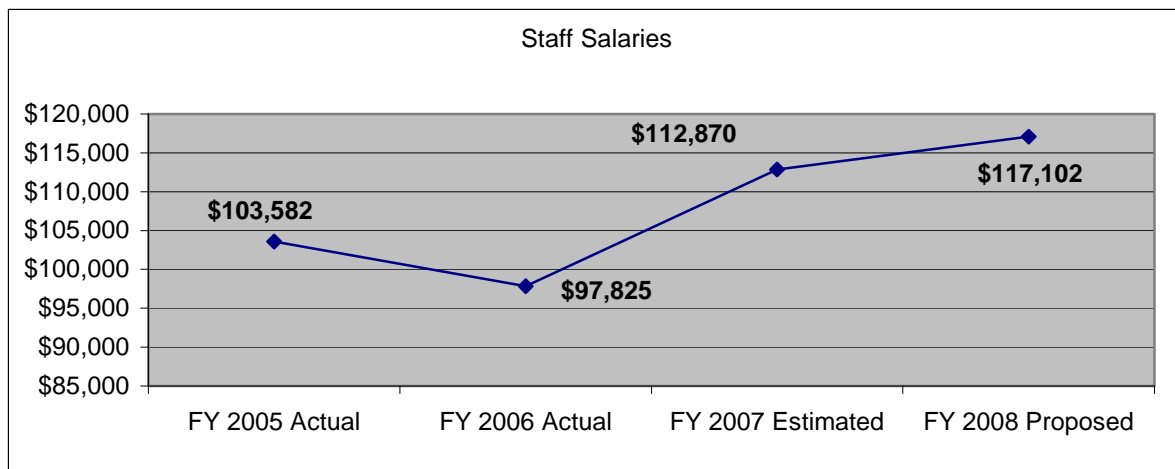
While the Symbolic Systems Program spends some of its budget savings and gifts on course development, special programs and events, the following analysis on expenditures will focus mainly on regular operating budget expenses rather than one-time-charges.

The program spends the majority of its money on administrative and teaching staff and their benefits. In FY 2005 we spent 69.7% of our budget on salaries and 16.6% on benefits (total costs of salaries \$135,690 and benefits \$33,972); in FY 2006 we spent similar amounts as salaries cost 70% (\$122,710) and benefits cost 19% (\$35,241). In FY 2007 our salary costs went up to 72.4% (\$152,321) and benefits percentage down to 16.9% (but dollar amount increase to \$37,191) due to position changes.

The administrative staff salary charges cover two positions: the Receptionist for Linguistics and the Associate Director for Symbolic Systems. The Symbolic Systems Program is administered

and supported fully by the Linguistics department staff made up of a Department Manager, Student Services Officer, Finance Analyst and Receptionist. As the needs of SSP are small compared with the Linguistics Department, it was determined by the Dean’s Office that SSP would cost share by covering the least expensive administrative position in the Linguistics Department—the receptionist.

In FY 2006 we had difficulties filling the receptionist position and as a result the office was without one for some time. This accounts for the -5.6% (or \$5,757) difference between FY 05 and FY 06. Prior to FY 2007, the Associate Director Position was not fully recognized by the Dean’s Office and therefore not fully funded. The program covered his salary and benefits costs through the lecturer pool. After discussions between the Cognizant Dean and Director of SSP, the FY 2007 budget recognized the Associate Director and his role by increasing the staff salaries revenue line and increasing his salary. One can see the upward increases in costs over time:



The salary increase for fiscal year 2008 reflects the highest percentage increase possible—Human Resources established 3.5% as the most any staff person can gain in a merit increase to their salary. The \$117,102 proposed for FY 2008 assumes both staff will get the full merit increase.

In addition to administrative staff, the Symbolic Systems program hires two lecturers and 1-2 teaching assistants per year as needed, as well as student assistants to serve as Advising Fellows to undergraduate majors and minors.

In fiscal years 2005 and 2006, we hired one lecturer to teach a single course. In FY 2005 we also paid a faculty member course development funds to encourage him to teach a course for our program, as reflected by the \$9,200 spent on the lecturer salary line. In FY 2006 we hired a lecturer for \$6,000. Due to the staff salary increase for FY 2007, meant to help cover the Associate Director, the program was able to hire an additional lecturer with money now available in the lecturer pool revenue line. We were able to hire two lecturers, one for \$10,000 and the other for \$7,000. [Although we are paying a visiting faculty member \$5,000 to teach a mini-

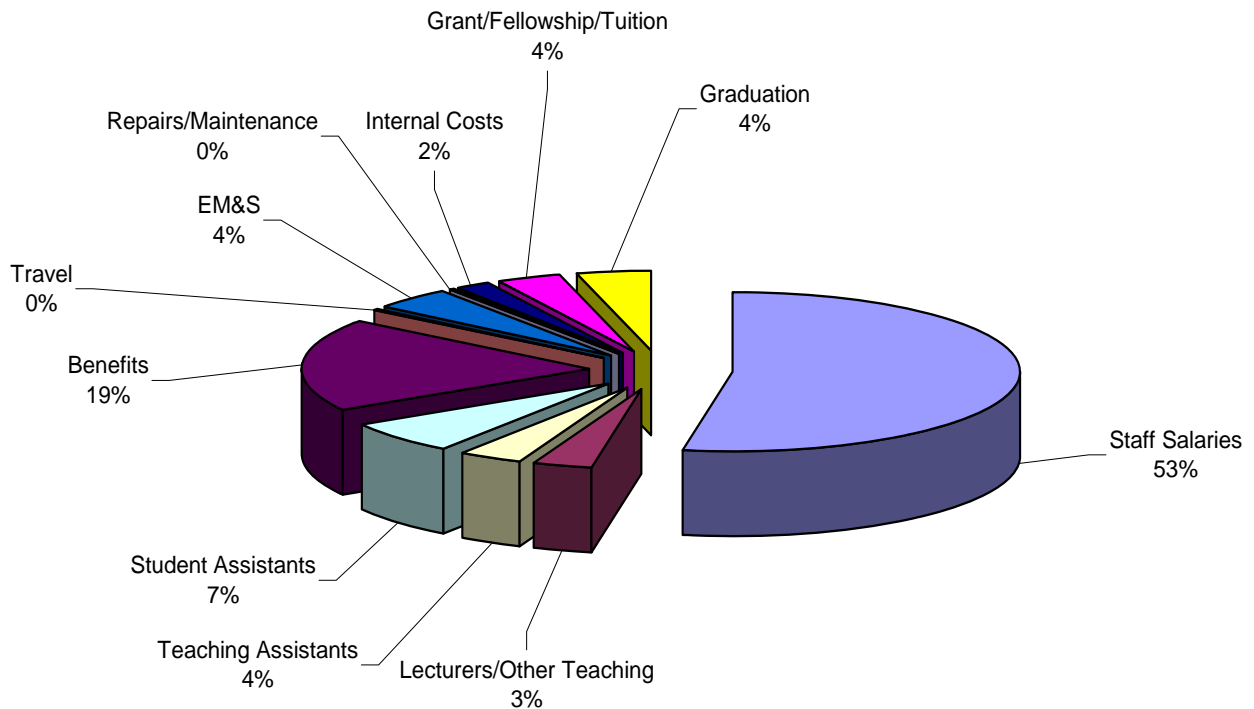
course, we are drawing it from a gift fund which is why it is not reflected in the base budget in FY 2007.] In 2008 we plan on maintaining the same rates of pay for two lecturers.

Unlike lecturers, the teaching assistant rates are set by the university in advance, as are tuition rates. As discussed in the revenue allocation section, our need for teaching assistants is based on course enrollment numbers. In the last few years, we have seen a steady increase reflected in the number of TAs we hire, and as discussed earlier, we would like to increase our expenditures to reflect that need in FY 2008.

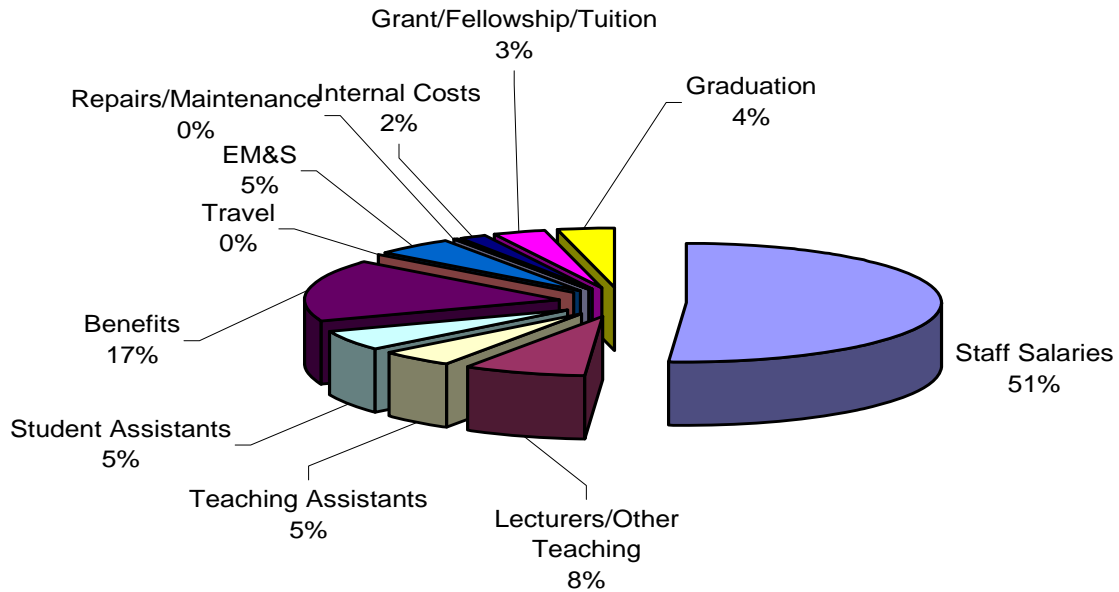
Our Advising Fellows (student) salaries are also driven by need—we base it on the number of hours needed to advise current majors. While we spent more in fiscal year 2005 than in fiscal year 2007, this expenditure is based on the number of hours worked by our 6 student advising fellows. The more majors and minors, the more hours the advising fellows need to work. In FY 2008 we anticipate a rate increase in hourly pay for student employees as well an increase in the number of hours worked due to an increased interest in the SSP major. As a result, we have increased our expenditure line to \$15,000.

The following pie chart represents a percentage breakdown of all the Symbolic Systems expenditures for fiscal year 2006 and 2007, including the salary expenses just discussed.

### Share Analysis of Expenditures FY 2006 Actual



## Share Analysis Expenditures FY 2007 Estimated



In addition to the large amounts spent on salary and benefits, SSP also covers the cost of the graduation ceremony (an unallowable expense as per certain grant and contract rules and therefore set as a different line item), EM&S (expendable materials and services), internal costs (like phone and internet service), repairs and maintenance and travel.

In FY 2005 travel costs were 4.4% of the budget or \$1,239 due to several special events involving travel costs for speakers. Fiscal years 2006 and 2007 are more representative of travel costs for speaker events at 2.1% (\$430) and 1.9% (\$450) respectively.

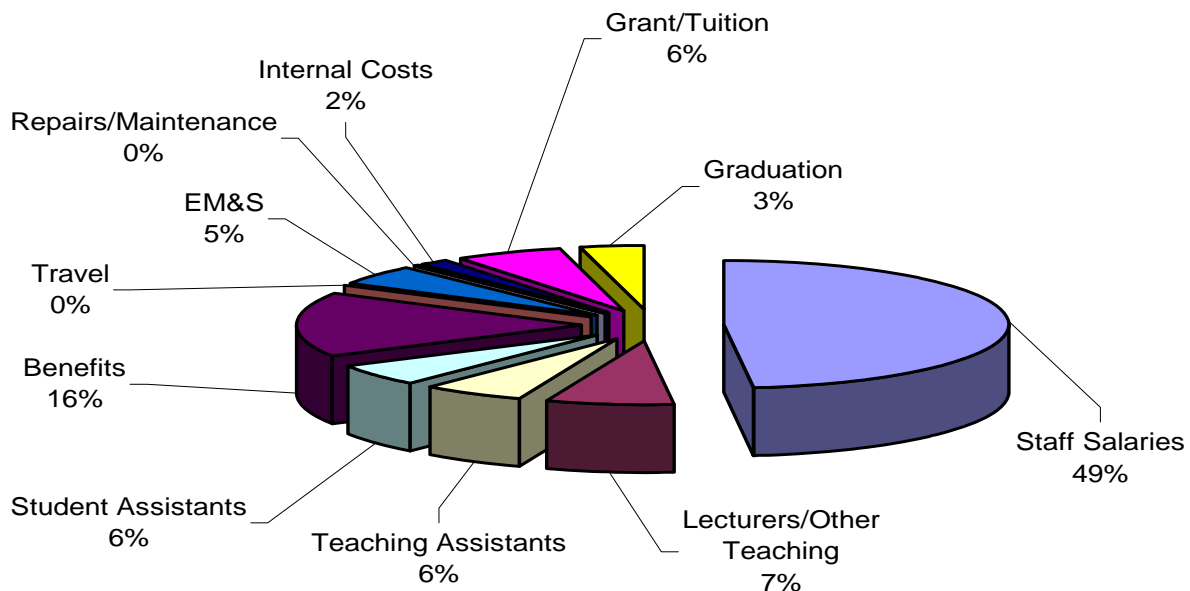
Expenditures	FY 2005 Actual	% Total of 2005	FY 2006 Actual	% Total of 2006	FY 2007 Estimated	% Total of 2007
Travel	1,239	4.4%	430	2.1%	450	1.9%
EM&S	18,621	66.3%	8,075	39.8%	11,000	46.4%
Repairs/Maintenance			650	3.2%	675	2.8%
Internal Costs	1,424	5.1%	3,427	16.9%	3,600	15.2%
Graduation	6,782	24.2%	7,700	38.0%	8,000	33.7%

Fiscal year 2005 also saw a dramatic upswing in EM&S expenditures at \$18,621 as compared to \$8,075 in 2006 and \$11,000 in 2007. This upswing was due to the purchase of computers, software, and an office printer; the increase in 2007 is due to colloquia expenses. In 2006 and 2007 repairs and maintenance costs reflect service contracts for the new equipment purchased in 2005. The increase in internal costs in FY 2006-07 is also a result of the new technology and accompanying connectivity costs.

The cost of graduation is directly linked to the number of students graduating as well as the relative increases in cost of food and event supplies. The program graduates approximately 50 students a year and the event is typically attended by at least 2 relatives and as many as 6.

Despite the increase in TA costs, the majority of the increases in the expenditure budget are incremental. The relative percentages of expenditure line items in the budget are relatively similar to FY 2006 and FY 2007 as illustrated by the percentage breakdown in the chart below.

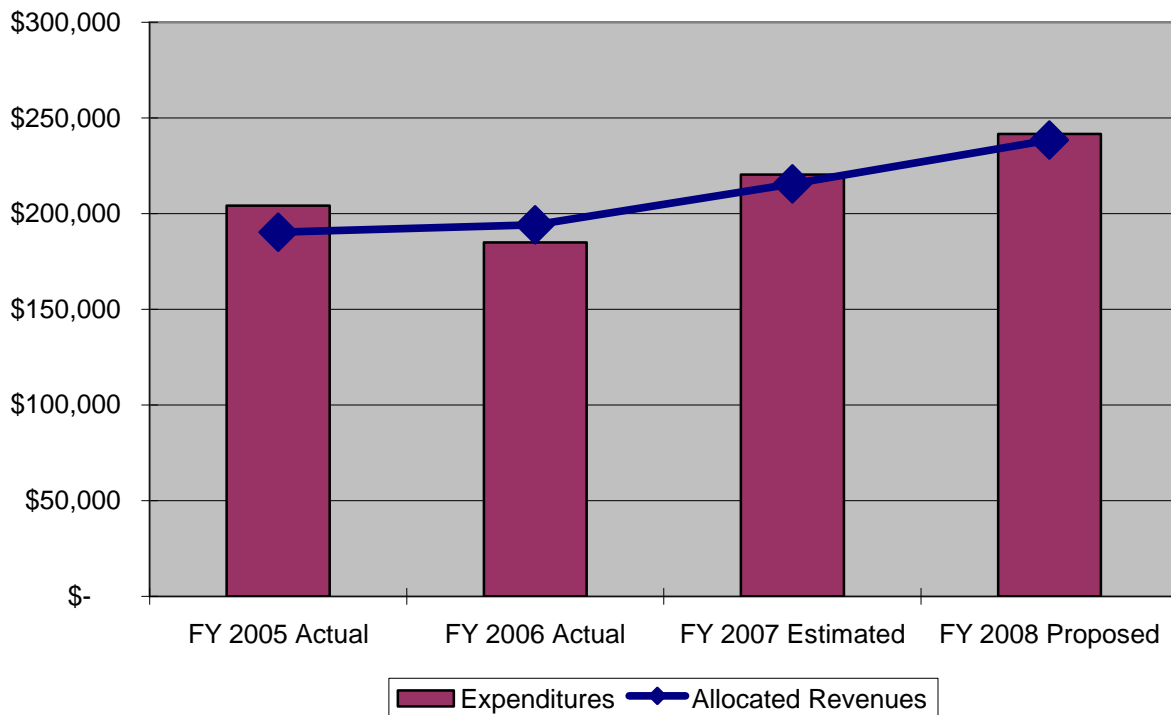
### Share Analysis Expenditures FY 2008 Proposed



### Concluding Remarks:

The Symbolic Systems Program has been highly successful in spending within its allocated revenue to bring value to its students. We use minimal budget savings or gifts to cover operating expenses and instead use it solely for undergraduate program development. The chart below compares our expenditures with our allocated revenue and illustrates the balance between the two. If we are granted our requested operating budget increases, we can continue to build out program for the benefit of our students and maintain our trend of spending within our means.

### Expenses Vs Revenues



**Appendix of Financial Spreadsheets:**

Appendix A.....Budget Data  
Appendix B.....Share Analysis  
Appendix C.....Trend Analysis  
Appendix D.....Variance Analysis  
& Discussion

## Appendix A: Budget Data

### Symbolic Systems Program Budget Stanford University

	<b>FY 2005 Actual</b>	<b>FY 2006 Budgeted</b>	<b>FY 2006 Actual</b>	<b>FY 2007 Estimated</b>	<b>FY 2008 Proposed</b>
<b>Allocated Revenues</b>					
Replacement Teaching	\$30,000	\$30,000	\$30,000	\$30,000	\$35,000
Lecturer Pool	38,061	39,393	39,393	41,560	50,893
Staff Salaries	57,954	59,246	59,246	73,355	75,922
Staff Benefits	40,568	41,100	41,100	45,576	50,891
Non-Salary Expenses	23,673	24,343	24,343	25,073	25,825
<b>Subtotal for Revenues</b>	<b>\$ 190,256</b>	<b>\$ 194,082</b>	<b>\$ 194,082</b>	<b>\$ 215,564</b>	<b>\$ 238,532</b>
<b>Budget Savings/Gifts</b>	<b>\$ 107,168</b>	<b>\$ 101,579</b>	<b>\$ 101,579</b>	<b>\$ 107,486</b>	<b>\$ 103,546</b>
<b>Expenditures</b>					
Staff Salaries	\$103,582	\$97,425	\$97,825	\$112,870	\$117,102
Lecturers/Other Teaching	9,200	15,000	6,000	17,000	17,000
Teaching Assistants	9,035	6,958	6,685	10,451	14,510
Student Assistants	13,873	11,639	12,200	12,000	13,500
Benefits	33,872	34,747	35,241	37,191	39,050
Travel	1,239	9,600	430	450	500
EM&S	18,621	18,000	8,075	11,000	12,000
Repairs/Maintenance			650	675	700
Internal Costs	1,424	4,200	3,427	3,600	3,800
Grant/Fellowship/Tuition	6,480		6,790	7,180	15,140
Graduation	6,782	7,750	7,700	8,000	8,400
<b>Subtotal for Expenses</b>	<b>\$ 204,108</b>	<b>\$ 205,319</b>	<b>\$ 185,023</b>	<b>\$ 220,417</b>	<b>\$ 241,702</b>
<b>Net Revenue Over Expenses</b>	<b>(\$13,852)</b>	<b>(\$11,237)</b>	<b>\$9,059</b>	<b>(\$4,853)</b>	<b>(\$3,170)</b>
<b>Budget Savings Balance</b>	<b>\$93,316</b>	<b>\$90,342</b>	<b>\$ 101,579</b>	<b>\$ 102,634</b>	<b>\$ 100,376</b>

## Appendix B: Share Analysis

### Share Analysis of Symbolic Systems Program Budget Stanford University

	FY 2005 Actual	% Total of 2005	FY 2006 Actual	% Total of 2006	Estimated of 2007	% Total of 2007	FY 2008 Proposed	% Total of 2008
<b>Allocated Revenue</b>								
Replacement Teaching	\$30,000	15.8%	\$30,000	15.5%	\$30,000	13.9%	\$35,000	14.7%
Lecturer Pool	38,061	20.0%	39,393	20.3%	41,560	19.3%	50,893	21.3%
Staff Salaries	57,954	30.5%	59,246	30.5%	73,355	34.0%	75,922	31.8%
Staff Benefits	40,568	21.3%	41,100	21.2%	45,576	21.1%	50,891	21.3%
Non-Salary Expenses	23,673	12.4%	24,343	12.5%	25,073	11.6%	25,825	10.8%
<b>Subtotal for Revenues</b>	<b>\$ 190,256</b>	<b>100.0%</b>	<b>\$ 194,082</b>	<b>100.0%</b>	<b>\$ 215,564</b>	<b>100.0%</b>	<b>\$ 238,531</b>	<b>100.0%</b>
<b>Budget Savings/Gifts</b>	<b>\$ 107,168</b>		<b>\$ 101,579</b>		<b>\$ 107,486</b>		<b>\$ 103,546</b>	
<b>Expenditures</b>								
Staff Salaries	\$103,582	50.7%	\$97,825	52.9%	\$112,870	51.2%	\$117,102	48.4%
Lecturers/Other Teaching	9,200	4.5%	6,000	3.2%	17,000	7.7%	17,000	7.0%
Teaching Assistants	9,035	4.4%	6,685	3.6%	10,451	4.7%	14,510	6.0%
Student Assistants	13,873	6.8%	12,200	6.6%	12,000	5.4%	13,500	5.6%
Benefits	33,872	16.6%	35,241	19.0%	37,191	16.9%	39,050	16.2%
Travel	1,239	0.6%	430	0.2%	450	0.2%	500	0.2%
EM&S	18,621	9.1%	8,075	4.4%	11,000	5.0%	12,000	5.0%
Repairs/Maintenance			650	0.4%	675	0.3%	700	0.3%
Internal Costs	1,424	0.7%	3,427	1.9%	3,600	1.6%	3,800	1.6%
Grant/Fellowship/Tuition	6,480	3.2%	6,790	3.7%	7,180	3.3%	15,140	6.3%
Graduation	6,782	3.3%	7,700	4.2%	8,000	3.6%	8,400	3.5%
<b>Subtotal for Expenses</b>	<b>\$ 204,108</b>	<b>100.0%</b>	<b>\$ 185,023</b>	<b>100.0%</b>	<b>\$ 220,417</b>	<b>100.0%</b>	<b>\$ 241,702</b>	<b>100.0%</b>
<b>Net Revenue Over Expenses</b>	<b>(\$13,852)</b>		<b>\$9,059</b>		<b>(\$4,853)</b>		<b>(\$3,171)</b>	
<b>Staffing Salaries</b>	<b>\$135,690</b>		<b>\$122,710</b>		<b>\$152,321</b>		<b>\$162,112</b>	

## Appendix C: Trend Analysis

### Trend Analysis 2005 to 2008 Symbolic Systems Program Budget Stanford University

	FY 2005 Actual	FY 2006 Actual	FY 2007 Estimated	FY 2008 Proposed	2006-2005 \$ Difference	2006-2005 % Difference	2007-2006 \$ Difference	2007-2006 % Difference	2008-2007 \$ Difference	2008-2007 % Difference
<b>Allocated Revenues</b>										
Replacement Teaching	\$30,000	\$30,000	\$30,000	\$35,000	\$0	0%	\$0	0%	\$5,000	16.7%
Lecturers Pool	38,061	39,393	41,560	50,893	1,332.0	3.5%	2,167	5.5%	9,333	22.5%
Staff Salaries	57,954	59,246	73,355	75,922	1,292.0	2.2%	14,109	23.8%	2,567	3.5%
Staff Benefits	40,568	41,100	45,576	50,891	532.0	1.3%	4,476	10.9%	5,315	11.7%
Non-Salary Expenses	23,673	24,343	25,073	25,825	670.0	2.8%	730	3.0%	752	3.0%
<b>Subtotal for Revenues</b>	<b>\$ 190,256</b>	<b>\$ 194,082</b>	<b>\$ 215,564</b>	<b>\$ 238,532</b>	<b>\$ 3,826.0</b>	<b>2.0%</b>	<b>\$ 21,482</b>	<b>11.1%</b>	<b>\$ 22,968</b>	<b>10.7%</b>
<b>Budget Savings/Gifts</b>										
	\$107,168	\$101,579	\$107,486	\$103,546	(\$5,569.0)	-5.2%	\$5,907	5.8%	(\$3,940)	-3.7%
<b>Expenditures</b>										
Staff Salaries	\$103,582	\$97,825	\$112,870	\$117,102	(\$5,757.0)	-5.6%	\$15,045	15.4%	\$4,232	3.7%
Lecturers/Other Teaching	9,200	6,000	17,000	17,000	(\$3,200.0)	-34.8%	11,000	183.3%	0	0%
Teaching Assistants	9,035	6,685	10,451	14,510	(\$2,350.0)	-26.0%	3,766	56.3%	4,060	38.8%
Student Assistants	13,873	12,200	12,000	13,500	(\$1,673.0)	-12.1%	(200)	-1.6%	1,500	12.5%
Benefits	33,872	35,241	37,191	39,050	\$1,369.0	4.0%	1,950	5.5%	1,859	5.0%
Travel	1,239	430	450	500	(\$809.0)	-65.3%	20	4.7%	50	11.1%
EM&S	18,621	8,075	11,000	12,000	(\$10,546.0)	-56.6%	2,925	36.2%	1,000	9.1%
Repairs/Maintenance		650	675	700	\$650.0	650.0%	25	3.8%	25	3.7%
Internal Costs	1,424	3,427	3,600	3,800	\$2,003.0	140.7%	173	5.0%	200	5.6%
Grant/Fellowship/Tuition	6,480	6,790	7,180	15,140	\$310.0	4.8%	390	5.7%	7,960	110.9%
Graduation	6,782	7,700	8,000	8,400	\$918.0	13.5%	300	3.9%	400	5.0%
<b>Subtotal for Expenses</b>	<b>\$204,108</b>	<b>\$185,023</b>	<b>\$220,417</b>	<b>\$241,702</b>	<b>(\$19,085.0)</b>	<b>-9.4%</b>	<b>\$35,394</b>	<b>19.1%</b>	<b>\$21,266</b>	<b>9.7%</b>
<b>Net Revenue Over Expenses</b>	<b>(\$13,852)</b>	<b>\$9,059</b>	<b>(\$4,853)</b>	<b>(\$3,170)</b>	<b>\$22,911</b>	<b>-165.4%</b>	<b>(\$13,912)</b>	<b>-153.6%</b>	<b>\$1,682</b>	<b>-34.7%</b>

## Appendix D: Variance Analysis for 2006

### Variance Analysis 2006 of the Symbolic Systems Program Budget

	FY 2006 Budgeted	FY 2006 Actual	\$ Difference Budget/Actual 2006	% Difference Budget/Actual 2006
<b>Allocated Revenues</b>				
Replacement Teaching	\$30,000	\$30,000	\$0	0%
Lecturers Pool	39,393	39,393	0	0
Staff Salaries	59,246	59,246	0	0
Staff Benefits	41,100	41,100	0	0
Non-Salary Expenses	24,343	24,343	0	0
<b>Subtotal for Revenues</b>	<b>\$ 194,082</b>	<b>\$ 194,082</b>	<b>\$0</b>	<b>0</b>
<b>Budget Savings/Gifts</b>	<b>\$ 101,579</b>	<b>\$ 101,579</b>	<b>\$0</b>	<b>0</b>
<b>Expenditures</b>				
Staff Salaries	\$97,425	\$97,825	(\$400.0)	-0.4%
Lecturers/Other Teaching	15,000	6,000	9,000.0	60.0
Teaching Assistants	6,958	6,685	273.0	3.9
Student Assistants	11,639	12,200	(561.0)	(4.8)
Benefits	34,747	35,241	(494.0)	(1.4)
Travel	9,600	430	9,170.0	95.5
EM&S	18,000	8,075	9,925.0	55.1
Repairs/Maintenance		650	(650.0)	(650.0)
Internal Costs	4,200	3,427	773.0	18.4
Grant/Fellowship/Tuition		6,790	(6,790.0)	(6790.0)
Graduation	7,750	7,700	50.0	0.6
<b>Subtotal for Expenses</b>	<b>\$ 205,319</b>	<b>\$ 185,023</b>	<b>\$ 20,296.0</b>	<b>9.9%</b>
<b>Net Revenue Over Expenses</b>	<b>(\$11,237)</b>	<b>\$9,059</b>	<b>\$20,296</b>	<b>180.6%</b>

FY 2006 is one of the few years SSP came in under budget and experienced a large variance across many expense lines. **Under Budget:** The program over budgeted the costs of travel expenses for a conference by 95.5% or \$9,170. However, most of the program speakers were local and drove to the event. SSP also budgeted for two lecturers, but one changed his mind accounting for the unspent \$9,000 on the Lecturer/Other Teaching expense line. In addition our EM&S expenditures fell below expected costs as the Associate Director decided against upgrading the program's website, saving \$9,925. Another unexpected cost savings came from the IT services department as they decided to cut their rates to be more competitive without outside bidders, saving SSP \$773. There were other minor over budgeted expenditure lines, but the difference was less than 4%.

**Over budget:** These freed up dollars from over budgeted line items was re-directed to cover unexpected expenses. The program expected to cover the salary of one TA, but not tuition (as per the student's understanding of his funding). However, the TA's home department insisted Symbolic Systems cover the tuition resulting in a \$6,790 charge. In addition, SSP discovered the new machines purchased in FY 2005 required maintenance contracts which cost \$650. The remaining under budgeted items represented a less than 5% difference.

The chart below illustrated the variance between budgeted and actual expenditures in FY 2006.

**Variance in 2006 Budget and Actual**

