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Genre Analysis of Obituaries: the Portrayal of Biologists and Linguists

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Abstract

The aim of the paper is to ascertain if the principle of "de mortuis nil nisi bene" is still being followed in modern obituaries for female and male biologists and linguists. This research was conducted in accordance with Swales' (1990) and Bhatia's (1993) genre analysis theory. A comparative analysis was also performed to examine the differences and similarities in the structure and linguistic expression of scientists' and linguists' obituaries. The results indicate that in the 21st century, the convention of speaking about the deceased only positively is still prevalent, as every obituary focused only on the deceased's achievements. The analysis showed that the structure of obituaries for biologists and linguists is identical. The main difference occurred between female and male obituaries when female obituaries included a significant number of gender mentioning features.

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1. Introduction

Death is one is the most difficult yet inevitable events in life. Death has been a vast subject in religious and philosophical discourse, and as a result, each civilization, culture, religion or community has created its own death-related rituals and customs. In the Western world, it is common to commemorate the people who have passed away with graves and monuments. Now, modern technologies offer new and creative ways, such as turning ash into diamonds, jewellery or even a tree to immortalize the people who have passed away. Since many people nowadays die away from home, in hospital wards or in long-term care facilities and for many, learning about death means relying on media: press, TV, radio, and the internet (Ahmad & O'Mahony 2005). Obituaries are one of the ways people learn about someone's death.

The word 'obituary' is derived from the Latin word *obitus*, which means 'departure', and it is a frequent euphemism for death (Crespo-Fernandez 2006:104). According to the Oxford English Dictionary, the word 'obituary' appeared in the 18th century, and at first, it meant "a register in which deaths, or obit days, are recorded" (2021). Later, the meaning changed to "a record or announcement of a death, especially in a newspaper or similar publication". They often serve as a death announcement and provide information about the person's life and achievements. In earlier centuries, obituaries used to be distributed through newspapers, and in the 21st century, obituaries appear not only in digital news outlets but they also have their own dedicated websites (e.g. Legacy.com is probably the most prominent website for online obituaries). Obituaries have been examined in the context of gerontology (Bytheway and Johnson 1996; Albert et al 2016), history (Phillips 2007), psychology (Fowler and Bielsa 2007; Boccio and Macari 2017), queer theory (Starck 2009), journalism (Moremen 2004; de Montluzin 2019), and social sciences (Marks and Piggee 1998). While there has been a lot of research done on obituaries from different perspectives, they have also not escaped linguistic analysis - conceptual metaphor theory research (Crespo-Fernández 2006; Heynderickx et al 2017). Recent linguistic studies on obituaries show that not all obituaries include the same content. Obituaries written for men tend to emphasize professional accomplishments, whereas obituaries for women tend to focus on family and obituaries for men are lengthier than those for women (Eid 2002; Moses and Marelli 2004; Chaudhry et al 2014; Colak 2017).

Swales (2004:86) has mentioned that “obituaries in *the New York Times* and other quality newspapers <…> are fairly extensive and evaluative narratives of the lives of the recently

deceased". However, he has added that in his local newspaper "those lives become overwhelmed by lists of those whom the deceased have been survived by and by lists of those who have preceded the deceased in death" (*ibid.*). Crespo-Fernández has identified two types of obituaries. The first kind, the informative type, is more objective, the obituary has a few details concerning the death, the deceased, or the location and time of the funeral (Crespo-Fernández 2006:104-105). The second kind, the opinionative type, is usually more subjective and personal, often used for religious or social purpose when the writer's sentiments and emotions are prominent (Crespo-Fernández 2006:104-105). This study is an attempt to look at obituaries as a genre.

For a long period of time, genres were associated mainly with literature, and it was also thought that genres were definitive and permanent (Fowler 1982:38). Contemporary genre analysis theory changed how genres are approached in the academic setting. Swales' definition of genre is one of the most common ways genres are understood today (1990). Swales indicated that genre is a term that is used to refer to a distinctive category of written or spoken discourse, with or without literary inspirations (1990:33). More importantly, Swales argued that each text consists of units called 'moves' and that each move has a specific communicative purpose it is trying to achieve (1990:228). The scholar proceeded by defining the moves, saying that "move in genre analysis is a discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (Swales 2004:228). Furthermore, a move can consist of from one clause to a couple of paragraphs as long as they serve a particular communicative purpose and achieve that particular purpose, a move can have several steps that aid in creating that communicative purpose (Swales 2004:228-229). Swales is possibly best known for his genre analysis and design of the Moves and Step analysis of research article introductions.

While Swales (1990) provided many fundamental notions in contemporary genre analysis, many of his notions and ideas about genre analysis are challenged and improved by Bhatia (1993). According to Bhatia, Swales' definition of genre lacks a psychological factor that has an essential role in the concept of genre as a dynamic social process (1993:53). Bhatia highlights this by indicating that for him, genre is "an instance of a successful achievement of a specific communicative purpose using conventionalized knowledge of linguistic and discoursal resources" (1993:53). Additionally, Bhatia provided a methodology for genre analysis, which could be applied for examining different text genres. Bhatia suggests seven steps for genre analysis:

1. “Placing the given genre-text in a situational context” – the first step in genre analysis starts with the researcher's reflection on their past encounter and connection with the genre at the matter.
2. “Surveying the existing literature” – the following step in genre analysis is a study on literature that could be relevant to the topic, texts such as linguistic analyses of the genre, practitioner advice, guide books, discussions of the social structure that is relevant to that speech community.
3. “Refining the situational/contextual analysis” – the third step in genre analysis is identifying who is the author and the audience of genre, what kind of a relationship is between them and the intention of the interaction.
4. “Selecting and collecting the corpus” – the next step in genre analysis relies heavily on the success of previous steps. In order to collect texts for corpus, researchers must have collected enough information about the genre that they could define and distinguish texts that belong to a specific genre. The size of the corpus depends on the aim and scope of the analysis.
5. “Studying the institutional context” – a step during which research needs to understand how the genre is influenced at an institutional level and recognize the linguistic, social, cultural, academic, and professional standards, conventions, restrictions, and/or constraints that apply to the genre.
6. “Levels of linguistic analysis” – During this stage, the researcher needs to decide at which level(s) the most significant language features occur and carry out the appropriate analysis: Level 1 - focuses on quantitative analysis of syntax and lexical features; Level 2 – centres on the tactical component of genre by examining how specific linguistic features are used; Level 3 – concentrates at the cognitive features of language organization and aims to identify the Moves and Steps.
7. “Specialist information in genre analysis” – the last step in genre analysis is consulting a practising member of the disciplinary community.

(Bhatia 1993:63-80)

According to Nielsen’s review of Bhatia's book *Analyzing genre: Language use in professional settings*, Bhatia’s system for genre analysis is operational, practical, plausible and provides the researcher with a tool that allows them to define and investigate any genre (1997:213). However, Nielsen also argued that Bhatia’s system could be refined, as he notes that some steps are overlapping, and indeed only the fourth and sixth steps consist of internal genre analysis (1997).

Swales (1990) emphasised the importance of discourse communities. Discourse communities are groups of people that have the same social interests, aims, and values and have historically chosen preferred ways of communication that share the same values among their discourse community, whether implicitly or explicitly (Swales 1990:23-28). The focus of this study is on the academic discourse community. However, members of the academy act as members of distinct groups which see the world through the lens of their own disciplines, for example, biology or linguistics. According to Hyland (2000:6), 'reality is seen as constructed through processes that are essentially social, involving authority, credibility and disciplinary appeals'. Thus, the study focuses on two disciplinary discourse communities: biologists and linguists. Works by Swales (1990) and Bhatia (1993) about genres are principal to this research paper as they provide the most comprehensive definitions of genre and a systematic approach to genre analysis.

Previous research on obituaries focused on certain news outlets. Rather than following in the same tradition, this study will concentrate on those for whom obituaries are published. The present research will analyse the obituaries for male and female scholars, which were written for the general university community, which includes the academic and administrative staff and students of a university. Obituaries written for academics are a mixture of informative and opinionative obituaries since they function to announce the death and include personal stories and opinions about the person who died.

The purpose of this research paper is to understand, through genre analysis, how obituaries are written for academics. Recognizing what moves and steps are present in online obituaries would expose necessary, critical, and expended parts of the obituaries. Therefore, this research aims to answer the following research questions: 1) whether obituaries still follow the "De mortuis nil nisi bene" principle; 2) whether obituaries written for biologists and linguists follow the same moves; 3) what positive/negative adjectives and nouns are used in the obituaries for biologists and linguists; 4) what positive/negative adjectives and nouns prevail in male and female obituaries.

2. Data and methods

The main goal was to collect obituaries written for biologists and linguists. Another objective was to compile an equal number of female and male obituaries. In order to have the most relevant and recent data, the obituaries were collected from the period 2012-2022, i.e. the last decade. The data collection process resulted in 32 obituaries since there was a lack of obituaries written for female scholars, and the goal was to have an equal number of texts for all the groups. The corpus consisted

of 28,221 words, and the full table of analysed obituaries is provided in the Appendix. Biologists' obituaries consisted of 14,986 words, whereas linguists' obituaries only had 13,235 words. However, female obituaries had 14,155 words and male obituaries had 14,066 words. The collected obituaries varied in size, the longest text contained 1,410 words and the shortest only 440 words.

The corpus was compiled of obituaries written and published for the general university audience. Obituaries were collected from university websites, official university newspapers, or other university websites' news sections from the period of 2012-2022, i.e. the last decade. For practical purposes, a list of universities was taken from the US News website (https://www.usnews.com/education/best-global-universities/rankings). Each university website was thoroughly investigated in order to find out if they publish obituaries since not all universities publish them. Words such as *biology, biologists* and *language* and *linguists* were looked up using the search feature on a website page to quickly identify the required obituaries. For this research, branches of biology and linguistics were accounted for just as biology or linguistics. For example, a psycholinguist was considered as a linguist. Gender was decided on the basis of the name of the deceased, pictures, if there were any and the pronouns used in the text. An unexpected difficulty encountered in the data collection process was the lack of obituaries written for female scholars. If the university had a section where they publish obituaries, the obituaries written for linguists and biologists in the last decade were collected. For the present research, only the running texts were collected and analysed.

After the data was collected, each text was carefully investigated and analysed in terms of its rhetorical functions and lexical-grammatical features. Move analysis used the top-down approach. Texts were manually coded for their Moves and Steps. Moves were identified based on their communicative function, and as the roles of each move and step category became more specific during this process, the move and step categories were modified, altered, merged, or omitted.

AntCon software was used for lexical analysis. Lists of the words arranged by frequency of occurrence were exported to an Excel sheet, and each word was tagged according to the part of speech. A significant occurrence was counted when a word appeared four or more times. This research only focused on adjectives and nouns, therefore, only these two categories were organised. Additionally, since this research focused on American universities, Merriam-Webster online dictionary was consulted for ambiguous cases.

3. Results

3.1. Move Analysis - Biologists' Obituaries

The analysis started with 16 obituaries written for biologists. All analysed obituaries contained Move 1 and Move 2, 15 obituaries had Move 3 and 14 had Move 4, Move 5 was found in 10 obituaries. The distribution of Moves and Steps is illustrated in Table 1.

Table 1. Distribution of Moves and Steps throughout biologists' obituaries

	OB1	OB2	OB3	OB4	OB5	OB6	OB7	OB8	OB9	OB10	OB11	OB12	OB13	OB14	OB15	OB16	Total
Move1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	**16**
Step 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 4	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	+	8
Step 5	+	+	+	-	+	+	-	+	-	-	+	+	-	+	-	-	9
Step 6	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	15
Move2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	**16**
Step 7	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	15
Step 8	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	15
Step 9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 10	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	15
Step 11	-	-	+	-	-	-	+	-	-	+	+	-	-	-	-	-	4
Move3	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	**15**
Step 12	+	+	+	-	-	-	+	-	+	-	+	+	-	+	+	+	10
Step 13	+	-	+	-	-	-	-	-	+	-	-	-	-	+	-	-	4
Step 14	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	13
Step 15	+	-	+	-	-	+	+	+	-	+	-	+	-	-	-	+	8
Move4	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	**14**
Move5	-	-	+	+	-	+	+	+	-	-	+	+	+	+	+	-	**10**
Step 16	-	-	-	+	-	+	+	+	-	-	-	-	+	+	+	-	7
Step 17	-	-	+	-	-	-	-	+	-	-	+	+	+	-	-	-	5
Total	17	15	19	16	14	16	16	16	15	15	20	19	15	19	17	15	

Move 1: Identifying the deceased

The primary purpose of Move 1 is to identify the deceased. This Move is always at the start of the obituary and includes Step 1 - the full name of the deceased, Step 2- their profession or what they are most known for, Step 3 - the date of the death, Step 4 - the place where they died, Step 5 - the reason of death and Step 6 - the age of the deceased.

Step 1

Step 1 was present in all 16 biologists' obituaries. This step contains the full name and surname of the deceased (see example (1)). Two notable examples before the name and surname stated the deceased's academic title (see example (2)):

(1) ***Nancy Wade**, who became Old Dominion's first female professor of biology during a four-decade career at the University, died Jan. 20.*

(2) ***Dr. Kristy Richards** '90, a groundbreaking cancer researcher and associate professor of biomedical sciences, died on March 30 in New York City.*

In addition to the name and surname, three obituaries also provided information about the deceased's education. One obituary, after mentioning the name and surname, indicated academic degrees and the years they earned them (see example (3)):

(3) ***Eugene L. Madsen**, **M.S. '81, Ph.D. '85**, professor of microbiology, died Aug. 9 in Freeville, New York.*

Only proper nouns indicating the deceased's name and common nouns indicating their occupation were included in Step 1.

Step 2

Step 2 in obituaries written for biologists aimed to describe the deceased's profession or highlight their achievements in their scientific field. Step 2 was present in all 16 obituaries written for biologists. Example (4) illustrates Step 2:

(4) *Winslow Brigg, **a professor emeritus of biological sciences who explained how seedlings grow toward light**, died Feb. 11 at Stanford University Medical Center.*

Since Step 2 focused on the profession of the deceased, it is not surprising that the most common noun was *professor,* with 12 occurrences in 16 obituaries. The noun *biology* appeared eight times,

and *cancer, emeritus* and *institute* appeared only four times. However, Step 2 did not have any adjectives which had a significant occurrence.

Step 3

Step 3 aimed to inform about the time of death, and all 16 obituaries mentioned it. The death date was provided in most obituaries as an exact date (the month and day). Additionally, seven obituaries also specified the day of the week (see example (5)).

(5) *Jean Langenheim, an eminent plant ecologist and leading authority on amber and plant resins,* ***died on Sunday, March 28****, in Santa Cruz.*

The month and the day were not mentioned in four obituaries. Instead, temporal deixis was employed in those four obituaries. In example (6), *yesterday* indicates the time of death in relation to when the text was released. The author assumes that the reader would be aware of the context.

(6) ***MIT Professor Susan Lee Lindquist****, a member and former director of the Whitehead Institute, and one of the nation's most lauded scientists,* ***yesterday*** *succumbed to cancer at age 67.*

In 15 out of 16 of the obituaries written for biologists, death was announced with the verb *died* (see example (5)). The only exception was a more euphemistic verb phrase *succumbed to* (see example (6)).

Step 4

Step 4 informed where the deceased died. Location is mentioned in nine obituaries written for biologists. Out of nine obituaries, eight mentioned only the city and its state. Three obituaries that mention the place of death were more specific, revealing that the person died either in a hospital or in their home (see example (7)):

(7) *John Pearse, professor emeritus of ecology and evolutionary biology at UC Santa Cruz, died on Friday, July 31,* ***at his home in Pacific Grove, California.***

Step 4 consisted of the preposition '*in'* and proper nouns which signify the location. Three obituaries deviated from this formula by starting with the preposition '*at*', followed by a common noun *home* and proper nouns which signify the location or the name of the hospital.

Step 5

Step 5 provides the reason for the death. However, only eight obituaries written for biologists included it. Interestingly, five obituaries mentioned that cancer was the cause of death. Two obituaries even specified what kind of cancer (see example (8)):

(8) Angelika Amon, professor of biology and a member of the Koch Institute for Integrative Cancer Research, died on Oct. 29 at age 53, ***following a two-and-a-half-year battle with ovarian cancer.***

Two obituaries mentioned a specific illness as in example (12) below:

(9) Ellen Fanning, Stevenson Professor of Biological Sciences and a professor of the Howard Hughes Medical Institute, died on Sunday morning, Sept.1, ***after a lengthy battle with amyotrophic lateral sclerosis (ALS)****.*

The two most common nouns were *cancer* (5 occurrences) and *battle* (3 occurrences). Step 5 did not have many adjectives which had a significant occurrence.

Step 6

In obituaries written for biologists, the age of the deceased was mentioned in 15 out of 16 obituaries. Ten obituaries presented the age by following the pattern of the pronoun of the subject + was + digits, which signifies his/her age. For example:

(10) She was 95.

In five obituaries, the information about the age was also presented employing the following expressions: (subject) + 'age…,' or 'at (the) age (of)…' For example:

(11) She was at age 80.

Move 2: Career and accomplishments

The next Move in obituaries written for biologists is concerned with their academic career. Move 2 consists of: Step 7 – summary of their academic career or their achievements; Step 8 – description of their academic research and career; Step 9 – quotes from colleagues; Step - 10 awards, grants, and positions or memberships in academic organizations; Step 11 – retirement. Move 2 in biologists' obituaries is the most extensive section compared to other Moves. Move 2 takes up 78% (11,452 words) of obituaries written for biologists.

Step 7

Move 2 started off with Step 7. The aim of this Step was to summarize the deceased's academic career and achievements. This Step was present in 15 obituaries written for biologists. Step 7 included information about how long the deceased worked at their academic institution, what they were best known for, what subjects they were interested in, and their accomplishments (see examples (12) and (13)):

*(12) Briggs established himself **as a global leader** in plant genetics and physiology, **publishing landmark research** on the molecular mechanisms that plants and other organisms use to sense and respond to light.*

*(13) Madsen was **a leading researcher** of microbial processes in natural environments whose research and teaching career **at Cornell spanned nearly four decades.***

In Step 7, the most frequent adjective was *scientific*, which appeared only four times. The most frequent nouns, on the other hand, included *cell* (12 occurrences), *biology* (10 occurrences), *research* (9 occurrences), *career* (6 occurrences), *professor* (6 occurrences), *cancer* (5 occurrences), *virus* (5 occurrences) and *DNA* (4 occurrences).

Step 8

Step 8 included quotes from the deceased's colleagues and family members. These quotations reflect the deceased's unique characteristics and attributes, as well as information about how others remember them after their death. The quotes describing the deceased's prominence or relevance in their scientific area or at their individual academic institution appeared in all 15 obituaries (see example (14)):

*(14) "She was a **keen observer** and a **deeply curious person**," said Julian Avery, assistant research professor at Penn State.*

Interestingly, five obituaries in Step 7 included quotes about the deceased's gender (see examples (15) and (16)):

*(15) "Jean was a remarkable person who forged new pathways in her personal scientific research, **overcame the many barriers to women scientists** as she built her scientific program, contributed to the establishment and furthering of entire scientific disciplines, and mentored generations of students," said John Thompson, professor of ecology and evolutionary biology at UCSC.*

*(16) "I have such fond memories of Nancy Wade," one of her former students said. "What I remember most is her being unapologetically herself **in a world where women were still breaking in**."*

Step 8 included positive adjectives such as *best, great* and *superb* (see Table 2). Nouns in Step 8 indicate that the main topic for this Step was *biology*. However, there are also many nouns that indicate that people and community are also discussed (see Table 2).

Table 2. The most frequent adjectives and nouns in Step 8.

Number of occurrences	Nouns	Number of occurrences	Adjectives
32	biology	9	scientific
28	professor	6	genetic; high; molecular
24	students	5	best; biological
18	science	4	creative; great; marine; superb
15	scientists; research		
10	colleague; department; faculty;		
7	cancer; people;		
6	community; mentor; university; world;		
5	ecology; generations; cell;		
4	lab; leader; plant; virus; women;		

Step 9

Step 9 was mentioned in all 16 obituaries for biologists. Step 9 was either ordered chronologically or from the most to the least relevant events. This is illustrated in examples (17) and (18)):

(17) ***After four years*** *as a researcher at the California Institute of Technology, he joined the biology faculty at UC Santa Cruz* ***in 1971****.*

(18) ***Another major focus*** *of research in the Amon lab has been on the relationship between how cells grow, divide, and age.* ***Among other insights****, this work has revealed that once cells reach a certain large size, they lose the ability to proliferate and are unable to reenter the cell cycle.*

Step 9 in six obituaries also offered extra information about the subject field in which the deceased worked (see example (19)):

(19) At Cal Tech, Kaiser became interested in a bacteriophage — a virus that infects bacteria — called lambda. ***This bacteriophage could develop, by some mysterious switching mechanism, in either of two directions after invading E. coli. Like all viruses, lambda could commandeer the cell's replicative machinery to generate multiple copies of itself.***

Step 9 included many adjectives and nouns that are listed in Table 3. Apart from a few positive adjectives such as *new* and *major*¸ most of the common adjectives were neutral and described academic research (see Table 3). Furthermore, the most common nouns in Step 9 belong to the same semantic field of biology (see Table 3).

Table 3. The most frequent adjectives and nouns in Step 9

Number of occurrences	Nouns	Number of occurrences	Adjectives
45	research	**14**	new
39	cells	**11**	biological
30	professor	**10**	many; molecular;
23	institute; university	**7**	medical; postdoctoral; chemical;
22	biology; plants	**6**	major
18	lab	**5**	cellular; national; natural; human; biomedical
17	graduate; students	**4**	complex; different; environmental; genetic; long;
16	science		
15	department; protein; sciences;		
14	faculty		
12	proteins		
11	woman; DNA; ecology; field		
10	fish; medicine; prize; program; gene; virus;		
8	associate; award; cancer; chair; member; position; mechanism		
7	campus; lambda; student; system		
6	ability; college; director; discovery; evolution; fellow; center;		

Step 10

The goal of Step 10 was to provide information about any grants, awards, positions and memberships the deceased had. Step 10 was present in all 16 obituaries written for biologists. This Step is illustrated in example (20):

*(20) In addition to **the Nobel**, Khorana won many other professional awards, including **the Louisa Gross Horwitz Prize** from Columbia University and **the Lasker Foundation Award for Basic Medical Research**, both in 1968;*

Step 10 contains nouns and adjectives that continue to reflect on the accomplishments of the deceased (see Table 4). The most frequent adjective that appeared in Step 10 was *national*. In contrast, the adjective *international* appeared five times, half as many as *international*. Nouns, on the other hand, reveal that biologists were most commonly part of societies and earned a lot of awards, prizes and medals (see Table 4).

Table 4. The most common adjectives and nouns in Step 10

Number of occurrences	Nouns	Number of occurrences	Adjectives
26	society	11	national
19	academy; sciences	5	international
19	award	4	highest; molecular; scientific;
13	research; science		
12	prize		
9	medal; member		
6	biology		
5	advancement; association; foundation; president;		
4	cancer; excellence; microbiology		

Step 11

The last Step in Move 2 was Step 11, which was concerned with retirement. However, Step 11 was present in only four biologists' obituaries. Even then, only three obituaries indicated in which year the deceased retired (see example (21)):

*(21) After his **retirement in 1994**, Pearse continued to teach and conduct research as a professor emeritus.*

In three obituaries, Step 11 was presented through the noun *retirement* and in one obituary by the verb *retired.*

Move 3: Biography

The purpose of Move 3 is to discuss any events in the biography of the deceased. This Move usually included Step 1 – when and where they were born; Step 2 – their parents and family; Step 3 – childhood and education and Step 4 - private life. Move 3 and its Steps usually appeared in two different locations: either after Move 2 or, if the obituary employed a chronological approach, it appeared in the middle of Move 2 and then again after Move 2 was finished.

Step 12

The Step appeared only in ten obituaries, the place was mentioned in 8 obituaries, and the time only six times. The location could either mean the place of birth or where they grew up, and it always mentioned the city and state/country, see examples (22) and (23):

*(22) Sinervo **was born in Port Arthur in Ontario, Canada**.*

*(23) **Born in 1967**, Amon **grew up in Vienna, Austria**, in a family of six.*

This Step was realised by including the verb *be* in the past tense followed by the past participle *born.*

Step 13

The following Step discusses the parents and the family. Step 13 was rarely used as it appeared only in four obituaries written for biologists. Only two obituaries mentioned the parents. One of these obituaries indicated the full name and surname of the parents. The other obituary which mentioned the parents did not state their names but provided additional information about the parents' religion and occupation (see examples (24) and (25)):

*(24) Langenheim was born in 1925 in Homer, Louisiana, **to Jeanette Smith** and **Vergil Wilson Harmon**.*

*(25) Harry Rubin was born in New York City on June 23, 1926, **the son of Russian Jewish immigrants**. **His father ran a grocery store in Manhattan**.*

Another two obituaries which mentioned Step 2 also indicated how many siblings the deceased had (see example (26)):

*(26) He was the youngest in a Hindu family **of one daughter** and **four sons**;*

Step 14

Step 14 was the most recurring out of all the Steps in Move 3. This Move aimed to discuss childhood and, more importantly, the deceased's education. Since these are obituaries written for academics, their education is highlighted even from an early age. Step 14 appeared in 13 obituaries. In obituaries where childhood was mentioned, it served a connecting function. The childhood of the deceased provided information on how they started to have an interest in the scientific field in which they later specialized. This is illustrated in example (27):

*(27) Playing outside all day with her three younger siblings, **she developed an early love of biology and animals**. She could not remember a time when she was not interested in biology, initially wanting to become a zoologist. But in high school, she saw an old black-and-white film from the 1950s about chromosome segregation, and found the moment that the sister chromatids split apart breathtaking.*

She knew then that she wanted to study the inner workings of the cell and decided to focus on genetics at the University of Vienna in Austria.

The education in Step 14 included a chronological description of when and where they finished educational institutions (see example (28)):

(28) Pearse attended high school in Tucson, Arizona, ***obtained his B.S. in zoology at the University of Chicago****, and* ***earned a Ph.D. in biology at Stanford University****.*

Step 15

The last Step in Move 3 was Step 15, which was dedicated to the private life of the deceased. There were seven obituaries that included this Step. In this Step, the readers were informed about the deceased's personality, hobbies, special interests, passion projects and volunteering (see example 29)):

(29) Langenheim also ***loved animals*** *and established a program at the Santa Cruz SPCA, known as "Blackie's Senior Friends," to match older animals with senior citizens.*

Move 4

The fourth Move in the obituary lists the surviving family members. This Move was present in 14 out of 16 obituaries written for biologists. The surviving members were listed in terms of their importance: spouse, children, grandchildren and great-grandchildren (see example (30)). If there were any surviving siblings, they were either listed before the spouse or after their great-grandchildren. In cases when the deceased was not married and did not have children (or it was unknown to the author), the surviving members were also listed in terms of their importance: parents, siblings and other relatives.

(30) ***Amon is survived by her husband Johannes Weis****, and her daughters Theresa and Clara Weis, and her three siblings and their families.*

Some obituaries provided additional information about the surviving members, such as how many years they were married, where they met when they were born or how old they are and where they live now (see example (31)):

(31) She is survived by her two sons, ***James, 24, of Boulder, Colorado****, and* ***Matthew, 22, of Berlin, Germany****, as well as her two grandchildren, Jonas Sean, 2, and Isla Viktoria, 3 months.*

All instances of Move 5 followed the same formula of Subject + "is survived by" + his/her + kinship term + relative's name.

The position of Move 4 is not fixed. For example, in one obituary, Move 4 appeared after Move 1. In the remaining 13 obituaries, Move 4 appeared in the last or second paragraph of the obituary (if Move 5 was present).

Move 5: Memorial services and donations

Move 5 is mainly concerned with future events. This Move included Step 16 - memorials that will take place, and Step 17 – organizations or institutions where donations can be made in the name of the deceased. This Move was the least used Move in obituaries written for biologists.

Step 16

Step 16 mentions dedicated memorials to the deceased. This Step was mentioned in seven obituaries. It is interesting to note that they mention only memorials and not funerals, affirming that the deceased was in some capacity a public figure. Some obituaries indicated that the event will happen sometime in the future (see examples (32) and (33)):

(32) ***A memorial service*** *open to friends, family and colleagues will be held Oct. 15 at 2 p.m. in Stocking Hall.*

(33) ***Memorial events*** *are being planned.*

Step 17

Step 17 appeared in five obituaries. Step 17 aimed to inform about organizations or institutions where donations could be made in the deceased's name. Some of these organizations were in some way connected to the deceased. This is illustrated in example (34)):

(34) ***Donations in his memory*** *may be made* ***to support students in the marine sciences*** *through UCSC's Institute of Marine Sciences and Long Marine Laboratory, the Western Society of Naturalists, California Academy of Sciences, or Society for Integrative and Comparative Biology.*

3.2. Move Analysis – Linguists' Obituaries

It is not surprising that obituaries written for linguists' consisted of the same rhetorical moves as biologists' obituaries. As can be seen in Table 5, obituaries for linguists had a similar distribution of Moves and Steps.

Table 5. Distribution of Moves and Steps throughout linguists' obituaries

	OL1	OL2	OL3	OL4	OL5	OL6	OL7	OL8	OL9	OL10	OL11	OL12	OL13	OL14	OL15	OL16	Total
Move1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 2	+	+	+	+	+	+	+	-	+	+	+	+	-	+	+	+	14
Step 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 4	+	-	+	+	+	+	-	-	+	-	+	+	+	+	+	-	11
Step 5	-	-	-	+	+	+	-	+	+	-	+	-	-	+	+	-	8
Step 6	+	+	+	+	+	+	+	-	+	+	+	+	-	+	+	+	14
Move2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 7	-	-	+	+	+	+	-	+	+	+	+	-	-	+	-	+	10
Step 8	+	+	+	+	+	+	+	-	+	+	+	+	-	+	+	+	14
Step 9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Step 10	+	+	+	+	+	+	+	-	-	+	+	+	-	+	+	+	13
Step 11	-	+	-	-	-	+		-	-	+	-	+	+	-	+	+	7
Move3	+	+	+	-	+	+	+	+	+	+	+	-	+	+	+	+	14
Step 12	+	+	-	-	+	+	+	-	+	+	+	-	+	+	+	-	11
Step 13	+	-	-	-	-	+	-	-	+	-	-	-	-	-	+	-	4
Step 14	+	+	+	-	+	+	+	-	+	+	+	-	-	+	-	-	10
Step 15	-	-	-	-	+	+	-	+	+	-	-	-	+	-	-	+	6
Move4	+	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	14
Move5	+	-	-	+	-	+	+	+	-	-	+	-	-	+	+	-	8
Step 16	+	-	-	-	-	+	+	+	-	-	+	-	-	+	+	-	7
Step 17	+	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	4
Total	18	14	13	15	17	21	15	12	17	15	19	12	10	19	18	14	

Move 1: Identifying the deceased

Move 1, just as in biologists' obituaries, sought to establish the deceased's identity and included the same Steps.

Step 1

All 16 linguists' obituaries contained the deceased's name, the middle name (if they have it) and surname. In one obituary where the deceased's nickname was mentioned, it followed her name and was put within quotation marks (see example (35)):

(35) ***Lenora "Nora" Timm****, a professor emerita of linguistics and former associate dean of Graduate Studies, died Nov. 22, 2016, at age 73 after a recurring battle with cancer.*

Two obituaries out of 10 had the names of the deceased preceded by their professional title (see example (36)):

(36) ***Prof. Michael Silverstein****, a leading University of Chicago anthropologist who made groundbreaking contributions to linguistic anthropology and helped define the field of sociolinguistics, died July 17 in Chicago following a battle with brain cancer.*

Step 1 included only proper nouns which indicate the deceased's name and common nouns which denoted their profession.

Step 2

Step 2 provided information about the deceased's profession or their scientific accomplishments. This Step occurred in 14 out of 16 linguists' obituaries (see example (37)):

(37) Christina Bratt Paulston, ***director of the English Language Institute (ELI) 1969-98 and chair of the Department of Linguistics 1975-89****, died Sept. 23, 2016.*

Step 2 contains nouns that express the deceased's profession and adjectives commenting on the deceased's influence. The most common nouns in Step 2 were: *professor* (10 occurrences), *language* (9 occurrences), *linguistics* (8 occurrences), *emeritus* and *studies* (4 occurrences). There were no adjectives which occurred at least four times.

Step 3

Step 3 indicated the time of death. This Step appeared in all 16 obituaries written for linguists. All but two of these obituaries indicated the day of the month and the month. Four obituaries even provided the year (see example (38)):

(38) John J. Ohala died in Berkeley, California ***on August 22, 2020****.*

Two obituaries did not specify the exact date and used temporal deixis. Temporal deixis is illustrated in example (39). In this obituary, Step 3 mentioned that the person died earlier that month in relation to when the obituary was published:

(39) Calvert Watkins, the Victor S. Thomas Professor of Linguistics and the Classics, emeritus, died ***earlier this month*** *at the age of 80.*

In all 16 linguists' obituaries, the time of death was preceded by the verb *die* in the past tense. There were no euphemisms in Step 3. The time of death was presented in the American date format - month, day, followed by the year. Only three obituaries included the preposition *on* before the date.

Step 4

The next Step provided information about the place where they died. The location was mentioned in nine obituaries. Eight obituaries mentioned the city. Additionally, two out of the eight obituaries which mentioned the city also specified the state. One obituary that also mentioned the city provided the location in the city, the city and the country (see example (40)):

(40) Emmon Bach, 85, professor emeritus of linguistics, died Nov. 28 ***at his home in Oxford, England****, of pneumonia-induced sudden respiratory failure*.

Only one obituary did not mention the city. However, it still commented that the deceased died at home (see example (41)):

(41) Delia Graff Fara, a noted professor of philosophy of language at Princeton University, died peacefully ***at home*** *July 18 after a chronic illness.*

As seen in the provided examples, the location of Step 4 is not fixed. In two obituaries Step 4 appears before Step 3. Step 4 consisted of the preposition 'in' and proper nouns which signify the location. Only two obituaries deviated from this formula by starting with the preposition 'at', followed by a common noun *home* and proper nouns which signify the location.

Step 5

Step 5 was concerned with the reason for death. This Step appeared in 8 linguists' obituaries. Four obituaries revealed that the cause of death was cancer (see example (42)):

(42) Yvan Sag, the Sadie Dernham Patek Professor in Humanities and a professor of linguistics and of symbolic systems at Stanford, died Sept. 10 ***after a long battle with cancer.***

Another two obituaries only mentioned that the deceased had a long illness, as shown in example (43):

(43) Geoffrey Nunberg, a linguist and scholar known for his engaging commentary on language for National Public Radio's "Fresh Air" talk show, died Aug. 11 in San Francisco ***after a long illness****.*

The other two instances included specific causes, as seen in example (44):

(44) Susan Ervin-Tripp, a psycholinguist acclaimed for her pioneering studies of bilingualism and language development in children, native Americans and immigrants, died earlier this month in Oakland ***from complications of an infected cut****.*

Since Step 5 did not appear in a lot of obituaries, the only meaningful, frequent word was the noun *cancer*, which appeared four times.

Step 6

Step 6 in Move 1 provided the age of the deceased. This Step was present in 14 out of 16 obituaries written for linguists. In nine obituaries, age was illustrated by following the formula: pronoun + was + digits, which signifies the deceased's age, as shown in example (45):

(45) She was 91.

The remaining three obituaries, which provided the age, employed a different formula: "At (the) age (of) + digits, which signifies the deceased's age". This can be seen in example (46):

(46) Calvert Watkins, the Victor S. Thomas Professor of Linguistics and the Classics, emeritus, died earlier this month ***at the age of 80****.*

Move 2: Career and accomplishments

Move 2 aimed to provide more information about the deceased academic career and included the same Steps as it did in biologists' obituaries. Like in obituaries for biologists, Move 2 is also the lengthiest part of linguists' obituaries as it takes up 71.59 % (9,547 words) throughout all 16 obituaries for linguists that were analysed.

Step 7

Step 7 started Move 2 with summaries of the deceased's academic career. However, this Step appeared only in 10 obituaries written for linguists. These summaries indicated how long the deceased worked at their respective academic institution, what they are best known for, in which subject they were interested, and the deceased's achievements. This is illustrated in example (47):

(47) She was ***an internationally known expert on Breton****, an endangered Celtic language of Brittany in northwest France.*

Step 7 contained nouns and adjectives that continue to elaborate on the deceased's profession. The most frequent adjective was *social*, with four occurrences. The most common nouns in Step 7 were *language* (6 occurrences), *linguistics* and *professor* (4 occurrences).

Step 8

Step 8 provided quotes from the deceased's colleagues and family members. Step 8 was present in 14 linguists' obituaries. These quotes highlight the special qualities and characteristics of the deceased and provide information about how other people remember the deceased after their death. All 14 obituaries had quotes about the deceased's status or importance in their scientific field or in their respective academic institution (see example (48)):

*(48) "He was **a sparkling intellect** who brought humanity and humor to his teaching and scholarship," said Anno Saxenian, the school's former dean. "**His collegiality** and **wisdom** helped to shape the School of Information for over a decade."*

Three obituaries also included quotes from colleagues about their personal stories and experiences with the deceased (see example (49)):

*(49) "Carol was a very generous colleague and teacher," said Abigail Cohn, professor of linguistics. "**She shared all her intro to linguistics materials with me** as I prepared to teach my very first semester. I learned so much from her about teaching, about working with graduate students, about Romance languages and linguistics."*

Additionally, three obituaries included quotes about the emotional responses to the loss (see example (50)):

*(50) "Catherine Chvany was always so present that **it is hard to think of her as gone**," said MIT Literature Professor Ruth Perry.*

Interestingly, just as in biologists' obituaries, Step 8 in three obituaries included commentaries about the gender of the deceased and what they did for other members of their gender (see example (51)):

*(51) "Mom seemed to have the energy of three people, because at the same time that she was **breaking barriers on campus as a woman** and pioneering research in her field, she was also raising the three of us," Tripcevich said.*

In 14 obituaries that Step 8 was used, it was presented right after Step 7. In obituaries where Step 7 was absent, Step 8 appeared as the first Step of Move 2.

Step 8 contained a lot of nouns and adjectives, which provided more insight into what was said about the deceased. Adjectives provided information about how the deceased and their work was described by their colleagues or family members (see Table 6). The most frequent nouns in Step 8 indicated that quotes and reported speech from colleagues and family members stayed on the theme of language and linguistics (see Table 6).

Table 6. Most common nouns and adjectives in Step 8.

Number of occurrences	**Nouns**	**Number of occurrences**	**Adjectives**
41	language	9	social
25	linguistics	7	human;
24	professor	5	many; strong; former;
16	department		
20	students		
11	philosophy		
9	chair; faculty; studies		
8	colleague; teacher		
7	time; university;		
6	life; anthropology;		
5	ideas; program; school;		

Step 9

Step 9 was concerned with the deceased's professional and academic career. This Step was present in all 16 linguists' obituaries. For ten obituaries, this section was organized chronologically (see example (52). The six remaining obituaries organized Step 9 from the most to the least important events.

*(52) He taught at the University of Texas from **1959-72, first** in the German department and **then** in linguistics, then at Queens College and the Graduate Center of the City University of New York in **1972–73**.*

In some obituaries, Step 9 also includes more information about the subject field to which the deceased contributed (see example (53)):

*(53) One of the most fascinating and intellectually influential figures in 20th century linguistics, Ohala insisted that the **sound systems of language, their phonologies**, are constrained by the **physiology of speech production** and **speech perception**.*

Step 9 contains nouns and adjectives that continue to elaborate on the deceased's career (see Table 7). The most frequent adjective *new* in Step 9 indicates that the deceased linguists created original ideas and research. Overall, the most frequent adjectives in Step 9 provided positive descriptions of the deceased academic's career (see Table 7). The most common nouns in Step 9 were in the same semantic field of linguistics.

Table 7. Most common nouns and adjectives in Step 9.

Number of occurrences	**Nouns**
77	language
55	linguistics
27	university
22	work
21	professor
18	science
17	studies
14	faculty; grammar; research; society
13	department; sound; students;
12	program
11	book
10	theory; publications; scholar
9	acquisition; institute; philosophy; speech;
8	children; journal; psychology; syntax; word
7	academy; chair; humanities; literature;
6	articles; associate; century; committee; field; issues; papers; speakers;
5	center; conference; course; development; essays; interests; patterns; phrase;
Number of occurrences	**Adjectives**
11	new
6	cognitive; international; philosophical
5	influential; last; modern; national; recent;

Step 10

Step 10 in Move 2 aimed to provide information about any grants, awards, positions and memberships the deceased had. This Step was present in 13 obituaries written for linguists. Instance of Step 10 is provided in example (54).

(54) ***She received Cornell's Russell Award*** *for excellence in teaching in 2010, and was* ***recognized three times by seniors in the Merrill Presidential Scholars Program*** *for her influence on their academic careers.*

Step 10 contains nouns and adjectives that continue to elaborate on the deceased's achievements (see Table 8). The most frequent adjective that appeared in Step 10 was *linguistic*. However, the lack of adjectives indicates little evaluation in this Step. On the other hand, nouns reveal that linguists were most commonly part of societies and served high-level positions such as the president (see Table 8).

Table 8. Most common nouns and adjectives in Step 10.

Number of occurrences	**Nouns**	**Number of occurrences**	**Adjective**
9	society	5	linguistic
7	president		
6	language; member;		
5	academy; association;		
4	institute;		

Step 11

The last Step in Move 2 was concerned with retirement. Step 11 was present in seven linguists' obituaries. Six obituaries mentioned only the year that the deceased retired. Out of these six obituaries, two obituaries also included what the deceased did after their retirement. This is illustrated in example (55):

(55) *He remained a member until* ***his retirement in 1995***. ***After his retirement****, Mueller-Vollmer continued to lead graduate seminars and advise graduate and postdoctoral students, including Barbara Buchenau, whose research project he supervised from 2004 to 2005.*

Step 11 was presented either by the verb *retire* (3 occurrences) in the past tense or by the noun *retirement* (4 occurrences).

Move 3: Biography

The goal of Move 3 was to discuss any events in the deceased's biography. Move 3 consists of the same Steps that biologists' obituaries had. This Move includes quotes from family members. Move 3 was present in eleven obituaries written for linguists. The placement of Move 2 was inconsistent. In four obituaries, Move 3 appeared right after Move 2; in four obituaries, it occurred between Step 8 and Step 9; in two obituaries, it appeared between Step 10 and Step 11; in one obituary, it appeared after Step 7.

Step 12

Step 12 indicated when and where the deceased was born. This Step was present in 11 obituaries. In this Step, the time and place of birth were presented by providing the full date, city and state or country. Other obituaries provided other information and stated in which year they were born and where they grew up (example (56)):

(56) ***Born in New York in 1945****, he was* ***raised in Manhattan****.*

This Step was illustrated by including the verb *be* in the past tense followed by the participle *born* or *native*.

Step 13

Step 13 was concerned with the parents and family background of the deceased. This Step was present in only five linguists' obituaries. Two obituaries mentioned the parents' nationality. Moreover, three obituaries indicated the profession of their parents (see example (57)):

(57) Born in Kumamoto, Japan, ***he was the youngest of six children of Danish missionary parents*** *who moved with their family from Japan to the U.S. in 1941, where he grew up in Fresno, Calif., and Boulder, Colo.*

Furthermore, three obituaries mentioned siblings (see example (58)):

(58) During World War II, ***she and her younger sister Anna*** *were sent first to the Pyrenees and then to the United States with assistance from a courageous young Unitarian minister's wife, Martha Sharp.*

Step 14

The purpose of Step 14 was to comment on the deceased's childhood and education. Step 14 appeared in 10 obituaries written for linguists. The deceased's education was listed chronologically, indicating the degree, the institution, and the year they graduated. This is illustrated below in example (59):

*(59) Rosen earned a **bachelor's degree** in mathematics from **Columbia University in 1962** and a **master's** in Italian from the **University of California, Berkeley**, **in 196**5, where she later studied Romance philology. She earned her **Ph.D**. in linguistics from **Harvard University in 1981.***

Step 15

The goal of Step 15 was to provide information about the deceased's private life, their personality, hobbies and how they liked to spend their free time. This Step was identified in 6 linguists' obituaries. Step 15 is shown in example (60):

*(60) **Her passions included family, food, art and music**, said her younger son, Nico Tripcevich, a laboratory manager at UC Berkeley's Archaeological Research Facility.*

Move 4: Surviving family

The surviving family members were listed in Move 4. This Move was present in 12 obituaries. Move 4 lists the remaining family members in terms of importance. Nine obituaries start the listing from the spouse, children, children's spouses, siblings and grandchildren. However, three obituaries start the listing from children, the children's spouses, siblings, grandchildren and great-grandchildren (see example (61)):

*(61) Chvany **is survived by her children,** Deborah Gyapong and her husband Tony of Ottawa, Canada; Barbara Chvany and her husband Ken Silbert of Orinda, California; and Michael Chvany and his wife Sally of Arlington, Massachusetts; her foster-brother, William Atkinson of Cambridge, Massachusetts; six grandchildren; and nine great-grandchildren.*

Move 4 in 13 obituaries was presented by following the formula: subject + "is survived by" + his/her + kinship term + relative's name. One obituary provided variety by using the verb *leaves* instead of the verb phrase *is survived by*.

Move 5: Memorial services and donations

Move 5 was primarily concerned with future events. This Move appeared only in eight obituaries, and in those eight obituaries, Move 2 was at the end of the obituary.

Step 16

Step 16 indicated whether there were any plans for funerals or memorials. This was mentioned in 7 linguists' obituaries. Step 16 can be seen in example (62):

*(62) A memorial reception **will be held** on Sunday, Nov. 18, from 1:30 to 4:00 p.m. in the Samberg Conference Center, 7th floor.*

One obituary indicated that memorial services had already happened. Two obituaries mentioned that the event would be held sometime in the future.

Step 17

Four obituaries concluded with an organization or institution to which donations could be made in the deceased's name in Step 17 (see example (63)):

*(63) Memorial donations **may be made** to Camp Kinderland in Easthampton, Massachusetts.*

4. Discussion

The structure of obituaries for biologists and linguists had many similarities. As can be seen from Table 9 below, the same Moves and Steps were found in both groups, even though the number of occurrences differed. The only steps that occurred 32 times in all obituaries were Step 1 and Step 3, which was expected as these steps identify the deceased person and inform about their death. It is interesting to note that the third most frequent step was Step 2, which provided the profession or achievements of the deceased. Since the aim of Move 1 is to identify the deceased, information about their achievements also holds great value in identifying them. Perhaps some readers might not know their name but know the deceased by their achievements. Therefore, the second most important information presented is the achievements of the deceased, which would also help identify the deceased.

Table 9. Distribution of Moves and Steps across linguists' and biologists' obituaries

	Biologists	**Linguists**	**All obituaries**
Move 1	**16**	**16**	**32**
Step 1	16	16	32
Step 2	16	14	30
Step 3	16	16	32
Step 4	9	9	18
Step 5	8	8	16
Step 6	15	14	29
Move 2	**16**	**16**	**32**
Step 7	15	10	25
Step 8	16	14	30
Step 9	15	14	29
Step 10	16	13	29

Step 11	5	8	13
Move 3	**13**	**11**	**24**
Step 12	10	11	21
Step 13	4	4	8
Step 14	13	10	23
Step 15	7	6	13
Move 4	**14**	**12**	**26**
Move 5	**7**	**7**	**14**
Step 16	7	7	14
Step 17	5	4	9

The other most commonly appearing Steps and Moves were Step 6, Step 8, Step 9, Step 10 and Move 4. The most uncommon step was Step 13. Childhood and family background was mentioned rarely, which might be because it was not known to the obituary author.

It is important to note that each individual text of the obituary can present a slight variation. The order of steps in obituaries may vary, and some steps might even be omitted. The most significant difference is in Step 7, which occurred 15 times in biologists' obituaries and only ten times in linguists' obituaries, thus creating an impression that career is more important for biologists.

The third research question aimed to discern what adjectives and nouns were used in biologists' and linguists' obituaries. Since all obituaries followed the "de mortuis nil nisi bene" principle, these obituaries did not include any negative adjectives or nouns (see Table 10). Biologists' and linguists' obituaries both included similar neutral adjectives and different descriptive adjectives. Unsurprisingly, the most common nouns between the two disciplinary communities differ greatly (see Table 10). For example, the most frequent nouns that occurred in obituaries for linguists were *language(s)* (143 occurrences) and *linguistics* (96 occurrences). Respectively, in biologists' obituaries, the nouns *cell* (63 occurrences), *biology* (92 occurrences) and *science* (probably used as a synonym for *biology*) (97 occurrences) are among the five most frequent nouns. However, the most frequent noun in biologists' obituaries is *research* (98 occurrences), thus indicating its importance for the discipline. An interesting difference can be noted in relation to the adjective *new*, with 28 occurrences in biologists' and only nine occurrences in linguists' obituaries. The noun *professor* appears in both sub-corpora of obituaries as the third most common noun (74 occurrences) in linguists' obituaries and the fourth (85 occurrences) in biologists' obituaries.

Table 10. Most common adjectives and nouns among biologists' and linguists' obituaries

LINGUISTICS		**BIOLOGY**	
Number of occurrences	**Nouns**	**Number of occurrences**	**Nouns**
143	language(s)	98	research
96	linguistics	97	science
74	professor	92	biology
64	university	85	professor
34	department; studies;	63	cell
Number of occurrences	**Adjectives**	**Number of occurrences**	**Adjective**
14	social	28	new
12	many	20	many
11	linguistic	26	scientific
10	former; more;	24	biological
9	human; new;	22	molecular

Gender

Previous sections only looked into the similarities and differences between obituaries written for two disciplinary discourse communities. The final research question aimed to identify what adjectives and nouns are used in female and male obituaries. Contrary to previous research done by Eid (2002), Moses and Marelli (2004), and Colak (2017), female and male obituaries contained a similar number of words.

As mentioned above, all analysed obituaries followed the "De mortuis nil nisi bene" principle and did not include any negative adjectives or nouns. The most common adjectives and nouns were either positive or neutral (see Table 11). As shown in Table 11, both male and female obituaries employed similar nouns. However, the most common adjectives between genders were different. For female scholars, the most frequent adjectives were *scientific, Slavic, biological* and *human*, whereas, in male obituaries, they included adjectives such as *linguistic, social, marine* and *molecular*. Each obituary described in detail the deceased's career. Even though they worked in the same scientific field (i.e. biology and linguistics), they specialised in certain branches of those fields. The most common adjectives reflect the idea of these subfields.

Table 11. Most common adjectives and nouns among male and female obituaries.

Male		**Female**	
Number of occurrences	**Adjectives**	**Number of occurrences**	**Adjectives**
21	linguistic	20	scientific;
18	social	18	Slavic
16	marine; molecular;	16	biological; human;
13	natural	11	national;
10	evolutionary; scientific;	10	academic; medical;
Number of occurrences	**Nouns**	**Number of occurrences**	**Nouns**
73	professor	87	professor
71	university	65	research
54	sciences	57	university
56	language; research;	49	biology
52	linguistics	47	language

On the other hand, both male and female obituaries employed similar nouns (see Table 11). However, there was a slight variation among some nouns that were used. One of the main differences between male and female obituaries was the mention of gender in their obituaries. Six obituaries written for female scholars mentioned the deceased's achievement when they were the only women in academia at that level or how they advocated and helped out other women. This is illustrated in example (64):

*(64) Langenheim began her career at a time when professional opportunities for **women** in science were limited. At UC Santa Cruz, she was the campus's first **female** faculty member in the natural sciences and the first **woman** to be promoted to full professor.*

This gender mentioning aspect is also evident from the occurrences of feminine nouns. Nouns denoting gender such as *women*, *woman* or *female* appeared 29 times in obituaries written for female scholars. In comparison, the noun *man* appeared only three times in male obituaries. Another interesting finding is the noun *family*, which appeared 16 times in female obituaries and twice less in male obituaries. This suggests that family is a more prevalent topic among female obituaries, as it was previously discovered by Eid (2002) and Colak (2017).

5. Conclusions

The present paper attempted to determine if present obituaries follow the “de mortuis nil nisi bene” principle, what Moves and Steps were used in writing obituaries for biologists and linguists and what kind of nouns and adjectives prevailed between the two genders and academic disciplines.

The analysis has revealed that obituaries continue to follow the “de mortuis nil nisi bene” principle, as there were no obituaries which described anything negative about the deceased. Moreover, this principle seems to be still followed since academics are considered somewhat public figures who have to set an example and influence future generations.

This research also has shown that obituaries for biologists and linguists employ the same Moves and Steps. However, there is a slight variation in individual texts in how they arrange the order of certain Steps and what Steps and Moves to include and omit. The most notable difference between biologists’ and linguists’ obituaries was in the use of adjectives. Biologists’ obituaries included a high number of adjective new, suggesting that biologists place more emphasis on the search for new knowledge. This study has discovered that modern female and male obituaries are similar in length but differ in the subjects they focus on. Obituaries written for females tend to focus more on their gender and family.

The present study analysed only the obituaries from American university websites. It would be interesting to investigate and compare obituaries from Canadian, Australian and British university websites. Besides, the data collection process provided a limited number of obituaries for female scholars, therefore, the same number of male obituaries was taken. For further research, it would be beneficial to increase the size of the corpus and also to re-evaluate Step 9 and Step 14 since they might be overlapping, and it is not always clear which category the clause belongs to.

6. Data Sources

https://blogs.umass.edu

https://linguistics.ucdavis.edu

https://med.stanford.edu

https://news.berkeley.edu

https://news.cornell.edu

https://news.mit.edu

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https://news.uchicago.edu

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8. Summary in Lithuania

Straipsnyje atliekama nekrologų, kurie buvo parašyti biologams (ėms) ir lingvistams (ėms), žanro analizė. Nekrologai yra tekstai kurie ne tik praneša apie žmogaus mirtį, bet ir pristato mirusiojo gyvenimą ir veiklą.

Tyrimo medžiagą sudaro 32 nekrologai, 2010 – 2022 metais paskelbti JAV universitetų naujienlaiškiuose, kurie buvo skirti biologų (-ių) ir lingvistų (-čių) atminimui. Tiriamosios medžiagos apimtis pasirinkta atsižvelgiant į ribotą, moterims skirtų nekrologų kiekį. Tekstyną sudarė 28 221 žodžiai, iš jų lingvistų nekrologų – 13 235, o biologų – 14 986. Tačiau beveik nebuvo skirtumo tarp moterų ir vyrų nekrologų dydžio, kadangi moterų nekrologai buvo sudaryti iš 14 155 žodžių, o vyrų iš 14 066.

Šiuo tyrimu siekta nustatyti, ar šiuolaikiniai nekrologai vis dar vadovaujasi „de mortuis nil nisi bene“ principu - apie mirusįjį kalbėti tik gerai arba nesakyti nieko. Kiti tyrimo tikslai buvo nustatyti retorinius žingsnius, kurie yra naudojami rašyti biologų ir lingvistų nekrologus, kokie dažniausiai naudojami būdvardžiai ir daiktavardžiai biologų ir lingvistų nekrologuose, ir kokie dažniausiai naudojami būdvardžiai ir daiktavardžiai vyrų ir moterų nekrologuose. Šis tyrimas remiasi Swales (1990) ir Bhatia (1993) žanro analizės teorija. Tyrimui atlikti naudota AntCon programinė įranga, skirta atlikti lingvistinę analizę.

Darbo metu nustatyta, kad analizuoti nekrologai vadovavosi „de mortuis nil nisi bene" principu ir apie mirusiuosius buvo kalbama tik teigiamai. Taip pat išanalizuotų nekrologų struktūra buvo labai panaši, skyrėsi tik žingsnių išsidėstymas. Didžiausi daiktavardžių ir būdvardžių naudojimų skirtumai pasireiškė tarp moterų ir vyrų. Nekrologuose skirtuose moterims buvo dažniau minimas faktas, kad jie parašyti moterims. Pastebėta, kad dvigubai dažniau minimas žodis „šeima“, kuris nusako, kad šiuolaikiniuose nekrologuose moterys yra labiau siejamos su šeima, negu vyrai.

9. Appendices

Appendix A

All collected obituaries

No.	Name	Link	Gender	Date of the article	University	Accessed	Number of words
Biologists							
1	Harry Rubin	https://news.berkeley.edu/2020/02/07/virus-expert-and-cancer-biologist-harry-rubin-dies-at-93/	Male	2020-02-07	UC Berkeley	2022-01-19	1115
2	Winslow Briggs	https://news.stanford.edu/2019/02/15/plant-biologist-winslow-briggs-dies-90/	Male	2019-02-15	Stanford University	2022-01-19	735
3	John Pearse	https://news.ucsc.edu/2020/08/pearse-in-memoriam.html	Male	2020-08-05	UC Santa Cruz	2022-01-19	709
4	Barry Sinervo	https://news.ucsc.edu/2021/03/sinervo-in-memoriam.html	Male	2021-04-22	UC Santa Cruz	2022-01-19	969
5	Gene Madsen	https://news.cornell.edu/stories/2017/08/gene-madsen-expert-environmental-microbiology-dies-64	Male	2017-08-30	Cornell University	2022-01-19	659
5	Gobind Khorana	https://news.mit.edu/2011/obit-khorana-1109	Male	2011-11-10	MIT	2022-01-19	914
7	Dale Kraiser	https://med.stanford.edu/news/all-news/2020/06/dale-kaiser--founding-member-of-stanfords-department-of-biochemi.html	Male	2020-07-20	Stanford University	2022-04-22	1050
8	Thomas C. Alber	https://senate.universityofcalifornia.edu/in-memoriam/files/thomas-c-alber.html	Male	2016	UC Berkeley	2022-04-22	1017
1	Angelika Amon	https://news.mit.edu/2020/angelika-amon-cell-biologist-pioneer-chromosome-imbalance-dies-53-1030	Female	2020-10-30	MIT	2022-01-19	1403
2	Susan Lee	https://news.mit.edu/2016/susan-lindquist-whitehead-institute-obituary-1028	Female	2016-10-28	MIT	2022-01-19	1210

	Lindquist						
3	Jean Langenheim	https://news.ucsc.edu/2021/04/langenheim-in-memoriam.html	Female	2021-04-01	UC Santa Cruz	2022-01-19	1143
4	Kristy Richards	https://news.cornell.edu/stories/2019/04/trailblazing-lymphoma-researcher-kristy-richards-90-dies	Female	2019-04-17	Cornell University	2022-01-19	745
5	Victoria Braithwaite	https://www.psu.edu/news/research/story/penn-state-community-grieves-loss-biologist-victoria-braithwaite/	Female	2019-09-30	Pennsylvania State University	2022-01-19	1013
6	Annamaria Torriani-Gorini	https://news.mit.edu/2013/obit-torriani-gorini-biology	Female	2013-08-05	MIT	2022-01-20	1052
7	Nancy Wade	https://www.odu.edu/news/2021/1/nancy_wade_obit#.YmK0PdpBy3A	Female	2021-01-25	Old Dominion University	2022-04-22	788
8	Barbara Collins	https://www.callutheran.edu/news/9671.html	Female	2013-05-01	California Lutheran University	2022-04-22	464
Linguists							
1	Geoffrey Nunberg	https://news.berkeley.edu/2020/08/14/uc-berkeleys-geoffrey-nunberg-famed-npr-linguist-dies-at-75/	Male	2020-08-14	UC Berkeley	2021-10-23	948
2	Kurt Mueller Vollmer	https://news.stanford.edu/2019/09/11/stanford-german-studies-scholar-kurt-mueller-vollmer-dies-91/	Male	2019-09-11	Stanford University	2021-10-23	649
3	Michael Silverstein	https://news.uchicago.edu/story/michael-silverstein-groundbreaking-anthropologist-and-linguist-1945-2020	Male	2020-07-20	University of Chicago	2021-10-11	1170

4	James W. Gair	https://news.cornell.edu/stories/2017/01/james-w-gair-linguistics-professor-emeritus-dies-88	Male	2017-01-17	Cornell University	2021-10-11	730
5	John J. Ohala	https://senate.universityofcalifornia.edu/in-memoriam/files/john-ohala.html	Male	2021	UC Berkeley	2022-01-19	1140
6	Karl Ernst Zimmer	https://senate.universityofcalifornia.edu/in-memoriam/files/karl-zimmer.html	Male	2020	UC Berkeley	2022-01-20	803
7	Erik P. Hamp	https://news.uchicago.edu/story/eric-p-hamp-renowned-linguist-lesser-known-languages-1920-2019	Male	2019-02-21	University of Chicago	2022-04-22	573
8	Charles Fillmore	https://senate.universityofcalifornia.edu/in-memoriam/files/charles-fillmore.html	Male	2021	UC Berkeley	2022-04-22	885
1	Catherine Chvany	https://news.mit.edu/2018/slavic-scholar-professor-emerita-catherine-chvany-dies-1113	Female	2018-11-13	MIT	2021-06-11	866
2	Lila Gleitman	https://almanac.upenn.edu/volume-68-number3#lila-gleitman-psychology-and-linguistics	Female	2021-08-31	University of Pennsylvania	2021-06-11	649
3	Carol Rosen	https://news.cornell.edu/stories/2019/08/linguist-carol-rosen-dies-79	Female	2019-08-21	Cornell University	2021-06-11	617
4	Delia Graff Fara	https://www.princeton.edu/news/2017/08/01/princeton-professor-delia-graff-fara-eminent-philosopher-language-dies-48	Female	2017-08-01	Princeton University	2022-01-19	726
5	Lenora Timm	https://linguistics.ucdavis.edu/directory-of-people/in-memoriam/lenora-timm	Female	2017-01-23	UC Davis	2022-01-19	1174
6	Susan Ervin-Tripp	https://news.berkeley.edu/2018/11/28/susan-ervin-tripp-obit/	Female	2017-11-28	UC Berkeley	2022-04-22	1410
7	Christina Bratt Paulston	https://www.utimes.pitt.edu/archives/?p=40723	Female	2016-10-16	University of Pittsburgh	2022-04-22	455

8	Anne Vainikka	https://blogs.umass.edu/linguist/anne-vainikka-obituary/	Female	2018	University of Massachusetts	2022-04-22	440

Appendices B

Text of analysed obituaries

OB1	Angelika Amon, professor of biology and a member of the Koch Institute for Integrative Cancer Research, died on Oct. 29 at age 53, following a two-and-a-half-year battle with ovarian cancer. From the earliest stages of her career, Amon made profound contributions to our understanding of the fundamental biology of the cell, deciphering the regulatory networks that govern cell division and proliferation in yeast, mice, and mammalian organoids, and shedding light on the causes of chromosome mis-segregation and its consequences for human diseases. Human cells have 23 pairs of chromosomes, but as they divide they can make errors that lead to too many or too few chromosomes, resulting in aneuploidy. Amon's meticulous and rigorous experiments, first in yeast and then in mammalian cells, helped to uncover the biological consequences of having too many chromosomes. Her studies determined that extra chromosomes significantly impact the composition of the cell, causing stress in important processes such as protein folding and metabolism, and leading to additional mistakes that could drive cancer. Although stress resulting from aneuploidy affects cells' ability to survive and proliferate, cancer cells — which are nearly universally aneuploid — can grow uncontrollably. Amon showed that aneuploidy disrupts cells' usual error-repair systems, allowing genetic mutations to quickly accumulate. "Angelika's intellect and research were as astonishing as her bravery and her spirit. Her lab's fundamental work on aneuploidy was integral to our establishment of the center," say Li-Huei Tsai, the Picower Professor of Neuroscience and co-director of the Alana Down Syndrome Center. "Her exploration of the myriad consequences of aneuploidy for human health was vitally important and will continue to guide scientific and medical research." Another major focus of research in the Amon lab has been on the relationship between how cells grow, divide, and age. Among other insights, this work has revealed that once cells reach a certain large size, they lose the ability to proliferate and are unable to reenter the cell cycle. Her lab's studies have found that in hematopoetic stem cells, small size is important to cells' ability to function and proliferate — in fact, she posted recent findings on bioRxiv earlier this week — and have been examining the same questions in epithelial cells as well. Amon lab experiments delved deep into the mechanics of the biology, trying to understand the mechanisms behind their observations. To support this work, she established research collaborations to leverage approaches and technologies developed by her colleagues at the Koch Institute, including sophisticated intestinal organoid and mouse models developed by the Yilmaz Laboratory, and a microfluidic device developed by the Manalis Laboratory for measuring physical characteristics of single cells. Born in 1967, Amon grew up in Vienna, Austria, in a family of six. Playing outside all day with her three younger siblings, she developed an early love of biology and animals. She could not remember a time when she was not interested in biology, initially wanting to become a zoologist. But in high school, she saw an old black-and-white film from the 1950s about chromosome segregation, and found the moment that the sister chromatids split apart breathtaking. She knew then that she wanted to study the inner workings of the cell and decided to focus on genetics at the University of Vienna in Austria. After receiving her BS, Amon continued her doctoral work there under Professor Kim Nasmyth at the Research Institute of Molecular Pathology, earning her PhD in 1993. Her work on yeast genetics

	in the Nasmyth laboratory led to major discoveries about how one stage of the cell cycle sets up for the next, revealing that cyclins, proteins that accumulate within cells as they enter mitosis, must be broken down before cells pass from mitosis to G1, a period of cell growth. In 1996, after Lehmann had left for New York University's Skirball Institute, Amon was invited to become a Whitehead Fellow, a prestigious program that offers recent PhDs resources and mentorship to undertake their own investigations. While at Whitehead, her lab made key findings centered around the role of an enzyme called Cdc14 in prompting cells to exit mitosis, including that the enzyme is sequestered in a cellular compartment called the nucleolus and must be released before the cell can exit. In 1999, Amon's work as a Whitehead Fellow earned her a faculty position in the MIT Department of Biology and the MIT Center for Cancer Research, the predecessor to the Koch Institute. A full professor since 2007, she also became the Kathleen and Curtis Marble Professor in Cancer Research, associate director of the Paul F. Glenn Center for Biology of Aging Research at MIT, a member of the Ludwig Center for Molecular Oncology at MIT, and an investigator of the Howard Hughes Medical Institute. Her pathbreaking research was recognized by several awards and honors, including the 2003 National Science Foundation Alan T. Waterman Award, the 2007 Paul Marks Prize for Cancer Research, the 2008 National Academy of Sciences (NAS) Award in Molecular Biology, and the 2013 Ernst Jung Prize for Medicine. In 2019, she won the Breakthrough Prize in Life Sciences and the Vilcek Prize in Biomedical Science, and was named to the Carnegie Corporation of New York's annual list of Great Immigrants, Great Americans. This year, she was given the Human Frontier Science Program Nakasone Award. She was also a member of the NAS and the American Academy of Arts and Sciences. Amon's perseverance, deep curiosity, and enthusiasm for discovery served her well in her roles as teacher, mentor, and colleague. She has worked with many labs across the world and developed a deep network of scientific collaboration and friendships. She was a sought-after speaker for seminars and the many conferences she attended. In over 20 years as a professor at MIT, she has mentored more than 80 postdocs, graduate students, and undergraduates, and received the School of Science's undergraduate teaching prize. "Angelika was an amazing, energetic, passionate, and creative scientist, an outstanding mentor to many, and an excellent teacher," says Alan Grossman, the Praecis Professor of Biology and head of MIT's Department of Biology. "Her impact and legacy will live on and be perpetuated by all those she touched." "Angelika Amon was an inspiring leader," notes Lehmann, "not only by her trailblazing science but also by her fearlessness to call out sexism and other -isms in our community. Her captivating laugh and unwavering mentorship and guidance will be missed by students and faculty alike. MIT and the science community have lost an exemplary leader, mentor, friend, and mensch." Amon's wide-ranging curiosity led her to consider new ideas beyond her own field. In recent years, she has developed a love for dinosaurs and fossils, and often mentioned that she would like to study terraforming, which she considered essential for a human success to life on other planets. Amon is survived by her husband Johannes Weis, and her daughters Theresa and Clara Weis, and her three siblings and their families.
OB2	MIT Professor Susan Lee Lindquist, a member and former director of the Whitehead Institute, and one of the nation's most lauded scientists, yesterday succumbed to cancer at age 67. Her nearly 40-year career was defined by intellectually courageous, boundary-defying research and a passion for nurturing new generations of scientific talent. "Sue has meant so much to Whitehead as an institution of science, and as a community of scientists, and her passing leaves us diminished in so many ways," reflects David C. Page, director of Whitehead Institute and a professor of biology at MIT. "She was a risk-taker and an innovator. She believed that if we were not reaching for things beyond our grasp, we were not doing our job as researchers; if we were not constantly striving for that which we could only imagine, we were not fulfilling our obligations to society as scientists." A cornerstone of the Whitehead Institute community, a professor of biology at MIT, and a Howard Hughes Medical Institute Investigator, Lindquist was a widely respected researcher with a global reputation for biomedical innovation. She made numerous, invaluable contributions to the study of protein folding, demonstrating that alternative protein conformations can have profound

and unexpected influences. Lindquist's research transformed budding yeast into a model organism for studying human disease, evolution, and biomaterials. She was best known for her work on prions — proteins that exhibit an unusual ability to exist in multiple stable structural states, with altered functions depending on the state. Using yeast, she and her colleagues demonstrated that prions have the capacity to drive change in an organism's inherited characteristics without changing its DNA or RNA — relying instead on an ability to change how proteins fold. In a seminal breakthrough in evolutionary biology, her laboratory showed that prions can help activate many previously hidden (inactive) biophysical interactions, producing new traits that are passed on to subsequent generations. In other words, by uncovering (activating) previously hidden genetic variation that can help cells survive changes in their environment, prions provide a mechanism for the evolution of beneficial new traits. In humans, devastating neurological illnesses such as Alzheimer's, Parkinson's, Creutzfeldt-Jakob, and Huntington's diseases involve proteins that change their conformation and thereby spur pathological processes. Among the many technical innovations created by her lab, Lindquist imported several of these disease-causing proteins into yeast, creating a platform with which to study disease-causing changes in protein folding in action and to test potential therapies for the ability to prevent the protein's toxicity. A committed teacher and dedicated mentor to generations of biomedical and basic research scientists, Lindquist served as a professor at the University of Chicago for 23 years and then at MIT, where she had taught concurrent with her Whitehead Institute appointment since 2001. During her 15-year career at Whitehead alone, she supervised 115 fellows, graduate students, and undergraduates. "Inspired by Susan's seminal work on the role of protein folding in evolutionary processes, I came to her laboratory at the Whitehead on a sabbatical from my role as a professor of pediatric oncology," remembers Luke Whitesell, a senior research scientist in the Lindquist lab at Whitehead Institute. "Breaking traditional boundaries, we sought to learn whether some of the same basic mechanisms she had discovered in yeast might fuel the malignant progression of cancers and enable them to acquire drug resistance. The nurturing, extraordinarily cross-disciplinary research environment that she had created for her students and postdocs was captivating. Over a dozen years later, I am still here, privileged to have assisted her in training a new generation of physicians and scientists who share her conviction that deep biological insight is essential to improving the treatment of human diseases. We are all devastated by her loss, but determined to carry her vision forward." Brooke Bevis, manager of the Lindquist lab, observes that, "Sue was the most creative, out-of-the-box scientific thinker I've known. She had a unique biological intuition — an instinct for the way things worked and the right questions to ask. And she was indefatigable, seeming to draw strength and stamina from the science itself." From 2001 to 2004, Lindquist served as director of Whitehead Institute — becoming one of the first women in the nation to lead a major independent research organization. In 2004, she resumed her research focus as an Institute member, an associate member of the Broad Institute of MIT and Harvard, and an associate member of the David H. Koch Institute for Integrative Cancer Research at MIT. "Sue was a terrific scientist, colleague, and friend to many of us," says Alan Grossman, the Praecis Professor of Biology and head of MIT's Department of Biology. "She will be deeply missed at MIT and in the scientific community. Our thoughts and wishes go out to her family and loved ones." "Sue's bold strategies and unique ideas to understand neurodegenerative disease were recognized by her peers and supported by generous partners, including the JPB Foundation and the Belfer Family Foundation," observes Li-Huei Tsai, professor of neuroscience and director of the Picower Institute for Learning and Memory at MIT. "She was a titan in the field and a genuine luminary, appreciated for her candor, friendship, thoughtful behavior, and superb communication skills. Her work and influence will continue to accelerate the fight against diseases such as Parkinson's and Alzheimer's, as well as inspire and educate upcoming generations of scientific leaders." "I met Sue when I arrived at the University of Chicago in 1980, and we've been close friends ever since. I was Sue's maid of honor at her wedding; she introduced me to my husband," recalls Elaine Fuchs, the Rebecca C. Lancefield Professor and Howard Hughes Medical Institute (HHMI) Investigator at The Rockefeller University. "In Chicago, we taught together and shared

	our HHMI labs. Throughout these past 35 years, we've fueled each other's science through many discussions and dinners together. I've never met another scientist as creative and visionary as Sue, nor a person so caring and loving. She was the gentle giant of science, and her work will continue to shape research and medicine — and inspire her family, friends, colleagues, students, and postdocs — long into the future." An insightful leader with an incomparable perspective on the intersection of academic and commercial medical research, Lindquist served as an elected member of the Johnson & Johnson Board of Directors since 2004, chairing its Science, Technology and Sustainability Committee and sitting on its Regulatory, Compliance and Government Affairs Committee. A biomedical entrepreneur in her own right, she co-founded FoldRx Pharmaceuticals and founded Yumanity Therapeutics and REVOLUTION Medicines. "Sue's global reputation in biomedical innovation and entrepreneurial spirit, her courageous leadership and her commitment to teaching are an inspiration for all of us and for generations to come," says Alex Gorsky, chairman and chief executive officer of Johnson & Johnson. "With her keen perspectives, Sue's made invaluable contributions to Johnson & Johnson and consistently challenged us to deliver more innovation and enhance our commitment to scientific excellence and to patients worldwide." Lindquist received many awards for her extraordinarily productive research, including the President's National Medal of Science — the highest scientific honor bestowed by the United States — as well as the Dickson Prize in Medicine, the Otto-Warburg Prize, the Genetics Society of America Medal, the FASEB Excellence in Science Award, the Max Delbrück Medal, the Mendel Medal, the E.B. Wilson Medal, a Vallee Visiting Professorship, the Vanderbilt Prize for Women's Excellence in Science and Mentorship, and the Albany Prize. She was elected as a member of the National Academy of Sciences, the National Academy of Medicine, the American Philosophical Society, the American Academy of Arts and Sciences, and the British Royal Society. "Sue was not only a superb basic scientist, but also a committed leader," says Erin O'Shea, president of the Howard Hughes Medical Institute. "She served as a role model for women in science, including me. Sue purposefully worked to mentor numerous students and postdocs, who have since gone on to successful careers. She will be deeply missed." Born on June 5, 1949, Lindquist earned an undergraduate degree in microbiology from University of Illinois at Urbana-Champaign and a PhD in biology from Harvard University. She is survived by her husband, Edward Buckbee; two daughters, Alana Buckbee and Nora Buckbee; and Nora's husband, Christopher Mannion; as well as her brothers and sisters-in-law Alan Lindquist and Stephanie Russell, and John Lindquist and Janice Moore.
OB3	Jean Langenheim, an eminent plant ecologist and leading authority on amber and plant resins, died on Sunday, March 28, in Santa Cruz. She was 95. A professor emerita of ecology and evolutionary biology at UC Santa Cruz, Langenheim conducted field research on five continents, crossed the disciplinary boundaries of botany, geology, and chemistry, served as president of four different scientific societies, and broke new ground for women in science. "Jean was a remarkable person who forged new pathways in her personal scientific research, overcame the many barriers to women scientists as she built her scientific program, contributed to the establishment and furthering of entire scientific disciplines, and mentored generations of students," said John Thompson, professor of ecology and evolutionary biology at UCSC. "She was a lion in her field," added Ingrid Parker, professor of ecology and evolutionary biology at UCSC. "She was such a trailblazer herself, yet she was always thinking about how to promote the next generation and create opportunities for young scientists." Langenheim studied plant resins and amber (fossilized resin) for more than 40 years, and her 2003 book Plant Resins is the authoritative reference book on the subject. Her investigations covered every aspect of plant resins, including their chemistry, their roles in the ecology of the plants that produce them, the evolutionary history of resin-producing plants, and the many uses of resins throughout human history. She conducted the first chemical analyses to determine the biological sources of amber, and her 1969 paper in the journal Science became a classic, establishing her as the world's leading authority on the botanical origins of amber. Her interdisciplinary research on the ways in which plants use chemicals to defend themselves from pathogens and herbivores helped establish the field of chemical ecology. "She

transformed chemical ecology with her pioneering research," Parker said. Langenheim began her career at a time when professional opportunities for women in science were limited. At UC Santa Cruz, she was the campus's first female faculty member in the natural sciences and the first woman to be promoted to full professor. She later became the first woman to serve as president of the Association for Tropical Biology and the International Society of Chemical Ecology, as well as the second woman president of the Ecological Society of America and the Society of Economic Botany. In her memoir, The Odyssey of a Woman Field Scientist, Langenheim wrote, "I lived through the period of being the token woman in numerous situations; I was not an activist fighting on the front lines, so to speak, but tried to demonstrate the capability of women through my own hard work and accomplishments." Langenheim was born in 1925 in Homer, Louisiana, to Jeanette Smith and Vergil Wilson Harmon. In the early 1930s, the family moved to Tulsa, Oklahoma, where she graduated from high school in 1943 and from the University of Tulsa in 1946 with a B.S. in biology. In 1946, she married Ralph Langenheim, a geology student, and they did their doctoral research together at the University of Minnesota, where she studied with the ecologist William S. Cooper. She earned her M.S. in 1949 and Ph.D. in 1953, both in botany. When her husband joined the faculty at UC Berkeley, Langenheim took a research associate position in the botany department. She was also an assistant professor at San Francisco College for Women and taught field ecology and botany at the Rocky Mountain Biological Laboratory in Colorado. She and her husband moved to the University of Illinois in 1959, where she continued her studies in ecology and paleobotany as a research associate. After a divorce in 1962, Langenheim became a scholar at the Radcliffe Institute for Independent Studies (now the Radcliffe Institute for Advanced Study) and a research fellow in biology at Harvard University. At Harvard, she began exploring the chemical analysis of amber samples she had collected in Chiapas, Mexico, on an expedition she and her husband had participated in while still at the University of Illinois. Her discovery that the amber came from a tropical flowering tree upended the common assumption that all amber was produced from pines. Langenheim came to UC Santa Cruz in 1966, the campus's second year, as an assistant professor of biology. She worked closely with the plant physiologist Kenneth Thimann, helping to establish a strong program in plant sciences at UCSC. Over the years, Langenheim and Thimann taught thousands of undergraduates in their popular botany course, "Plants and Human Affairs," and they coauthored a textbook for the course. "It was an intriguing move from [Harvard] the oldest university, full of rich tradition, to a new campus bursting with innovation," she wrote in her memoir. Langenheim played an important role in the establishment of the graduate studies program at UC Santa Cruz. She sponsored or cosponsored more than 40 graduate students, including students from Brazil and Mexico, and her lab included postdoctoral fellows and visiting faculty from Korea, China, and New Zealand. She did field research around the world, through much of Mexico and Central and South America, as well as Europe, Africa, Australia, and New Zealand. While Langenheim's research focused on the evolution and ecology of tropical trees, her students also studied the chemical ecology of redwoods and other plants native to the California coast. Many of her former graduate students stayed in close contact with her through the years, and she considered them her "surrogate family." Langenheim served on a variety of advisory boards for UC and for national and international organizations, including the Environmental Protection Agency and the International Union of Biological Sciences. A fellow of the American Association for the Advancement of Science, the Ecological Society of America, and the California Academy of Sciences, she received the California Academy's highest honor, the Fellows Medal, in 2006. Although she officially retired in 1994, Langenheim remained active as a professor emerita, supervising graduate students and publishing several major syntheses of research on amber and chemical ecology. Langenheim provided generous philanthropic support for research on the ecology and evolution of plants. She endowed graduate fellowships in plant ecology and evolution at UC Santa Cruz and at the Rocky Mountain Biological Laboratory, as well as a graduate fellowship in the field sciences for Sigma Delta Epsilon/Graduate Women in Science. She also endowed a faculty chair at UCSC, the Jean H. Langenheim Endowed Chair in Plant Ecology and Evolution. In

	support of the UC Santa Cruz Arboretum, she endowed a program to foster and strengthen ties between the Arboretum and plant science faculty and students for research and teaching. Langenheim also loved animals and established a program at the Santa Cruz SPCA, known as "Blackie's Senior Friends," to match older animals with senior citizens. She requested that donations in her memory be made to the Jean H. Langenheim Endowed Graduate Fellowship fund at UC Santa Cruz.
OB4	Dr. Kristy Richards '90, a groundbreaking cancer researcher and associate professor of biomedical sciences, died on March 30 in New York City. She was 50. Richards was known for her trailblazing interdisciplinary work treating cancer in dogs in hopes of discovering a therapy for humans. An oncologist who studied lymphoma, a cancer shared by humans and dogs, her cutting-edge work recruited pet canine lymphoma patients to test potential treatments. In collaboration with colleagues at Weill Cornell Medicine in New York City, she worked to apply insights gained to human lymphoma patients. Her research included immunotherapy approaches, which employ the body's own immune system to fight cancer cells. "In addition to her many scientific and career accomplishments, Kristy had unbounded energy and an infectious passion for discovery," said Lorin Warnick, the Austin O. Hooey Dean of the College of Veterinary Medicine. "She was a wonderful citizen of the college and university. She was always willing to provide a supportive voice for our initiatives, and took great pride in the empowerment of others. Kristy's passing is a tremendous loss to us personally and to the research field she pushed forward with great determination." Richards received her B.S. in biology (magna cum laude) from Cornell before attending Stanford University, where she earned a doctorate in 1997 and an M.D. in 2001. She did an internal medicine residency at Brigham and Women's Hospital in Boston from 2001 to 2003, and completed a medical oncology fellowship at the MD Anderson Cancer Center in Houston, Texas, from 2003-07. In 2007, she joined the faculty of the Department of Medicine at the University of North Carolina. She was hired in 2015 as an associate professor in the Department of Biomedical Sciences at Cornell's College of Veterinary Medicine. She held dual appointments at Cornell's Ithaca campus and in the Division of Hematology/Medical Oncology at Weill Cornell Medicine. In addition to her comparative cancer research, Richards provided clinical care as an oncologist at NewYork-Presbyterian Hospital. She was also chair of the Cornell Veterinary Biobank's governance committee;the Cornell Veterinary Biobank collects, processes, and stores biological samples from participating patients that are made available to researchers worldwide. "Kristy was a compassionate oncologist, a brilliant researcher and an outstanding mentor," said Marta Castelhano, director of the Cornell Veterinary Biobank. "Above all, she was an authentic human being who passionately cared to help others reach new heights, through her unique gift of radical collaboration. Her greatest legacy lives on in the hearts and minds of the many people she empowered, including my own." Richards, a faculty fellow at the Atkinson Center for a Sustainable Future, was an author on nearly 60 original research publications. She served as a Leukemia and Lymphoma Society board member, North Carolina chapter, from 2010-2015, and until her death was on the Cancer and Leukemia Group B/Alliance for Clinical Oncology Trials Pharmacogenomics and Population's Pharmacology Committee (since 2011) and Lymphoma Committee (since 2008). She was also an active member of the American Society of Hematology and the American Association for Cancer Research. She served as a Progressive Assessment of Therapeutics program co-leader, and an academic editor for PLoS One and PeerJ. Richards is survived by her parents, a sister and a brother. Memorial events are being planned.
OB5	Victoria Braithwaite, a highly regarded expert on animal behavior and cognition and a much-loved friend and colleague, died today (Sept. 30) at the age of 52 after a battle with pancreatic cancer. She is survived by her two sons, James, 24, of Boulder, Colorado, and Matthew, 22, of Berlin, Germany, as well as her two grandchildren, Jonas Sean, 2, and Isla Viktoria, 3 months. A professor of fisheries and biology and the Dorothy and Lloyd Huck Chair in Behavioral Biology at Penn State, Braithwaite was a lover of natural history, as practiced by the likes of Charles Darwin and E.O. Wilson, and an aficionada of beautifully designed experiments on par with Robert Paine's starfish removal experiment. "She was a keen observer and a deeply curious

person," said Julian Avery, assistant research professor at Penn State. Braithwaite's inquisitive personality influenced her own world-renowned research on animal perception, learning and memory. Her passion for these subjects began when she was a graduate student at the University of Oxford in the United Kingdom, where she studied homing pigeons. A radical finding for the time, she observed that, like humans, homing pigeons use visual cues such as landmarks to find their way home. Braithwaite did similar work on fish as a postdoctoral fellow at the University of Glasgow, United Kingdom. Specifically, she found that populations of the same species differed in how they solved spatial problems, and that these differences were related to predation risk. In environments with more predators, fish exhibited higher-level cognitive mapping abilities than those that were not exposed to predators. "Beginning with a Ph.D. in which she tried to understand not just what pigeons can see (in the real world rather than in a lab) but what they do with what they see, Victoria had an enormously successful career in trying to understand the minds of animals," said Susan Healy, professor of biology at the University of St. Andrews in the United Kingdom and a longtime friend of Braithwaite. "Given that we are still trying to do this with our own species, this has been no small challenge." As a result of this research, Braithwaite often was called upon to lend her expertise to the debate among animal rights activists, fish farmers, anglers and policy makers regarding the humane treatment of fish. Despite criticisms from people holding fast to the notion that fish can't possibly feel pain, Braithwaite maintained composure and stood firmly by her scientifically derived findings. She insisted that fish do, indeed, feel pain in some way, and that appropriate measures should be taken to minimize their suffering. Her work on this topic was referenced in award-winning novelist Ian McEwan's 2005 novel "Saturday." Braithwaite published her book, "Do Fish Feel Pain?" in 2010. Her aim in writing it was to present the latest research on fish cognition and neurobiology so as to promote informed discussion. Throughout the pages, Braithwaite's unbiased approach to investigation is clear. In addition to her scientific knowledge, Braithwaite's natural curiosity and enthusiasm also come through in her book. In the preface, she mentions that the more she learned about the biology, physiology and behavior of fish, the more engrossed she became. "They really are seductive," she wrote. "My family knows this to their cost because I can rarely pass a pond, stream or river without stopping to search for a tiny bit of movement, the slightest flash of silver that betrays a fish's position." She joked about the role reversal with her children in which they sometimes had to drag her away from the water's edge. In her more recent work, Braithwaite examined the effects of introducing variability, such as rocks and plants, to salmon and trout hatcheries. She found that providing a more natural environment for young salmon increased their cognitive abilities and, thus, their survival rates upon being released into the wild. "She always displayed a high level of professionalism," said David Eissenstat, interim head and professor of ecosystem science and management at Penn State. "She set high standards for her own research and teaching, as well as for her students and colleagues." Indeed, Braithwaite was a dedicated mentor. "Not only has Victoria supported me throughout my time at Penn State, but she is a strong supporter of all women scientists," said Tracy Langkilde, professor and head of the Department of Biology at Penn State. "She empowers and supports them to succeed." Peter Hudson, Willaman Professor of Biology and former director of the Huck Institutes of the Life Sciences, was involved in Victoria's appointment to the Penn State faculty in 2007. "I recall well her interview talk, probably the best I've ever heard," he said. "She started by talking about fish biology and experiments, but then expanded to rivers and landscapes, step-by-step exposing the issues and providing experimental insights facing migratory fish, and all done with superb logic and science. She was such a remarkable leader and scientist that she was later awarded the Dorothy and Lloyd Huck Chair in Behavioral Biology. I can't help but smile as I think about the meeting where we nominated her and she received totally unanimous support." In recognition of her scientific achievements, Braithwaite was named a Fellow of the Linnean Society and of the Institute for Advanced Study in Berlin. In 2006, she was awarded the Fisheries Society of the British Isles Medal for her research on pain in fishes. She received a bachelor's degree in zoology and doctorate in animal behavior at the University of Oxford in the United Kingdom. After serving on

	the faculty of Edinburgh University for 12 years, she moved to Penn State in 2007, where, in addition to conducting research, she taught animal behavior and animal welfare classes to undergraduate and graduate students. Despite all of her honors and achievements as a scientist, Braithwaite was an unassuming and modest person. “She was diplomatic yet understated,” said Avery. “She didn’t need to promote herself because everything she did spoke volumes about her prominence as a scientist and kindness as a human being.”
OB6	Ellen Fanning, Stevenson Professor of Biological Sciences and a professor of the Howard Hughes Medical Institute, died on Sunday morning, Sept.1, after a lengthy battle with amyotrophic lateral sclerosis (ALS). “Ellen Fanning was a valued colleague and a dear friend and her death is a great loss for all who knew her. Of her many accomplishments and awards, I think the one for which she was most proud was the Howard Hughes Undergraduate Research Program that she directed,” Provost Richard McCarty said. “She worked tirelessly on behalf of her students, and the structure of her program was replicated at other colleges and universities across the country. Her leadership on campus will be sorely missed.” Fanning joined the Vanderbilt faculty in 1995. In 2002, she was one of 20 research scientists nationwide to receive $1 million over the following four years from the Howard Hughes Medical Institute as part of an initiative intended to encourage researchers to put as much creativity into undergraduate education as they did into research. She used the funds to build what she called a “Community of Scholars” to give participating Vanderbilt undergraduates hands-on research experience. Many of her former undergraduate and graduate students went on to careers in science and medicine. “Ellen Fanning was among the most distinguished scientists among faculty in the College of Arts and Science. She was also a deeply dedicated mentor to undergraduate and graduate students and younger faculty,” Carolyn Dever, dean of the College of Arts and Science and professor of English, said. “She was a great person and a true pioneer. This is a huge loss for Vanderbilt and for the scientific community.” Fanning received her Ph.D. in 1977 from the University of Cologne in Cologne, Germany. She held faculty positions at the University of Konstanz and the University of Munich in Germany before coming to Vanderbilt. Fanning’s research focused on DNA replication in mammalian cells. Control of DNA replication is one of the key processes in the regulation of the mammalian cell cycle. Misregulation of the cell cycle can arise at several stages and is an important causative factor in a variety of human diseases, the most frequent being cancer. The long-term goal of her laboratory’s research is to understand in molecular detail the mechanisms that control DNA replication in mammalian cells. “The faculty of the Department of Biological Sciences and I join Ellen’s many colleagues and friends throughout the university in our shared sadness over her death,” said Charles Singleton, chair and professor of biological sciences. “Ellen’s many contributions in teaching, in research and in service were invaluable to our department and to Vanderbilt. The many local, national and international awards and honors bestowed on Ellen testify to her stature in the academic community and reflect her numerous scientific contributions to the field of genome replication and maintenance. I know I speak for her students and our faculty in saying that we will all miss Ellen both personally and professionally.” Fanning she served as chair of the Department of Molecular Biology from 1999 to 2002. She was the recipient of the Chancellor’s Cup in 2005 and a Chancellor’s Award for Research in 2006. While a professor in Germany, Fanning was elected in 1995 to membership in the European Molecular Biology Organization. In 2007 Fanning was elected as a member of the American Association for the Advancement of Sciences and to the German Academy of Sciences Leopoldina, the oldest German-speaking society of scholars, for her scientific achievements and her personal standing. In 2008, Fanning was the recipient of the Alexander von Humboldt-Forschungspreis, Germany’s highest research award for senior U.S. scientists and scholars, and in 2010 she was elected as a fellow in the American Academy of Microbiology, an honorific leadership group within the American Society for Microbiology, the world’s oldest and largest life science organization. Fanning served on several study sections at the National Institutes of Health and on several editorial boards, most recently for the Journal of Biological Chemistry. Among the many advisory committees on which she has served, Fanning was especially proud to serve with the Shaw Scientist Advisory Board of

	the Greater Milwaukee Foundation that oversees awards supporting young scientists performing groundbreaking genetics and cancer research. Fanning is survived by her husband, Stephen E. Pryor, and extended family members. The family asks that donations in memory or in honor of Fanning be made to the ALS Association.
OB7	Nancy Wade, who became Old Dominion's first female professor of biology during a four-decade career at the University, died Jan. 20. She was at age 80. Wade taught introductory biology classes to freshmen and indelibly touched the lives of budding scientistswith her unique style of teaching. "She had an enormous influence on generations of students in her 40 years as a faculty member at ODU," said Gail Dodge, dean of the College of Sciences. "Often when I speak to biology alumni, they mention the very positive impact that Nancy Wade had on them as students. Some credit her with setting them on the path to success." "She had a reputation: students knew her knowledge of biology was vast - they also knew her standards were high," added Christopher Osgood, chair of biological sciences. "Introductory biology was not an easy course and students often felt the challenges they faced in her course were excessive, but typically they came to appreciate not just what they learned about biology, but what they learned about themselves." "Nancy had a real passion for teaching. Either students loved her or hated her," said Lytton John Musselman, Mary Payne Hogan distinguished professor of botany and manager of the Blackwater Ecologic Preserve. "They thought Nancy was either intimidating or inspirational. Numerous students have related to me how she taught them for the first time how to really study and that this prepared them for college courses. She was demanding. One of my daughters took her course after earning an A in an advanced placement high school biology course and had to work hard to earn an A with Nancy." Prior to joining ODU, Wade attended Meredith College, then transferred to East Carolina University (formerly College) for her Bachelor of Science and Master of Science in Biology. She was from Henderson, North Carolina. She sought out a position at ODU and started in the Department of Biological Sciences in 1964. She was hired by then-biology chair Harold Marshall. "She showed up in a Volkswagen Beetle in her overalls and asked if they needed a biology teacher," said Mary Hayward, biological sciences departmental laboratory manager. Her pioneering role as a biology professor earned the respect of her colleagues and her students. "I have such fond memories of Nancy Wade," one of her former students said. "What I remember most is her being unapologetically herself in a world where women were still breaking in. The best biology I learned from her was to be a strong woman." "You had to fight, being a female," Hayward added. Many of her students received top honors from the annual College of Sciences awards ceremony, the Charles Kaufman Prize, and went on to achieve even more professionally. "There are many students who made their way to later become physicians," Hayward said. Dr. Allan Kirk '83, chief of surgery at Duke University, credits Wade for his success."I still go back to the things Nancy Wade said in Bio 101," said Kirk, the son of the late Paul Kirk, a colleague of and mentor to Wade. "It helps me understanding how stuff works now." Wade was one of the original instructors involved with the College of Sciences Learning Communities on campus and was active in that program until her retirement. "When I meet ODU graduates and they learn I am in biological sciences, they invariably query about the instructor they had for general biology and proceed to relate their favorite Nancy story," Musselman said. "She had very high expectations, and many alumni report that they had to work very hard to meet them," Dodge added. "Those of us who taught those same students later in their careers could count on their solid grounding in biology and their understanding that our expectations were high - we knew that they had been given an excellent start by Professor Wade's class," Osgood said. She served in multiple roles at ODU including dean of women. She participated in "Pie a Professor" events to help raise funds for the American Red Cross. Taking care of the environment was important as well. She volunteered and worked to restore the wetlands at the Lafayette River behind Larchmont Elementary School. After retirement she returned to ODU and volunteered as a mentor to countless Monarchs. Aside from her honesty, "there was a kindness about her," Hayward said. "Every step of everything she did had kindness to it." A memorial service will be scheduled when a congregate gathering can be safely held.

OB8	Longtime California Lutheran University biology professor Barbara Collins died in her sleep Tuesday. She was 84. Collins, who had been suffering from an incurable bacterial lung disease, died at home with her husband of 58 years, Larry, by her side. The beloved professor was in her 50th year of teaching at CLU when she reluctantly stopped at the end of fall semester as the disease progressed. She was slated to retire in May with professor emerita status. Collins was a trailblazer in many ways. After earning a bachelor's degree from Bates College and a master's degree from Smith College, the New Jersey native became the first female to earn a doctorate in geology from the University of Illinois at a time when few women studied science. She returned to the University of Illinois to complete the requirements for a master's degree and doctorate in botany. She found her calling as a college professor. She taught at San Fernando Valley State College, which later became California State University, Northridge, for three years before becoming one of the first faculty members at CLU in 1963. As a woman in a man's profession, she worked full time while raising five children in the days before policies like maternity leave. Collins, who climbed Mount Whitney several times, shared her passion for nature with CLU students, taking them on scientific field trips in California's deserts, Hawaii, Australia, Fiji and New Zealand. Students named her Professor of the Year in 1996, and she received the President's Award for Teaching Excellence in 2007. She also received the national Sears-Roebuck Foundation Teaching Excellence and Campus Leadership Award in 1991. The Thousand Oaks resident worked to preserve open space and received a commendation from her city's mayor for helping to preserve Wildwood Mesa. The author of more than 10 textbooks, she identified about 100 plants for the Barbara Collins Arboretum at CLU and compiled an online directory of thousands of plants. Collins told the story of her life in "You Lead a Mean Trail: Life Adventures and Fifty Years of Teaching," which was released in August. The book's title came from a student who had declared, "Dr. Collins, you sure do lead a mean trail," as he struggled to keep up with her during a strenuous field trip. In addition to Larry, Collins is survived by their children Glenn, Greg, Kevin and Rachel. She was preceded in death by their daughter Beth. A memorial service will be held at 1 p.m. Saturday, May 11, in CLU's Samuelson Chapel. A reception will follow in the lobby of Ahmanson Science Center. In lieu of flowers, her family requests that donations be made to California Lutheran University for a scholarship to be established in her name.
OB9	Harry Rubin, a leader in the search to understand how viruses cause cancer — research that ultimately led to the discovery of cancer-causing genes called oncogenes — died on Sunday, Feb. 2, at the age of 93. Rubin was a professor emeritus of molecular and cell biology at the University of California, Berkeley. A veterinarian by training, Rubin began investigating in the 1950s how normal cells turn into cancer cells — a process called transformation. This was at a time before genes could be cloned and sequenced, and much of his research relied on manipulating cultured cells in a petri dish. Many labs were beginning to work with tumor viruses as the only tractable way to understand cancerous transformation, and Rubin chose to focus on a virus known since 1911 to cause cancer in chickens: the Rous sarcoma virus (RSV). RSV is an RNA virus, which means that it carries its genetic instructions in the form of RNA, not DNA. The virus tricks cells into reverse transcribing its RNA into DNA and integrating it into its own genome. "At that time, there was really no way of studying the molecular or genetic basis of cancer by studying cancer cells, because the genome of the cell is so enormous," said G. Steven Martin, one of Rubin's former postdoctoral fellows and a UC Berkeley professor emeritus of molecular and cell biology. "Before the advent of cloning and genetic sequencing, we couldn't look into the cancer cell and find the genes involved in cancer. Since tumor viruses have such small genomes and carry only a few genes, it was clear that studying tumor viruses would provide an entry point into the basic mechanisms of cancer." Between 1953 and 1958, Rubin worked as a postdoctoral fellow and, later, as a research fellow in the lab of virologist Renato Dulbecco at the California Institute of Technology in Pasadena. In 1955, Rubin showed that every cell in an RSV-induced tumor was capable of releasing the virus, implying that RSV was permanently associated with the host cell and suggesting that it plays a direct and continuing role in perpetuating the cell in its malignant state. Then, working with Caltech graduate student Howard Temin, Rubin developed a way to

	measure the amount of infectious virus using cultured fibroblast cells from chicken embryos. This opened the way for quantitative studies of the mechanism by which RSV transforms normal cells into cancerous cells. Dulbecco and Temin, along with David Baltimore, later shared the 1975 Nobel Prize in Physiology or Medicine for their work on tumor-causing viruses. When Rubin moved to UC Berkeley in 1958 to join the Department of Virology, he continued work on RSV and developed other assays, including one to detect avian leukosis virus in vaccines, such as the measles vaccine, that are produced in chicken cell cultures. He also showed that one strain of RSV was a replication-defective virus that could transform normal cells into cancer cells, but required a leukosis virus — a "helper virus" — to replicate and spread. In other words, the RSV could transform, but not replicate, itself, while the helper virus could replicate, but not transform. "This was one of the very first observations to suggest that the virus might carry information about cell transformation and tumorigenesis that was separate from the information needed for the replication cycle of the virus," Martin said. Rubin's work on RSV earned him a prized Lasker Award in 1964. "The work of Drs. Rubin and Dulbecco proves that cells can carry, for many generations, a foreign nucleic acid, whether RNA or DNA, that is responsible for the malignant properties of these cells," the Lasker Foundation wrote in giving them the award in clinical research. Rubin also received the 1961 Eli Lilly Award in Bacteriology and Immunology and the 1963 Merck Research Award for his work on RSV and was elected to the National Academy of Sciences in 1978. In 1970, a viral gene responsible for cancerous transformation, now known as viral src, or v-src, was identified through genetic and biochemical studies on RSV carried out by Martin, who was then in the Rubin lab, Peter Vogt at the University of Washington in Seattle and Peter Duesberg at UC Berkeley. This allowed Harold Varmus and Michael Bishop of UC San Francisco to identify an analogous gene in the cellular genome — a gene evidently stolen by the Rous sarcoma virus. Called cellular src, or c-src, it was the first known proto-oncogene, that is, a normal gene that, when mutated, can trigger cancer. Many more proto-oncogenes have been discovered since then. The discovery won Bishop and Varmus the 1989 Nobel Prize in Physiology or Medicine. "The significance of the work on the Rous sarcoma virus is that it led to the work on cellular genes that can cause cancer," Martin said. "The idea that, by studying the virus, one could get an insight into the cellular and genetic mechanism of carcinogenesis was, in fact, vindicated." Although Rubin's research set the stage for the discovery of oncogenes, by the early 1970s he had switched his focus from viruses to the biology of transformed cells, looking at the mechanisms of growth control and, in particular, the role of inorganic ions in cellular regulation. In later years, he studied the origin of spontaneous transformation of animal cells in culture, using this system as a model for tumor progression. Rubin is survived by his wife, Dorothy, of Berkeley; three children, Andrew, Janet and Clinton Rubin; six grandchildren; and six great-grandchildren. He and his wife were longtime members of Congregation Beth Israel in Berkeley.
OB10	Winslow Briggs, a professor emeritus of biological sciences who explained how seedlings grow toward light, died Feb. 11 at Stanford University Medical Center. He was 90. Briggs established himself as a global leader in plant genetics and physiology, publishing landmark research on the molecular mechanisms that plants and other organisms use to sense and respond to light. He was remembered as a valuable colleague and friend. "Winslow Briggs was a most generous and welcoming colleague for me when I joined the Stanford faculty in 1961," said Philip Hanawalt, the Dr. Morris Herzstein Professor in Biology, Emeritus. "I appreciated his broad expertise in plant biology and he served importantly as an advisor to several of my graduate students." When a plant seedling germinates, it must be able to rapidly position itself to capture light as soon as it emerges from the soil. Briggs and his lab discovered and first characterized a pair of photo-sensitive receptors that mediate this response and enable the plant to grow toward the light so that it can convert solar energy, carbon dioxide and water into sugar – a process called photosynthesis. Over the years, work by Briggs and others revealed that these two receptors contribute to a plant's efficiency in other ways, including leaf growth and orientation, as well as the opening of the pores on a leaf's surface through which it takes in the carbon dioxide needed to manufacture sugars. "Winslow was a pioneer in understanding the role of light in plant development," said Paul

	Ehrlich, the Bing Professor of Population Studies, Emeritus. Briggs arrived at Stanford University in 1955 as an instructor in biological sciences after receiving his PhD from Harvard University. He had risen to full professor by 1967, when he left Stanford to take a faculty position at Harvard. He returned to Stanford's School of Humanities and Sciences in 1973, when he also became the director of the Department of Plant Biology at the Carnegie Institution, a position he held for two decades. After retirement in 1993, Briggs remained extremely influential in science as he pursued research on photoreceptors in plants and bacteria until the day of his death. Most recently, his team was working on elucidating the role of photoreceptors in the process by which symbiotic root bacteria can provide nitrogen to certain plants. "Plants are stationary, which means that they have to evolve complex methods to take advantage of every available resource, including sunlight," explained Zhiyong Wang, acting director of Carnegie's Department of Plant Biology. "Receptors such as those discovered by Winslow, found broadly in both plants and microbes, are a crucial part of not only how plants respond to and take advantage of their environmental conditions, but also how bacteria interact with their animal and plant hosts." Joe Berry, acting director of Carnegie's Department of Global Ecology, noted that Briggs was also recognized in his youth as an intrepid mountaineer with first ascents of peaks in Canada and Alaska. Briggs also volunteered for 40 years at Henry W. Coe State Park, about which he published a book of trails and where, in 2007, he organized volunteers to study recovery after a massive wildfire. During that time he discovered that chemicals in smoke stimulate the sprouting of seeds of rare plants that may lie dormant for many years until awoken by fire. Briggs was a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the Academy of Sciences Leopoldina, the Botanical Society of America, the American Society of Plant Physiologists, the American Society of Photobiology, the American Association for the Advancement of Science and the California Academy of Sciences. In 2007, the American Society of Plant Biologists, of which he was president in 1975 and 1976, gave him the Adolph E. Gude, Jr. Award for his "service to the plant science community." Two years later, the Japan Society for the Promotion of Science awarded him the prestigious International Prize for Biology for his "outstanding contributions to the advancement of basic research." He is survived by his wife of 63 years, Ann, whom he met while they were students at Harvard, and by his daughters Marion, Lucia and Caroline, as well as four grandchildren and one great-grandchild.
OB11	John Pearse, professor emeritus of ecology and evolutionary biology at UC Santa Cruz, died on Friday, July 31, at his home in Pacific Grove, California. He was 84 and had been in hospice care for several months after undergoing treatment for cancer and suffering a stroke. A leading authority on marine invertebrates and intertidal ecology, Pearse was a beloved teacher and mentor to generations of marine biologists. He pioneered long-term studies of kelp forests and intertidal ecosystems on California's Central Coast, was instrumental in establishing the marine science program at UC Santa Cruz, wrote and edited major textbooks and reference books in his field, and led several scientific organizations. His most enduring legacy, however, is likely to be the many students he inspired, mentored, and helped launch on successful careers in science. "John's ability to draw in students, to convey the pure excitement of basic research, was unparalleled," said James McClintock, who worked with Pearse as a UCSC undergraduate and later as a postdoctoral fellow, and is now an endowed professor of polar and marine biology at the University of Alabama, Birmingham. "I entered UCSC as an English major, and because of John I exited as a marine invertebrate zoologist headed off to a successful career," he said. "I have to think he is among the very best of the best teachers UCSC has had the good fortune to employ." Daniel Costa, director of UCSC's Institute of Marine Sciences, said Pearse combined teaching and research in his courses on intertidal biology and kelp forest ecology. "He taught students the science of marine ecology as they helped him collect data on marine organisms," Costa said. "He was an extremely knowledgeable natural historian and a superb experimentalist. Students and faculty alike would follow him around while he worked, discussing biology, politics, and humanity." Born in Boise, Idaho, Pearse attended high school in Tucson, Arizona, obtained his B.S. in zoology at the University of Chicago, and earned a Ph.D. in biology at Stanford

	University. He taught at the American University in Cairo, Egypt, and studied invertebrates in the Red Sea, but had to leave abruptly when the 1967 Six-Day War erupted. After four years as a researcher at the California Institute of Technology, he joined the biology faculty at UC Santa Cruz in 1971. After his retirement in 1994, Pearse continued to teach and conduct research as a professor emeritus. In 2000, he founded an educational program for high school students, initially run by UCSC's Seymour Marine Discovery Center, to teach students about the intertidal zone and continue the monitoring of coastal ecosystems he had begun in the 1970s. Eventually, the program grew to become a statewide citizen science program, the Long-Term Monitoring Program and Experimental Training for Students (LiMPETS), monitoring the coastal ecosystems of California's national marine sanctuaries. Although Pearse's research focused mostly on the California coast, his studies ranged from Antarctica to Japan. He was among the first biologists to work at McMurdo Station, overwintering in the Antarctic in 1961 and studying reproduction in the Antarctic sea star. Pearse Valley, an ice-free valley near McMurdo Sound, was named in recognition of his early contributions to Antarctic science. Pearse's wife Vicki Buchsbaum Pearse also studied marine invertebrates and was a research associate at the Institute of Marine Sciences. They were both honored in 2008 with a lifetime achievement award from the Western Society of Naturalists. Together with Vicki's parents, Ralph and Mildred Buchsbaum, they revised the classic invertebrate zoology textbook Animals Without Backbones and wrote another, Living Invertebrates, first published in 1987. They also coedited the seven-volume treatise Reproduction of Marine Invertebrates. Pearse served as president of the California Academy of Sciences, the Society for Integrative and Comparative Biology, the Western Society of Naturalists, and the International Society of Invertebrate Reproduction and Development. He received the California Academy of Sciences Fellows' Medal, its highest honor, in 2011. Pearse is survived by his brother Spencer, wife Vicki, son Devon, daughter-in-law Louise, and granddaughter Fiona. Donations in his memory may be made to support students in the marine sciences through UCSC's Institute of Marine Sciences and Long Marine Laboratory, the Western Society of Naturalists, California Academy of Sciences, or Society for Integrative and Comparative Biology.
OB12	Barry Sinervo, a professor of ecology and evolutionary biology at UC Santa Cruz known for groundbreaking research in evolutionary biology and on the impacts of climate change, died on Monday, March 15, in Santa Cruz. Sinervo had been battling cancer for six years, but remained active in teaching and research. He was 60. "The premature loss of Barry Sinervo's blazingly creative thinking is a blow for the campus and for evolutionary biology and conservation science," said Paul Koch, dean of UCSC's Division of Physical and Biological Sciences. Sinervo's research in evolutionary biology spanned population genetics, game theory, behavior, and physiology. His decades-long research on social systems and mating behavior in lizards led to a series of influential publications on the evolutionary dynamics and behavioral ecology of their mating strategies. Sinervo also led an international team of biologists in a survey of lizard populations worldwide that found an alarming pattern of population extinctions connected to climate change. Those findings, published in Science in 2010, led Sinervo to focus increasingly on the issue of climate change. He led collaborative research projects with a global network of scientists studying the impacts of climate change worldwide and worked to inform the public about the urgency of the growing climate catastrophe. In 2014, Sinervo helped establish the UC-wide Institute for the Study of Ecological and Evolutionary Climate Impacts (ISEECI) and served as its director, leveraging UC's Natural Reserve System to study how climate change will affect California ecosystems. "He really connected UCSC globally with researchers studying the impacts of climate change around the world, and he was an important mentor for many scientists in developing countries," said Bruce Lyon, professor of ecology and evolutionary biology. "There's been an outpouring of sympathy from around the world, and also celebration of his life and achievements. It's clear that Barry had a big impact on a lot of people." Sinervo was born in Port Arthur in Ontario, Canada. He earned his B.Sc. in biology and mathematics at Dalhousie University in Nova Scotia and his Ph.D. in zoology at the University of Washington in Seattle. He was an assistant professor of biology at Indiana University before joining the faculty at UC Santa Cruz in

	1997. For over three decades, Sinervo studied mating behavior in California's side-blotched lizards. His research showed, among other things, that three different throat colors in male lizards correspond with different behaviors and mating strategies. The competition between these strategies (aggression, cooperation, and deception) takes the form of a rock-paper-scissors game in which no single type can dominate the population, and the abundance of each rises and falls in cycles. Sinervo and his collaborators later discovered the same dynamic in an unrelated lizard species in Europe. More recently, he investigated how this type of mating system can be generalized and applied to other species, including mammals. Sinervo's research on the rock-paper-scissors game, starting with a landmark paper published in Nature in 1996, was influential in many areas beyond evolutionary biology and behavioral ecology. "Even economists reference Barry's lizards in their books on game theory," said Daniel Friedman, professor emeritus of economics at UCSC. "Rock-paper-scissors is an iconic game for game theorists, and Barry was the first to show an animal species plays this interesting game in its social system." Friedman and Sinervo collaborated on several papers, taught courses together on evolutionary game theory, and coauthored a book, Evolutionary Games in Natural, Social, and Virtual Worlds (2016, Oxford University Press). "He was a fun guy, alive with a new idea every minute. They didn't all work, but they were always fun to explore, and many were really good ideas that no one else would have thought of," Friedman said. "He was fearless and had his own way of looking at things. He reminded me of some of the early faculty, the type of people who made UCSC what it is." Sinervo's longtime collaborator Donald Miles, professor of biological sciences at Ohio University, said Sinervo's integrative perspective enabled him to see connections that broadened the impact of his work. "Where other people would see bits of the puzzle, Barry would see the whole picture," Miles said. "He's arguably one of the major contributors to our understanding of evolutionary processes and of species responses to climate change. He had a big impact not only with his publications but also through his teaching and the training workshops he organized in countries all over the world—he touched so many people." Despite his ongoing health challenges, Sinervo's passing took many of his colleagues by surprise. "It's a shock that he isn't with us now," Friedman said. "I was amazed how he was able to keep going—he was just having too much fun." Lyon, who has been co-teaching a behavioral ecology field course with Sinervo for two decades, including the current quarter, said Sinervo was eager to continue working with students. "All of us were kind of in awe of his spirit and how he handled everything that happened to him with such grace. He never lost his infectious enthusiasm for science and natural history," Lyon said. In the past year, while continuing to teach and maintain ongoing research collaborations, Sinervo was also devoting much of his time to completing a digital textbook on animal behavior. When his voice gave out, his wife stepped in to narrate the lecture videos. The book, Behavioral Genetics to Evolution, was published in January by Top Hat Marketplace. Sinervo is survived by his wife of 35 years Jeanie Vogelzang, son Ari Sinervo, sisters Kristiina Alariaq and Sirppa Sterling, and brothers Pekka Sinervo and Ken Sinervo. Donations in his memory may be made to 350.org.
OB13	Eugene L. Madsen, M.S. '81, Ph.D. '85, professor of microbiology, died Aug. 9 in Freeville, New York. He was 64. Madsen was a leading researcher of microbial processes in natural environments whose research and teaching career at Cornell spanned nearly four decades. His work advanced the understanding of the role microorganisms play in the cycling of carbon, nutrients and pollutant compounds in all natural habitats, such as soil, sediments and ground water. "Gene was an unusually talented and creative environmental microbiologist who pioneered many new methodological approaches in the 'real world' of natural environments," said William Ghiorse, professor emeritus in the Department of Microbiology. "This endeavor earned him great respect from his peers, and it showed his true genius for innovative science." Madsen, according to Ghiorse, was well-known in his field for long-term studies of the bioremediation processes in polluted natural sites. Those studies in upstate New York and elsewhere in the U.S. provided real-world sites in which to apply powerful molecular and field-oriented methods to microbial ecology and bioremediation processes. Madsen's research provided key insights into how microbially

	mediated processes affect environmental quality in polluted sites. Madsen came to Cornell in 1979 as a graduate student in the field of agronomy (now the Section of Soil and Crop Sciences in the School of Integrative Plant Science). He studied under soil microbiology professor Martin Alexander and after finishing his Ph.D. took a postdoctoral position at Pennsylvania State University. He later served for a year as senior microbiologist for a private company in Montana before returning to Cornell in 1989 as a research scientist. He was appointed a research assistant professor in 1992 and became an assistant professor in the newly formed Department of Microbiology in 1999. He became associate professor in 2002 and full professor in 2009. John Helmann, professor and chair of the Department of Microbiology, said: "This is truly a great loss to our department and to the Cornell community as a whole. He will be profoundly missed by everyone whose lives he touched." Madsen published more than 150 primary research papers and review articles in a variety of cross-disciplinary scientific journals, and was frequently invited to lecture around the world. His widely used textbook, "Environmental Microbiology: From Genomes to Biogeochemistry," is based on a course he taught for years at Cornell. Along with his credentials as a research scientist, Madsen was a dedicated instructor who taught courses in environmental science and sustainability, environmental microbiology, science communication, and others to undergraduate and graduate students. Ghiorse described Madsen as a kind, generous and caring teacher and adviser. He was a member of the graduate fields of microbiology and environmental toxicology at Cornell, and the American Society for Microbiology, the American Chemical Society, the Society for Environmental Toxicology and Chemistry, and the American Association for the Advancement of Science. He is survived by his widow, Jane '78, and two daughters, Cecelia '12 and Sidney '13. A memorial service open to friends, family and colleagues will be held Oct. 15 at 2 p.m. in Stocking Hall. Donations to the Eugene Madsen Fund for WGYM (Women's Gymnastics Team) can be made to Big Red Athletics, Cornell University, Teagle Hall, ATTN: John Webster, Ithaca, NY 14853.
OB14	H. Gobind Khorana, MIT's Alfred P. Sloan Professor of Biology and Chemistry emeritus, died of natural causes in Concord, Mass., Wednesday morning. He was 89. A winner of the 1968 Nobel Prize in physiology or medicine, Khorana devoted much of his scientific career to unraveling the genetic code and the mechanisms by which nucleic acids give rise to proteins. "Gobind was a brilliant, path-breaking scientist, a wise and considerate colleague, and a dear friend to many of us at MIT," said Chris Kaiser, MacVicar Professor of Biology and head of the Department of Biology, in an email announcing the news to the department's faculty. Khorana was born in India in 1922, in a small village called Raipur, in the region of Punjab that is now part of Pakistan. He was the youngest in a Hindu family of one daughter and four sons; his father was a patwari, an agricultural taxation clerk in the British Indian system of government. In an autobiographical note written upon winning the Nobel Prize, Khorana wrote: "Although poor, my father was dedicated to educating his children and we were practically the only literate family in the village inhabited by about 100 people." Khorana attended high school in the nearby city of Multan before enrolling in Punjab University, where he received his bachelor's degree in 1943 and master's in 1945, both in chemistry and biochemistry. Upon graduating, he received a fellowship from the Indian government to study at the University of Liverpool in the U.K., where he received his PhD in 1948. He did postdoctoral work at Switzerland's Federal Institute of Technology, where he met his wife, the late Esther Elizabeth Sibler. Feeling lost in a new country, Khorana later wrote: "Esther brought a consistent sense of purpose in my life at a time when, after six years' absence from the country of my birth, I felt out of place everywhere and at home nowhere." After returning to the U.K. for another postdoc position in Cambridge, Khorana and his wife created a new home together in Vancouver, Canada, where he took a job at the British Columbia Research Council in 1952. "Gobind was so excited that he was going to start a lab of his own. He looked at the map of Canada, saw where Vancouver was for the first time, and off he went," says colleague Uttam Rajbhandary, MIT's Lester Wolfe Professor of Molecular Biology, recalling Khorana's telling of how he accepted the position. Khorana stayed in Vancouver for eight years, continuing his pioneering work on proteins and nucleic acids while raising two daughters, Julia Elizabeth and

	Emily Anne, and a son, Dave Roy. In 1960, he went to the University of Wisconsin at Madison, where he became co-director of the Institute for Enzyme Research. It was at Wisconsin that Khorana and colleagues worked out the mechanisms by which RNA codes for the synthesis of proteins, leading to the Nobel Prize in 1968, which Khorana shared with Robert Holley of Cornell University and Marshall Nirenberg of the National Institutes of Health. Khorana was among the pioneers of the now-familiar series of three-nucleotide codons that signal to the cell which amino acids to use in building proteins — for example, uracil-cytosine-uracil, or UCU, codes for the amino acid serine, while CUC codes for leucine. After discovering this key biological code, Khorana became interested in replicating the process synthetically. In 1970 he joined MIT, where he continued at the forefront of the ballooning field of genetics. Shortly after arriving at the Institute, Khorana — along with colleagues — announced the synthesis of two different genes crucial to protein building. In a major breakthrough in 1976, they managed to complete the synthesis of the first fully functional manmade gene in a living cell. This method of chemically synthesizing genes made possible controlled, systematic studies of how genetic structure influences function. In the decades that followed, Khorana became interested in other cellular components, including biomembranes and, in the visual system, rhodopsin — the pigment on the eye's retina that is responsible for the first step in the biological perception of light. He retired from the MIT faculty in 2007. In addition to his strong research ethic, Khorana took pride in mentoring younger scientists. "Even while doing all this research, he was always really interested in education, in students and young people," says his daughter, Julia Khorana '75. "After he retired, students would come to visit and he loved to talk to them about the work they were doing. He was very loyal to them, and they were very loyal to him, too." Rajbhandary says he will remember Khorana for his drive and focus, but also his humility. "As good as he was, he was one of the most modest people I have known," he says. "What he accomplished in his life, coming from where he did, is truly incredible." In addition to the Nobel, Khorana won many other professional awards, including the Louisa Gross Horwitz Prize from Columbia University and the Lasker Foundation Award for Basic Medical Research, both in 1968; the Willard Gibbs Medal of the Chicago section of the American Chemical Society, in 1974; the Gairdner Foundation Annual Award, in 1980; and the Paul Kayser International Award of Merit in Retina Research, in 1987. He was a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences, among other distinguished professional memberships. Khorana is survived by his daughter, Julia, and son, Dave. A memorial service is being planned.
OB15	Dale Kaiser, PhD, a Lasker Award-winning professor emeritus of biochemistry and of developmental biology at the Stanford University School of Medicine, died June 5 at his home in Stanford, California. He was 92. Kaiser's pioneering research on a virus that infects bacteria was instrumental in ushering in the era of recombinant DNA, or gene splicing, technology. Gene splicing allows scientists to study genes by stitching them into the DNA of cells. It also enables biotechnologists to produce proteins by the batch in bioreactors. This, in turn, has enabled the bulk production of drugs ranging from antibodies to insulin. "Dale Kaiser's discoveries transformed the fields of molecular biology and genetics," said Lloyd Minor, MD, dean of the School of Medicine. "His research also advanced scientists' understanding and appreciation of signaling mechanisms in developmental biology. He was renowned for his teaching, and he was praised by all for his towering scientific integrity. We will all miss him." "Dale was one of the founders of molecular genetics during the time the field emerged," said Roeland Nusse, PhD, professor and chair of developmental biology, Virginia and D. K. Ludwig Professor in Cancer Research and Reed-Hodgson Professor in Human Biology. "He was a creative and original scientist. He was also modest and very kind. Few people who met Dale casually would have guessed that much of our current understanding of molecular genetics originated from his brilliant insights." In 1980, Kaiser shared the Albert Lasker Award for Basic Medical Research with Paul Berg, PhD, now professor emeritus of biochemistry; Stanley Cohen, MD, professor of genetics and of medicine; and Herbert Boyer, PhD, then a professor of biochemistry at the University of California-San Francisco, for their work on gene splicing. Born Armin Dale Kaiser on Nov. 10,

	1927, in Piqua, Ohio, the young Kaiser displayed two hallmark features of a budding scientist: a propensity for making explosives and a deep-seated drive to fix broken radios. After serving in the Army Signal Corps from 1945 to 1946, the 6-foot-2-inch veteran attended Purdue University, graduating in 1950 with a degree in biophysics. He earned a PhD in biochemistry in 1955 at the California Institute of Technology, where he met his future wife of 67 years: Mary Durrell, a technician in his lab. At Cal Tech, Kaiser became interested in a bacteriophage — a virus that infects bacteria — called lambda. This bacteriophage could develop, by some mysterious switching mechanism, in either of two directions after invading E. coli. Like all viruses, lambda could commandeer the cell's replicative machinery to generate multiple copies of itself. Alternatively, like some but not all viruses, lambda could sew its own tiny genome into that of its bacterial host. There it would sit, replicating only as a feature of the dividing cell's own genome, until some environmental signal indicating stress on the part of the cell awakened the dormant phage and rendered its host a factory for viral proliferation. Kaiser's curiosity about how this switching happens turned him into a world-class expert on the lambda genome, whose relative simplicity made it an ideal experimental system. After a postdoctoral fellowship at the Pasteur Institute in Paris from 1956 and 1957, Kaiser was hired as an instructor by Arthur Kornberg, MD, then chair of Washington University's department of microbiology, to become the department's resident virologist. In 1959, the department — all six faculty members — moved as a unit to the Stanford School of Medicine to establish its Department of Biochemistry. Kornberg, who received the Nobel Prize in physiology or medicine that year, was its chair. Kaiser rose from assistant professor to associate professor in 1961 and to full professor in 1966. He served as departmental chair from 1984 to 1989, when he became a founding professor of the medical school's Department of Developmental Biology. Kornberg had purified DNA polymerase, the molecular machine that we now know copies every living species' genetic material, and had shown that DNA polymerase could indeed make DNA copies from genomic templates. But it was Kaiser who proved that DNA polymerase faithfully replicates the encoded message of DNA. A DNA molecule is a lengthy sequence of four chemical units, or bases, often referred to by the initials A, T, G and C, that hook up one after another like links in a chain. Two of these bases, A and T, have a chemical attraction to one another; the other two, G and C, likewise share a mutual attraction. These tails on opposite ends of the lambda chromosome had been shown to have an affinity for one another, and their fusion turned the linear lambda chromosome into a circular ring. Kaiser also invented an efficient new way to introduce bits of DNA into bacterial cells to see how they affected the cells' behavior. By doing this, he could discern the roles of individual lambda genes. In the early 1970s, Kaiser shifted his focus to the study of soil-dwelling bacteria called Myxobacteria. These one-celled organisms travel in microbial "wolf packs": orchestrated swarms of tens of thousands of individual cells. Swarming enables the extracellular accumulation of enzymes required to digest insoluble organic substances in the soil. The co-author of roughly 400 peer-reviewed papers, Kaiser was a meticulous writer. Kim recalled Kaiser's returning 23 serial drafts of the same paper to him for revision. Kaiser won the U.S. Steel Award in Molecular Biology in 1970, the Waterford Prize for Basic Medical Research in 1981 and the Genetics Society of America's Thomas Hunt Morgan Award in 1992. He was president of the society in 1993 and 1994. He was a member of the National Academy of Sciences, of the American Academy of Arts and Sciences, and of the American Society of Biological Chemists. Besides his wife, Kaiser is survived by a son, Christopher Kaiser, of Cambridge, Massachusetts; and a daughter, Jennifer Lee, of Maricopa, California. No memorial service is planned.
OB16	Thomas C. Alber, an accomplished structural biologist known for his scientific integrity, mentorship, and collegial spirit, died in Berkeley on March 28, 2014. His impressive academic career in structural biology was cut short after a courageous five-year battle with amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease. He was professor of molecular and cell biology and Chancellor's Class of '43 chair at the University of California, Berkeley. Alber was born in Tokyo, Japan, on January 5, 1954. He grew up in post-World War II Japan, which provided him the opportunity of a bilingual and bicultural education. He moved to the United

States at the age of 10, and grew increasingly interested in science, an interest amplified by a teacher who taught college-level anthropology at his high school. He then honed his growing intellectual curiosity as an undergraduate at the University of California, Santa Cruz, where, as a chemistry major, he worked with the late Professor Anthony "Tony" Fink. This experience, which led to his first publication, "Crystal Structure of Elastase-Substrate Complex at -55° C," in the journal Nature, proved transformative for Alber and initiated his career of using protein crystallography to answer questions about proteins and their function. As a graduate student at the Massachusetts Institute of Technology, Alber worked under the guidance of Professor Gregory A. Petsko as Petsko's first graduate student. While a graduate student, Alber elucidated the crystal structures of an elastase-substrate complex and a bacterial periplasmic galactose-binding protein, but it was his five papers on the atomic-resolution crystal structure of triose-phosphate isomerase and its catalytic mechanism that set a standard for the field and remain classics of the art. From 1981, he dedicated six years to postdoctoral studies with Brian W. Matthews at the University of Oregon. Under Matthews, Alber exploited the structure and site-directed mutagenesis of bacteriophage T4 lysozyme to analyze the features of secondary and tertiary structure that contribute to the stability of this protein, leading to results that are now also considered textbook classics. This work was featured in a major review he authored entitled, "Mutational Effects on Protein Stability," in the journal Annual Review of Biochemistry. In 1988, Alber became an assistant professor at the University of Utah before moving to the Department of Molecular and Cell Biology at UC Berkeley in 1992. By the time he died, he had authored more than 120 scientific publications. Gifted in recognizing key biological problems, he created clever biochemical and structural studies to solve them. His dedication to his research became legendary, as he steadfastly continued his research even as his health deteriorated, using voice recognition technology. As a recently hired faculty member, Alber was awarded the Pew Scholarship in 1998 for showing outstanding academic promise. At Berkeley, he worked on an array of problems with a string of innovative accomplishments focused on using structural biology to attack important problems in biology. He discovered a sophisticated system of protein communication within Mycobacterium tuberculosis, and identified proteins within this system that can be targeted with new drugs. He studied a large protein complex needed to express HIV genes, leading to the discovery of new potential targets for therapeutic intervention against HIV/AIDS. He developed new computational methods to examine X-ray data in order to reveal previously hidden alternative structures that have critical roles for protein function. In acknowledgment of his many important contributions, Alber received the Christian B. Anfinsen Award of the Protein Society in 2013 for his "foundational studies yielding an understanding of the structure/function relationship of proteins." During the 2003-04 academic year, Alber took a one-year sabbatical, spending the first semester at Plexxikon in Berkeley, where he searched for inhibitors of the serine and threonine protein kinases in Mycobacterium tuberculosis in order to uncover the functions of these proteins. He then spent the second semester at the Institute for Molecular Bioscience in Queensland, Australia, where he developed new experimental methods for structural genomics and explored the basis for signaling and target specificity in the serine and threonine protein kinases. During his time at UC Berkeley, Alber taught 10 different undergraduate courses in various aspects of molecular and cell biology, from the fundamentals of molecular biology to advanced biophysical chemistry. Alber was particularly proud of the large number of graduate students and postdoctoral fellows who trained with him and have gone on to make substantial contributions to our understanding of structural biology. Former mentees remember Alber as someone who cared deeply for his students and treated them as his colleagues – "from the moment they entered the lab and long after they left, [Alber] saw them as equals," said James Holton, a former student. Even with his disability, "he worked with and helped his postdocs do their own best work by mentoring and coaching," said Joan Alber, his sister-in-law. "He said it was the most powerful teaching he had ever done." Alber was known for his ability to span a wide range of scientific disciplines, to see connections between disparate fields and to extract fundamental insights from complex data sets. He had a collaborative spirit and was extremely dedicated to his department, campus, and

	professional societies. In 2008, he was named UC Berkeley Chancellor's Class of '43 Chair. Recognizing his uniquely inclusive and pioneering nature, he was also named as the founding director of the Henry Wheeler Center for Emerging and Neglected Diseases, and as head of the Stanley Donner Administrative Services Unit. Alber's enthusiasm and energy extended beyond academic pursuits. He loved his children and as they grew, he delighted in their moments of self-discovery where they developed their own interests and passions in life. Alber was also an ardent outdoor enthusiast – he enjoyed hiking, climbing, skiing, and was a dedicated long distance runner. Impressively, right up until just a few days before he died, although his body was failing, his spirit never dimmed. He was still meeting with friends and colleagues, writing papers, and enjoying the natural beauty of the Bay Area. Alber is survived by his children, Josh, Emily, and Mackenzie. He is also survived by their mother Julie Nye and his brothers William, Chad, and Don Alber.
OL1	Professor Emerita Catherine Vakar Chvany, a renowned Slavic linguist and literature scholar who played a pivotal role in advancing the study of Russian language and literature in MIT's Foreign Languages and Literatures Section (now Global Studies and Languages), died on Oct. 19 in Watertown, Massachusetts. She was 91. Chvany served on the MIT faculty for 26 years before her retirement in 1993. Global Studies and Languages head Emma Teng noted that MIT's thriving Russian studies curriculum today is a legacy of Chvany's foundational work in the department. And, Maria Khotimsky, senior lecturer in Russian, said, "Several generations of Slavists are grateful for Professor Chvany's inspiring mentorship, while her works in Slavic poetics and linguistics are renowned in the U.S. and internationally." A prolific scholar, Chvany wrote "On the Syntax of Be-Sentences in Russian" (Slavica Publishers, 1975); and co-edited four volumes: "New Studies in Russian Language and Literature" (Slavica, 1987); "Morphosyntax in Slavic" (Slavica, 1980); "Slavic Transformational Syntax" (University of Michigan, 1974); and "Studies in Poetics: Commemorative Volume: Krystyna Pomorska" (Slavica Publishers, 1995). In 1996, linguists Olga Yokoyama and Emily Klenin published an edited collection of her work, "Selected Essays of Catherine V. Chvany" (Slavica). In her articles, Chvany took up a range of issues in linguistics, including not only variations on the verb "to be" but also hierarchies of situations in syntax of agents and subjects; definiteness in Bulgarian, English, and Russian; other issues of lexical storage and transitivity; hierarchies in Russian cases; and issues of markedness, including an important overview, "The Evolution of the Concept of Markedness from the Prague Circle to Generative Grammar." In literature she took up language issues in the classic "Tale of Igor's Campaign," Teffi's poems, Nikolai Leskov's short stories, and a novella by Aleksandr Solzhenitsyn. "Catherine Chvany was always so present that it is hard to think of her as gone," said MIT Literature Professor Ruth Perry. "She had strong opinions and wasn't afraid to speak out about them." Chvany was born on April 2, 1927, in Paris, France, to émigré Russian parents. During World War II, she and her younger sister Anna were sent first to the Pyrenees and then to the United States with assistance from a courageous young Unitarian minister's wife, Martha Sharp. Fluent in Russian and French, Chvany quickly mastered English. She graduated from the Girls' Latin School in Boston in 1946 and attended Radcliffe College from 1946 to 1948. She left school to marry Lawrence Chvany and raise three children, Deborah, Barbara, and Michael. In 1961-63, she returned to school and completed her undergraduate degree in linguistics at Harvard University. She received her PhD in Slavic languages and literatures from Harvard in 1970 and began her career as an instructor of Russian language at Wellesley College in 1966. She joined the faculty at MIT in 1967 and became an assistant professor in 1971, an associate professor in 1974, and a full professor in 1983. Historian Philip Khoury, who was dean of the School of Humanities, Arts and Social Sciences during the latter years of Chvany's time at MIT, remembered her warmly as "a wonderful colleague who loved engaging with me on language learning and how the MIT Russian language studies program worked." Elizabeth Wood, a professor of Russian history, recalled the warm welcome that Chvany gave her when she came to MIT in 1990: "She always loved to stop and talk at the Tuesday faculty lunches, sharing stories of her life and her love of Slavic languages." Chvany's influence was broad and longstanding, in part as a result of her

	professional affiliations. Chvany served on the advisory or editorial boards of "Slavic and East European Journal," "Russian Language Journal," "Journal of Slavic Linguistics," "Peirce Seminar Papers," "Essays in Poetics" (United Kingdom), and "Supostavitelno ezikoznanie" (Bulgaria). Emily Klenin, an emerita professor of Slavic languages and literature at the University of California at Los Angeles, noted that Chvany had a practice of expressing gratitude to those whom she mentored. She connected that practice to Chvany's experience of being aided during WWII. "Her warm and open attitude toward life was reflected in her continuing interest and friendship for the young people she mentored, even when, as most eventually did, they went on to lives involving completely different academic careers or even no academic career at all," Klenin said. Chvany is survived by her children, Deborah Gyapong and her husband Tony of Ottawa, Canada; Barbara Chvany and her husband Ken Silbert of Orinda, California; and Michael Chvany and his wife Sally of Arlington, Massachusetts; her foster-brother, William Atkinson of Cambridge, Massachusetts; six grandchildren; and nine great grandchildren. A memorial reception will be held on Sunday, Nov. 18, from 1:30 to 4:00 p.m. in the Samberg Conference Center, 7th floor. Donations in Chvany's name may be made to the Unitarian Universalist Association. Visit Friends of the UUA for online donations. Please RSVP to Michael Chvany, Mike@BridgeStreetProductions.com, if you plan to attend the memorial.
OL2	Lila R. Gleitman, professor emerita of psychology and linguistics in Penn's School of Arts and Sciences, died on August 8. She was 91. Dr. Gleitman was born in Brooklyn and graduated from the James Madison High School in Sheepshead Bay. After earning a bachelor's degree in literature from Antioch College, she entered graduate school in linguistics at Penn's School of Arts and Sciences, also working as a research assistant in Penn's department of linguistics. She studied under Zellig Harris and earned her master's degree in 1965 and her PhD in 1967. She began her academic career as an assistant professor at Swarthmore College, teaching there from 1968 to 1971. In 1972, she became the William T. Carter Professor of Education at Penn. She subsequently served as professor of linguistics and as the Steven and Marcia Roth Professor of Psychology at the University of Pennsylvania from 1973 until she retired in 2001. In 1991, Dr. Gleitman and Aravind Joshi of Penn Engineering founded the Institute for Research in Cognitive Science at Penn; she co-directed the center until 2001. Under Dr. Gleitman's leadership, the Institute for Research in Cognitive Science became a model for promoting interactions between psychology, linguistics, computer science, philosophy, neuroscience and other branches of inquiry that contribute to the computational study of the mind (a role inherited by Penn's MindCORE today). Dr. Gleitman's contributions to the study of language and cognition are renowned. In a career that spanned six decades, she explored questions pertaining to language in children and adults, such as how children acquire language, how language and thought are related, the nature of concepts, and the role of syntax in shaping the direction of word learning. She has earned particular acclaim for her work showing that children's keen sensitivity to syntactic structure plays a crucial role in their language acquisition. Dr. Gleitman and her collaborators' theory of syntactic bootstrapping enabled them to address many longstanding mysteries in the field, such as how blind children effortlessly acquire spoken language (including such words as "look" and "see," and color terms), and how deaf isolates invent sign language without exposure to any language at all. Dr. Gleitman was a legendary mentor who trained a long and distinguished list of psycholinguists, many of whom went on to become central figures in the field. As former colleagues John Trueswell, professor of psychology, and Anna Papafragou, professor of linguistics, note, "Lila was a tremendous colleague and teacher. Her secret weapon was to combine serious discourse with joy, laughter and, crucially, respect for all present. This was on full display each week, at the famous 'cheese seminar' held at her home and named in honor of the cheese she served. There, student projects were regularly discussed, shaped and improved through her exceptional ability to get to the heart of the matter. She was deeply interested in mentoring students throughout her entire career, with much of her best work coming from collaborations with students." Dr. Gleitman was widely recognized for her influential research: She was a member of the National Academy of Sciences and an elected fellow of the American

	Psychological Association, the Association for Psychological Science, the Society of Experimental Psychologists, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences. She served as President of the Society for Language Development, the Society for Philosophy and Psychology, and the Linguistic Society of America. Her publications include Phrase and Paraphrase (1970, with Henry Gleitman), Language Acquisition: The State of the Art (1982, co-edited with Eric Wanner), Language and Experience: Evidence from the Blind Child (1985, with Barbara Landau), Sentence First, Arguments Afterward: Essays in Language and Learning (2020), and the upcoming Oxford Handbook of the Mental Lexicon (co-edited with Dr. Papafragou and Dr. Trueswell). Dr. Gleitman is survived by her two daughters, Claire and Ellen; and grandchildren, Zachary, Zoe, Philip and Lucas.
OL3	Carol Gilson Rosen, professor emerita of linguistics whose research interests included the theory of universal grammar, died Aug. 19 in Ithaca. She was 79. Rosen was a member of the Cornell faculty from 1978 to 2010. She mentored generations of Romance studies, linguistics and even music majors, as well as colleagues, graduate students and College Scholars in the College of Arts and Sciences. She received Cornell's Russell Award for excellence in teaching in 2010, and was recognized three times by seniors in the Merrill Presidential Scholars Program for her influence on their academic careers. "Carol was a very generous colleague and teacher," said Abigail Cohn, professor of linguistics. "She shared all her intro to linguistics materials with me as I prepared to teach my very first semester. I learned so much from her about teaching, about working with graduate students, about Romance languages and linguistics." Rosen regularly taught historical and comparative Romance linguistics, an old discipline renewed by current theoretical approaches. Her research was based in relational grammar, a framework she helped create, and focused on the Romance language family, especially Italian. She sought to build a theory of universal grammar that was free of Anglocentrism, and to discover how to best reveal and explain the regularities that run through the world's languages. "Carol was a foundational figure in the theory of relational grammar, an approach to human language structure which looks at how the grammars of languages differ in terms of basic 'grammatical relations' such as subject and object," said John Whitman, professor and department chair of linguistics. "She worked on many languages, including the New Mexico Tanoan language Southern Tiwa, but she was best known for her work on the Romance languages. "Her special loves were Romanian," Whitman said, "and Italian, which was featured in her courses and seminars on opera libretti [texts]. Those were attended by students from music and Romance studies as well as linguistics, and gave her a forum to work with her husband, [emeritus professor of music] David Rosen." Rosen translated the libretto of the 1606 baroque opera "Eumelio" for a performance held in March 2016 as part of the New Century for the Humanities Celebration for the opening of Klarman Hall, according to Molly Diesing, professor of linguistics. "Carol was one of the most formidable scholars I have had the privilege of knowing. She had a vast knowledge of the Romance languages and a mind of utter clarity. Her teaching materials were wonderfully informative and inventive," said Diesing, who also described Rosen as "wickedly funny." Rosen's publications include the widely used textbook, Romance Languages: A Historical Introduction (2010), co-authored with her former student Ti Alkire, M.A. '92, Ph.D. '00, senior lecturer of French and Italian language in the Department of Romance Studies. The book traces the changes that led from colloquial Latin to five major Romance languages: Spanish, French, Italian, Portuguese and Romanian. Prior to her retirement from Cornell, Rosen co-taught History of the Romance Languages I and II with Alkire. She also published in scholarly journals, including Language, Natural Language and Linguistic Theory, and the Journal of Linguistics. Rosen earned a bachelor's degree in mathematics from Columbia University in 1962 and a master's in Italian from the University of California, Berkeley, in 1965, where she later studied Romance philology. She earned her Ph.D. in linguistics from Harvard University in 1981. She joined the Cornell faculty in 1978 as an instructor and became an assistant professor in 1981. She was tenured as an associate professor of modern languages in 1987 and was named full professor in 1994. She taught in the former Department of Modern Languages and Linguistics and the Department of Linguistics.

OL4	Delia Graff Fara, a noted professor of philosophy of language at Princeton University, died peacefully at home July 18 after a chronic illness. She was 48. Fara served on Princeton's faculty for 11 years. She made exceptional contributions to her field and was a highly engaged member of the philosophy community, her colleagues said. "Delia was an eminent scholar, an extremely conscientious teacher and an exemplary department citizen," said Michael Smith, the McCosh Professor of Philosophy and department chair. Fara taught undergraduate and graduate courses on logic, semantics and the philosophy of language. To her students, "though she was scarily smart, she turned out to be funny, friendly and extraordinarily helpful to them when they began working with her," Smith said. Fara served on Princeton's faculty from 1997 to 2001 as an assistant professor, and then returned to Princeton in 2005 as an associate professor after teaching at Cornell University for four years. She was promoted to professor in 2012. In 1991, Fara earned her bachelor's degree in philosophy and government at Harvard University, and began her doctorate there that fall. In 1993, she transferred to the Massachusetts Institute of Technology and earned a Ph.D. in philosophy with a minor in linguistics. "She was devoted to her students," said Adam Elga, a professor of philosophy at Princeton who met Fara when they were both graduate students at MIT. "She was not only philosophically cool, but also, just plain cool," Elga said about their time in graduate school. "When she went to a conference, not only did she ask incisive questions, but was also legendary for singing at post-conference parties." In 2005, Fara was awarded the Princeton University Council of the Humanities Behrman Junior Fellowship, a two-year program designed to recognize exceptional humanists as they enter the ranks of the senior faculty, and to provide a forum for conversation and collaboration across disciplines. "As a philosopher and as a person, Delia was bold, strong and incisive," said Sarah-Jane Leslie, the Class of 1943 Professor of Philosophy, vice dean for faculty development, and director of the Program in Linguistics and Program in Cognitive Science. "She would ask the questions that no one else was asking, and challenge the orthodoxies that the rest of us took for granted." At the University, "she was a fearless advocate for people who were vulnerable or marginalized, and a spectacularly effective advocate for diversity," Leslie said. Fara was appointed the Equal Opportunity officer for the philosophy department in 2014, "a position she held with distinction," Leslie said. Fara's numerous publications include her influential article "Descriptions as Predicates," which was awarded the 2001 American Philosophical Association Article Prize for the best article published by a younger scholar in the previous two years. Fara built on this work, culminating in her 2015 paper "Names as Predicates," published in the journal Philosophical Review. Another of Fara's oft-cited papers is "Shifting Sands: An Interest-Relative Theory of Vagueness," originally published in 2000 in Philosophical Topics and since reprinted in other publications. She was co-editor of "The Routledge Companion to the Philosophy of Language," a collection of 70 essays from leading scholars published in 2012. Over the years, Fara co-organized the annual Philosophical Linguistics and Linguistical Philosophy (PhLiP) conference, which brings together researchers working at the intersection of philosophy and linguistics. The most recent conference took place in Tarrytown, New York, last September. A blog post in memory of Fara by the Collegium of Black Women Philosophers notes: "Fara was a treasured member of multiple fields in philosophy. During her tragically short career, she produced, even in its later stages when she was beset by illness, work that has permanently altered the landscape of analytic philosophy. " Elga recalled a time when a colleague asked Fara how best to write a piece of philosophy. "Her reply was, 'Clearly lay out a philosophical problem that grabs the reader, and find pure joy in addressing it,'" he said. "It strikes me now that in life she clearly laid out her priorities in philosophy and her family, and found pure joy in addressing them." Fara is survived by her husband, Michael, and daughter, Clarissa. Memorial donations may be made to Camp Kinderland in Easthampton, Massachusetts.
OL5	Lenora "Nora" Timm, a professor emerita of linguistics and former associate dean of Graduate Studies, died Nov. 22, 2016, at age 73 after a recurring battle with cancer. She was an internationally known expert on Breton, an endangered Celtic language of Brittany in northwest France. Family, friends and colleagues also remembered her as a fearless advocate for UC Davis

students, a fair-minded champion of social justice, and an environmentalist who helped preserve thousands of acres of threatened wildlife habitat in California, Wyoming, Nevada and New Mexico. Among other conservation efforts, Timm and her husband, biologist Frank Maurer, spearheaded the creation of the Quail Ridge Reservet o preserve native grasses and oak woodlands in Napa County near Lake Berryessa. Now close to 2,000 acres, Quail Ridge is part of the UC Natural Reserve System. She was also a faculty member and past director of the former Nature and Culture program, which from 1991 to 2011 offered undergraduates a major that combined environmental studies with the humanities. “She was wonderfully and widely intelligent, engaged in a variety of eclectic interests,” said Carol Wall, former vice chancellor of Student Affairs, who had been both teacher and colleague to Timm. “She was bright and witty, excellent company.” Wall was a faculty member and graduate advisor in the Department of Anthropology when Timm began graduate studies there in the late 1960s. “She was an excellent student, always bringing novel perspectives to seminar discussions and enlivening them,” said Wall, who chaired Timm’s dissertation committee. After earning her Ph.D. in 1973, Timm joined the linguistics faculty. While her doctoral thesis focused on “A Child’s Acquisition of Russian Phonology,” she would go on to also study language and gender, minority languages, and “code-switching” (when bilingual speakers alternate between languages in a single conversation). In one of her most widely cited studies, she showed that bilingual English-Spanish speakers were not using a simplified creole but following the grammar of each language. Proficient in seven languages in addition to her native English — Breton, French, Italian, Spanish, German, Russian and Latin — Timm was best known for her work on Breton, which is spoken by an estimated 200,000 people and has been designated by UNESCO as a “severely endangered” language. She was a founding member and longtime president of the U.S. Branch of the International Committee for the Defense of the Breton Language. Lois Kuter, an ethnomusicologist active with the Breton organization, said Timm wrote scholarly articles on the shifting borders, both geographically and socially, of the language’s use in Brittany.“She was not timid about writing articles that demonstrated the challenges and roadblocks France put in the way of Bretons trying to promote their language,” Kuter said. Timm introduced the works of a 20th-century Breton poet to English speakers with the publication of her 1990 book, A Modern Breton Political Poet, Anjela Duval: A Biography and an Anthology. [Timm's translations can also be read on a site devoted to Duval's work.] When the linguistics program became a full-fledged department in fall 1999, Timm became department chair, a position she held until 2007, with one year off in 2005-06. As chair, she led efforts to launch the Ph.D. program in linguistics. “We called her our founding mother,” said Almerindo Ojeda, professor of linguistics. Like other colleagues, Ojeda described Timm as a champion of students. He said she once bundled a graduate student with a toothache into her car and took him to the dentist herself. She also advocated for female colleagues, chairing an advisory committee on the status of women at UC Davis in 1982-83, directing the Women’s Resources and Research Center from 1983 to 1989, and co-authoring a 1989 report, “Academic Women at the University of California, Davis: Institutional Barriers to Retention and Promotion and Recommendations for Action.” In addition, she served from 1995 to 1998 as a special assistant to the provost for diversity and affirmative action. “We stood side-by-side on many issues: what was best for students, the appropriate role of faculty (in concert with or opposition to the administration), and social issues of what was right and just,” Wall said. “I always knew her to be fair and balanced in her views and respectful of positions that differed from hers, while at the same time willing to argue eloquently for positions she believed justified.” Vai Ramanathan, professor and chair of linguisitics, described Timm as a mentor to her and other junior faculty. “Nora’s integrity and convictions made her strong; her sensitivity made her gentle; a most rare combination in academia. We will miss her, but even as we mourn her passing, we celebrate a life well lived, tasks well done, and a warmth that is with us to this day. She is very present in the department even in her absence. May she rest in peace.” Timm served as associate dean of Graduate Students from 2007 until her retirement on June 30, 2015. Maurer said his wife, a breast cancer survivor, was “just getting into retirement,” relaxing and regularly playing guitar when

	cancer returned with a vengeance last fall. In October, another tragedy struck the family when one of Maurer's two grandsons was killed in a car crash. Maurer is also a cancer survivor (leukemia), but who is battling health problems still. A wildlife biologist who met Timm in the early 1980s when she came to buy ducks from him for her farm, Maurer said she was a "great organizer" and fair minded. "She probably could have been a diplomat because she could talk to both sides and break down barriers," he said. In addition, she played classical guitar and raised organic chickens, geese and turkeys. Married in 1985, the couple farmed 37 acres west of Davis, raising chickens and other fowl that they sold to Berkeley restaurant Chez Panisse and other customers. In addition to her Celtic language studies, Maurer said Timm helped foster Scottish American pride by supporting his stone carving. He specializes in Pict and Celtic pictographs and has created unique "tartan stones" for 35 U.S. states. A native of Illinois, Timm earned her bachelor's degree in chemistry at UC Berkeley. She was previously married to Ted Margadant, professor emeritus of history, and David Olmsted, professor emeritus of anthropology.
OL6	Susan Ervin-Tripp, a psycholinguist acclaimed for her pioneering studies of bilingualism and language development in children, native Americans and immigrants, died earlier this month in Oakland from complications of an infected cut. She was 91. A widely cherished UC Berkeley professor emerita of psychology and an early advocate for gender equity in academia, Ervin-Tripp remained intellectually, socially and politically active after she retired in 1999, and right up until her death on Nov. 13. Among other notable achievements, Ervin-Tripp, a 1974 Guggenheim fellow, discovered that people's mindsets can change depending on the language they are speaking, providing new insights into the cognitive psychology of bilingualism. "She was a pathbreaker, embracing new directions in the study of first-language acquisition as well as bilingualism," said UC Berkeley psychology professor emeritus Dan Slobin. "In addition to groundbreaking scholarly work, she focused on the treatment of women and minorities, yet always using her psycholinguistic and sociolinguistic skills to provide a scientific foundation to her advocacy." Ann Kring, UC Berkeley chair of psychology, recalls how Ervin-Tripp's steadfast activism led to the 1971 creation of the Academic Senate's Standing Committee on the Status of Women, which later became the Committee on the Status of Women and Ethnic Minorities, of which she served as chair. "This, along with actions by Sue and many other women on campus, led to significant increases in hiring of women faculty and movement toward pay equity between male and female faculty members," Kring said. "She was a beloved member of the department, never shy to express her views but also keen to listen and understand others. She will be missed." Ervin-Tripp's husband of 54 years, Robert Tripp, is a professor emeritus of physics at UC Berkeley and the Lawrence Berkeley National Laboratory. Her passions included family, food, art and music, said her younger son, Nico Tripcevich, a laboratory manager at UC Berkeley's Archaeological Research Facility. "She expressed her love for family by cooking spectacular meals, by producing berry pies in the middle of the night for a grandchild's birthday using the pie-crust recipe of her grandmother, and by involving us in cultural activities she loved like museum visits and baroque music performances," Tripcevich said. Tripcevich's wife, Cheyla Samuelson, said her mother-in-law had a penchant "for the word 'delicious,' which she would apply with equal relish to a piece of baroque music, a wonderful painting or a newborn baby." Despite being in her 90s, Ervin-Tripp's passing came as a shock to family, friends and colleagues, especially those who had recently socialized with her. Margaret Conkey, a longtime friend and UC Berkeley professor emerita of anthropology, ran into Ervin-Tripp at a recent meeting of the Society of Women Geographers. "She was in a lively mood at the meeting, and very active right up until the unexpected end," Conkey said. Keith Johnson, chair of linguistics, recalled how he came away from a recent gathering impressed by Ervin-Tripp's humor and humility. "She laughed about her own intellectual trajectory and remarked on the role of luck in it all," Johnson recalled in a note to his department. "She was the only woman at the table when psycholinguistics was 'invented' at the 1953 Indiana Linguistics Institute." Ervin-Tripp was born on June 29, 1927, in Minneapolis, Minnesota, the youngest of two children born to Kingsley Ervin Sr., a vice president at Lyon Chemicals Inc., and Marian Moore Ervin. She and her older brother, Kingsley Jr., spent many

	summers swimming and fishing on a lake near Saint Cloud, Minnesota. At 13, she published a defense of Cubism and Picasso in the Minneapolis Star Ledger. At Northrup Collegiate High School, she read literature in five languages and reviewed newly published works by Thomas Mann, Andre Gide, Jean Cocteau, and James Joyce, according to her older son, Alexander Tripp. As an art history major at Vassar College, she took classes in several disciplines and worked on Henry Wallace's 1948 presidential campaign during her senior year. In a psychology course, she was asked to observe the interactions of young children for five minutes and describe what happened. That led to an epiphany that she recounted in a 2003 letter to the Vassar Quarterly magazine. After graduating from Vassar in 1949, she began her doctoral studies in social psychology at the University of Michigan, earning her Ph.D. in 1955. She studied Navajo verbal behavior, among other languages, and taught for three years at the Harvard School of Education. In 1958, she was offered a visiting assistant professorship at UC Berkeley, and drove there alone from Cambridge, Massachusetts, in a Rambler convertible, camping in fields and abandoned farmhouses along the way. A year later, she landed a tenured position in what was then UC Berkeley's Speech Department. An avid skier, she met Robert Tripp at the Clair Tappaan Lodge on Donner Summit in 1963. They married in 1964 in Geneva, Switzerland. Their eldest son, Alexander, was born in 1965, daughter Katya in 1966 and son Nicholas in 1970. At times, parenting clashed with political activism on the UC Berkeley campus, but she tried to take it in stride. During a 1970 protest against the U.S. invasion of Cambodia, for example, a National Guardsman threatened her visibly pregnant belly with a bayonet as she tried to get to her office at Dwinelle Hall, she recalled in a 2016 interview for UC Berkeley's Oral History Center. "She seemed to have the energy of three people, because at the same time that she was breaking barriers on campus as a woman and pioneering research in her field, she was also raising the three of us," Tripcevich said. Her efforts paid off. In a 1964 experiment, she showed a series of illustrations to bilingual French adults living in the United States and asked them to invent a three-minute story for each image. In describing each scene, the storytellers emphasized certain interpersonal dynamics in English and entirely different ones in French. In a 1968 experiment of Japanese women married to American men in San Francisco, she found that the wives' answers differed dramatically depending on the language in which the questions were asked. The results suggest human thought and feeling is expressed within language mindsets. In 1975, Ervin-Tripp secured a faculty position in the psychology department, where she focused on early language development in mono- and bilingual children. As her own children grew older, their language acquisition, jokes and insults became material for her research papers. She made presentations on such topics as "Gender differences in the construction of humorous talk," "It was hecka funny: Some features of children's conversational development" and "Risky laughter: Teasing and self-directed joking among male and female friends." Among other honors, she received a Guggenheim fellowship in 1974 and a Cattel fellowship in psychology in 1985. She was also a dedicated research psychologist in the Institute of Human Development and the Institute for Cognitive and Brain Sciences. In 2000, she served as president of the International Pragmatics Association. In her 70s, Ervin-Tripp acknowledged that she was slowing down physically, and so would give her beloved downhill skiing one last go. "It was apparent it might be necessary to stop because of arthritis, so I thought I would really enjoy that run," she wrote in an email to her family. "Because at my age anything you like to do may suddenly be unavailable. But it is not sad. It just means enjoy. It's like mindfulness training." Ervin-Tripp is survived by her husband, Robert Tripp, of Berkeley; sons, Alexander Tripp of New York, and Nico Tripcevich, of Berkeley; daughter, Katya Tripp of Portland, Oregon; daughters-in-law Suzanne Murray and Cheyla Samuelson; and granddaughters Clara Tripp, Iva Borrello and Sofia Tripcevich. A campus memorial to celebrate the life and legacy of Ervin-Tripp will be held in the spring. For more details about the event, email ervin.tripp.memorial@gmail.com.
OL7	Christina Bratt Paulston, director of the English Language Institute (ELI) 1969-98 and chair of the Department of Linguistics 1975-89, died Sept. 23, 2016. She was 83. Born in Sweden on Dec. 30, 1932, Bratt Paulston earned her doctorate in applied linguistics in 1966 from Teachers' College at

	Columbia University, following a BA from Carleton College in 1953 and an MA from the University of Minnesota in 1955. She joined the University as a linguistics faculty member in 1969 after teaching in her native country as well as Morocco, Peru and India. Dorolyn Smith, associate director of ELI today, met Bratt Paulston when Smith was a linguistics graduate student here.“She really molded the ELI in some ways, and the department,” Smith recalls. “She was very influential in the profession of teaching English as a second language.” Smith points to a book Bratt Paulston co-authored on how to adapt foreign-language teaching methods to English as a second language (ESL) instruction. Previously, non-English-speaking students learning English had been taught to read literature in the new tongue. Bratt Paulston instead emphasized the audio-lingual method — learning to hear and speak in conversation with the teacher and fellow students. “It was really a departure from what had been done in the past,” Smith says. “At the time it was revolutionary to do this for ESL.” Bratt Paulston also emphasized a concept from sociolinguistics, Smith notes — learning to communicate in a meaningful way instead of drilling to memorize grammar patterns. “She was a force of nature,” Smith also recalls. “She had a very strong personality. When she wanted something, she was not shy about going to the dean … and saying, “Look, this is what we need.’” Bratt Paulston also served on a number of University committees and in the University Senate. She was part of the Linguistic Society of America’s Committee on Linguistics and the Public Interest, president of Teachers of English to Speakers of Other Languages and a trustee of the Center of Applied Linguistics. Her research covered everything from language maintenance to the shift in language following immigration and colonialism. She continued her work past retirement as professor emerita of linguistics, contributing scholarly articles and editing volumes with students and colleagues. Bratt Paulston is survived by sons Christopher and Ian and their families, and was predeceased by her husband, Rolland G. Paulston, a School of Education faculty member. A remembrance and celebration of Bratt Paulston’s contributions to Pitt and to linguistics will be held in Heinz Chapel at 3 p.m. Dec. 13 (St. Lucia’s Day in Sweden), followed by a reception.
OL8	Anne Vainikka died on 11 June 2018, of cancer. At the time of her death, she was an adjunct professor at the University of Delaware in the Department of Linguistics and Cognitive Science. Her professional accomplishments are matched by her personal virtues—strength, good humor, and devotion marked her commitments. She was widely known as someone who marched forward, following ideas where they go, but with grace, determination, no untoward bombast or self-promotion, and just straightforward arguments. Anne received her Ph.D. in 1989 in Linguistics from the University of Massachusetts/ Amherst, with a dissertation on Finnish syntax, the second dissertation ever on this topic and one which has provided the groundwork for most work on generative Finnish syntax since then. She followed this with a series of publications on aspects of Finnish syntax including partial null subjects, structural case and long distance case, and had started to work on the Finnish -KIN particle. She was working on a project on Uralic Syntax and will be missed by the vibrant new community she helped create and which she was leading; this community crossed disciplinary and paradigm boundaries by drawing modern syntacticians, traditionally trained Uralicists, typologists, field linguists and endangered Uralic language speakers of languages ranging from her native Finnish to Enets, Erzya, Estonian, Hungarian, Inari Saami, Khanty, Mansi, Mari, Nganasan, Selkup and Udmurt. During her PhD Anne began with Tom Roeper and Jill de Villiers to work on child language acquisition, and she solo- and co-authored a number of well-received publications. Her work on second language acquisition began in the late 1980s as a researcher on a project led by Harald Clahsen. She became well known with Martha Young-Scholten for work based on adult immigrants’ acquisition of German, which culminated in their theory of Organic Grammar. They had recently turned to the acquisition of English. Her eye for long-standing problems led her to establish The Verb Company to introduce the English spelling system to emergent readers in a much more systematic way. Anne actively mentored young scholars; her PhD student Taija Saikkonen defended her thesis in Helsinki a few weeks before Anne died. Newcastle University PhD student, Dongyan Chen, benefitted considerably from Anne’s advice on applying Organic Grammar to L2

	Mandarin. Anne is survived by her husband, Inigo Thomas, director of Technology Solutions at the Port of Wilmington, Delaware, their sons Aksel and Ashok, of 528 Old Elk Neck Road, Northeast, Maryland 21901, and by seven sisters and a brother. Services were held on Saturday June 16, at 11 a.m. with visitation at 10 a.m. at the Old Apostolic Lutheran Church, 2038 Pleasant Valley Road, Newark DE 19702.
OL9	Geoffrey Nunberg, a linguist and scholar known for his engaging commentary on language for National Public Radio's "Fresh Air" talk show, died Aug. 11 in San Francisco after a long illness. He was 75. Nunberg, who served as an adjunct full professor at the University of California, Berkeley's School of Information (I School), was particularly interested in linguistic usage and how language changes over time, as well as the use of taboo language, like slurs and racial slurs. He also studied and wrote about the social and cultural implications of new technologies. His short pieces for NPR, delivered with his trademark sly and playful tone, managed to showcase highbrow issues of language and usage and make them approachable for the casual listener. He also loved teaching and, according to his younger sister, Barbara Nunberg, thought of the I School as home, because it embraced all of the various facets of his work. "He was a sparkling intellect who brought humanity and humor to his teaching and scholarship," said Anno Saxenian, the school's former dean. "His collegiality and wisdom helped to shape the School of Information for over a decade." After becoming an on-air contributor to NPR in 1987, Nunberg became popular for his commentaries on language. He was perhaps best known for his highly anticipated "Word of the Year" segments, which explored how culture and politics are reflected in everyday language. Some of his recent annual word picks have included "no," "selfie," "normal" and "nationalist," and in December 2019, he announced his very last word of the year: disinformation. Nunberg was an expert witness for trademark cases and other legal matters involving linguistics. In 2005, he served pro bono as the linguistics expert on behalf of the plaintiffs in the trademark case against the Washington Redskins, documenting for the court that "redskin" is "inevitably associated with contempt, derision, condescension or sentimental paeans to the noble savage." Ben Zimmer, language columnist for the Wall Street Journal, said that Nunberg was always ahead of the curve. "He predicted that 'boomer' would become a pejorative term 15 years ago," Zimmer said. When they'd last spoken, in June, Zimmer said Nunberg wanted to "noodle" with him over the language of the coronavirus and Black Lives Matter. "That was a Geoff word, 'noodle,'" Zimmer said. Nunberg, who was ill at the time, said he was itching to get back onto "Fresh Air" because he felt he was missing out on all of the fast-moving politics of the day, Zimmer said. In addition to his NPR commentaries, Nunberg shared his love of language through books and articles. He wrote for numerous publications, including The Atlantic and the Los Angeles Times, and his books include The Way We Talk Now (2001), Going Nucular (2004), Talking Right: How Conservatives Turned Liberalism into a Tax-Raising, Latte-Drinking, Sushi-Eating, Volvo-Driving, New York Times-Reading, Body-Piercing, Hollywood-Loving, Left-Wing Freak Show (2006) and The Years of Talking Dangerously (2009). His most recent book, Ascent of the A-Word: Assholism, the First Sixty Years, was released in 2012. He also served as emeritus chair of the usage panel of the American Heritage Dictionary and has authored or co-authored many scholarly articles on linguistics and computational linguistics. Born in New York in 1945, he was raised in Manhattan. His mother was a high school teacher, his father a commercial real estate broker. From an early age, he was "mind-blowingly articulate" and read voraciously, said Barbara Nunberg. "My father used to sit at the dinner table with the dictionary open, quizzing my brother," Nunberg said. "My father, as an immigrant, had an intense interest in speaking correctly." And this, "no doubt, had an impact on Geoff," she said. He received his Ph.D. from City University of New York in 1978 and went on to teach at UCLA, University of Rome and University of Naples. He spoke flawless Italian, as well as French, German and Spanish. Until 2001, he was a principal scientist at Xerox Palo Alto Research Center, working on the development of linguistic technologies and inventing a program called "Trollope" — named for Anthony Trollope, one of his favorite authors — that was a precursor to today's autocorrect function. Nunberg's daughter, Sophie Nunberg, recalled her father's witty sense of humor and the lighthearted jokes she shared

	with him. “My father convinced me for longer than I’d like to admit that Russian was just adding -ski as a suffix to every word, and he also ferociously defended my right to use ‘like,’” Sophie Nunberg said. “A couple of months ago, when he was laid up in bed, I asked him if he was finally going to read Moby Dick, now that he had the time. It has been a long-standing joke of ours that it was one of the few great novels he never read and refused to. He looked at me and said, ‘Moby Dick? The whale gets it.’” As a faculty member at the I School, Nunberg co-taught two courses every spring with Paul Duguid, his colleague and friend: an undergraduate course, “History of Information,” and a graduate course, “Concepts of Information.” He also gave the school’s 2019 commencement address. Professor Deirdre Mulligan said the speech was “such a clear expression of his creativity, wit and generosity. He made the complex ways in which everyday speech conceals ideology and preconceptions accessible to the audience. … It’s all there for us to see and marvel at. I literally hung on Geoff’s every word, because every word mattered, not just counted.” Nunberg is survived by his wife, Kathleen Miller; daughter, Sophie Nunberg; and sister, Barbara Nunberg. The family plans a private remembrance, and the I School will hold a memorial in celebration of Nunberg’s life at a later date.
OL10	Kurt Mueller-Vollmer, a professor emeritus of German studies and humanities at Stanford University, died Aug. 3 at the age of 91. Mueller-Vollmer was a scholar of German, European and American thought. His areas of focus included European and American Romanticism, German-American cultural relations, comparative literature, translation studies and theory, as well as hermeneutics and the history and methodology of the humanities and human sciences. Mueller-Vollmer joined the German studies faculty in 1962 after having earned his PhD from the department that same year. During his tenure at Stanford, Mueller held a variety of administrative roles, including directing the graduate program in humanities from 1982 to 1985 and the Bing Overseas Program in Berlin from 1978 to 1979. From 1985 to 1987, he chaired the committee responsible for the graduate program in humanities. He remained a member until his retirement in 1995. After his retirement, Mueller-Vollmer continued to lead graduate seminars and advise graduate and postdoctoral students, including Barbara Buchenau, whose research project he supervised from 2004 to 2005. “Professor Mueller-Vollmer was a generous and spacious thinker who invited his mentees to think along with him and to explore the intricacies of the Romantic age,” said Buchenau, chair of North American Cultural Studies at the University of Duisburg-Essen. “He was very polite and also personally shy, thus enabling and inspiring junior thinkers who did not have the bravado of some of their more vocal peers. Intellectually and personally, he was a man whose mentoring impact became clear slowly, gradually.” Mueller-Vollmer had a keen interest in German literature from the 18th century, particularly the work of Wilhelm von Humboldt (1767-1835), the Prussian philosopher, diplomat and linguist who founded the Humboldt University of Berlin. Humboldt’s unpublished papers were once thought to be lost, but Mueller-Vollmer rediscovered them and oversaw their publication. Mueller-Vollmer wrote several volumes about Humboldt’s work and served as editor-in-chief of an interdisciplinary series that featured international scholars who critically examined his writing. These scholarly accomplishments earned him recognition from the Wilhelm von Humboldt Foundation, which awarded him its inaugural prize for contributions to the study of Wilhelm von Humboldt. In 2000, Mueller-Vollmer received the Commander’s Cross of the Order of Merit of the Federal Republic of Germany, the highest tribute the Federal Republic of Germany pays to individuals for their service to the country. Mueller-Vollmer was also interested in how German philosophy influenced American thought during the 18th and 19th centuries, particularly on transcendentalism, the social and political movement led by early 19th century New England philosophers Ralph Waldo Emerson and Henry David Thoreau. In 1995, Mueller-Vollmer organized an international conference at Stanford, “Translating Cultures, Translating Literatures.” In 1997, he was a Fulbright senior scholar for research and graduate teaching at the University of Göttingen. “His sense of the connectedness of various movements of cultural rebellion deserves to be reiterated and strengthened,” said Buchenau. Mueller-Vollmer’s recent publications include Transatlantic Crossings and Transformations: German-American Cultural Transfer from the 18th to the End of

	the 19th Century (2015) and The Internationality of National Literatures in Either America: British America and the United States (2000), co-authored with Armin Paul Frank. In addition to serving the Stanford faculty, Meuller-Vollmer was also a visiting guest professor at various institutions in the United States and abroad, including the University of Washington, Seattle; the University of California, Berkeley; the University of Bonn; and the University of Göttingen. Mueller-Vollmer was born on June 28, 1928, in Hamburg, Germany. He attended the University of Cologne, where he studied history, philosophy, German and Romance languages. Mueller-Vollmer was awarded a Fulbright Scholarship to study at Brown University, where he received his MA in American studies in 1955. He received a Ford Foundation fellowship that brought him to Stanford University for his doctoral work, where he earned a PhD in German studies in 1962. Mueller-Vollmer is survived by his wife, Patricia Ann, and sons Jan David and Tristan Matthias Mueller-Vollmer.
OL11	Prof. Michael Silverstein, a leading University of Chicago anthropologist who made groundbreaking contributions to linguistic anthropology and helped define the field of sociolinguistics, died July 17 in Chicago following a battle with brain cancer. He was 74. The Charles F. Grey Distinguished Service Professor of Anthropology, Linguistics and Psychology, Silverstein was known for his highly influential research on language-in-use as a social and cultural practice and for his long-term fieldwork on Native language speakers of the Pacific Northwest and of Aboriginal Australia. Most recently, Silverstein examined the effects of globalization, nationalism and other social forces on local speech communities. “Over a half-century at the University of Chicago, he produced a body of work that fundamentally changed the place of linguistics in the field, with foundational contributions to the understanding of language structure, sociolinguistics and semiotics, as well as the history of linguistics and anthropology,” said Prof. Joe Masco, chair of the Department of Anthropology. “His erudition, sense of humor, love of scholarship, of teaching, of conversation and substantive debate is legendary and helped establish the intellectual strength of UChicago in all the many different fields of which he was part.” Born Sept. 12, 1945, in Brooklyn, New York, Silverstein earned his bachelor’s degree and doctorate from Harvard University. He was invited by the Department of Anthropology to teach the Language in Culture introductory course in the fall of 1970. He was hired as associate professor with tenure in 1971 and was promoted to professor in 1978. “Language in Culture, which he taught continuously from 1970-2020, offered generations of students in multiple fields—Anthropology, Psychology, Linguistics, Human Development, among others—a Rosetta Stone to interpret a 2,000-year history of ideas about the relationship between language, culture and social interaction,” said Robert Moore, PhD’00, a former student who now teaches at the University of Pennsylvania. “It inspired numerous books and reshaped the humanistic fields concerned with speech as a form of social action. Students who went on to become philosophers, sociologists, anthropologists and social activists all drew primary inspiration from this course.” A prolific writer of essays, articles and reviews, Silverstein’s books included Whitney on Language, Natural Histories of Discourse (with Greg Urban), Talking Politics and Creatures of Politics: Media, Message and the American Presidency (with Michael Lempert). He was active in professional service across UChicago, including as a member of the Social and Behavioral Sciences Institutional Review Board for Research with Human Subjects from 1997-2000 and 2001-2005. He served as board chair from 2005-2012. In 2019, Silverstein gave the Nora and Edward Ryerson Lecture—a recognition of his lasting contribution to the intellectual life of the University of Chicago. “What he strove to understand, and what he clarified in groundbreaking ways, was a systematic way to understand what fundamentally makes human societies function: communication in all its guises,” said Assoc. Prof. Constantine Nakassis. “He did so with incisive observation, brilliant analysis and with his unique wit. His ideas are, quite literally, the very language through which the social study of discourse is thought. “But what I will remember most of Michael was how generous he was. He built worlds—institutional worlds, scholarly worlds, intellectual worlds—and he invited you to participate in them, grow them, and make them your own. In doing so, he lifted us up.” He served on the editorial boards of American Anthropologist,

	Law and Social Inquiry, Ethnos, Functions of Language and the Journal of Linguistic Anthropology among others. Silverstein was also a member of seven professional societies, including serving as the founding vice president and then president of the Society of Linguistic Anthropology. Silverstein was named a MacArthur Fellow in 1982. He held a Guggenheim Fellowship in 1979, was elected to the American Academy of Arts and Sciences in 1991, and to the American Philosophical Society in 2008. In 2016, he was interviewed for APS's "Talking About Things" series, discussing one of the journals of explorers Meriwether Lewis and William Clark. In 2014, he received the Franz Boas Award for Exemplary Service to Anthropology; in giving him its highest award, the American Anthropology Association described Silverstein as "a virtual force of nature in the discipline." "To learn from Michael Silverstein was to stand at a pivotal point in the history of social thought, and to witness how, right in front of your eyes, he generated and refined ideas for the formation of a future discipline," said Nick Harkness, PhD'10, now on faculty at Harvard University. "He taught us how to study and explain the sinews of social life, to coherently connect the foundational questions of anthropology, sociology, linguistics and psychology. And he did so with joy and merriment that were impossible to resist." Silverstein was also honored at UChicago with the Faculty Award for Excellence in Graduate Teaching, which he received in 2000. In an interview at the time, he credited his students with influencing his work in his long career. "Michael was a man known for his enormous energy, erudition, precision and charm," said Susan Gal, the Mae and Sidney G. Metzl Distinguished Service Professor. "Less recognized was his work behind the scenes to make knowledge happen by and for all of us. His conceptual approach radically redefined the place of language in social and cultural life; it was first of all brilliantly and excitingly his own. "Yet scholarship is indispensably a collaborative effort, a continuing, creative conversation among students and colleagues. His practice matched this teaching. That is why Michael was a devoted institution-builder, a tireless organizer of lasting infrastructures for critical, ethical discussion." He is survived by his wife, Mara Tapp, and children, Ariella and G. A public memorial will be announced at a later date, when social gatherings are possible. The Division of the Social Sciences has established the Michael Silverstein Memorial Fund to support and encourage doctoral students of Anthropology. Learn more details on the Department of Anthropology website.
OL12	James Wells Gair, professor emeritus of linguistics who throughout a long and distinguished career produced groundbreaking work on South Asian languages and their relation to other languages, died Dec. 10 in Ithaca. He was 88. "Jim Gair was in many ways the paradigmatic Cornell linguist," said John Whitman, chair and professor of linguistics. "He had a language passion for Sinhala, the language of Sri Lanka, and he threw himself entirely into it, teaching the language, writing textbooks for its learners, and analyzing both the colloquial language and its classical texts. "But at the same time he was a contributor to linguistic theory, invested in current research and constantly on the lookout for important properties of language as a human faculty." Gair joined the Cornell linguistics faculty upon earning his doctorate in 1963. He became a full professor in 1974 and professor emeritus in 2000. He also taught at several U.S. and international universities and served a year in the U.S. Army in Korea. He received bachelor's (1949) and master's (1956) degrees from the University at Buffalo. As associate chair of the Department of Modern Languages and Linguistics from 1978 to 1981, Gair led the integration of generative linguistic theories with area language studies, guiding the hiring of a new generation of scholars who would bridge theoretical linguistics with intensive language studies. He helped to build and sustain Cornell's South Asia Program, directing it from 1970 to 1977. His scholarship steered the program to its continuing commitment to Sri Lankan studies and its preeminent place for Sri Lankan studies in the world, establishing the first and only Sinhala language program in the Western Hemisphere. "Jim Gair pioneered the study and teaching of the Sinhala language in the United States and established Cornell as a center for Sri Lankan studies beginning in the 1960s," said Bonnie G. MacDougall '62, M.A. '65, Ph.D. '73, Cornell professor emerita of architecture. "As a director of the Cornell South Asia Program he made important contributions to shaping a broad Cornell program in area studies. I am grateful having been one of his very first Sinhala

	students, a colleague and a friend." Gair studied and taught several South Asian languages, with an emphasis on Sinhala and Tamil, but also including Hindi, Dhivehi, Malayalam and Pali, the canonical language of Theravada Buddhism, as well as various stages of English language development and Blackfoot. His books include "Colloquial Sinhalese Clause Structures" (1970), "A New Course in Reading Pali: Entering the Word of the Buddha (1998) and "The Sidat Sangara: Text, Translation and Glossary" (2013), written with longtime collaborator and former student, Sri Lankan linguist W.S. Karunatillake. "Jim Gair was eminent in Sinhala language and area studies not just within the U.S., but also internationally," said Norman Uphoff, professor emeritus of government and international agriculture. "His Sinhala text was widely used around the world, and I personally benefited from it when studying the language for two years in preparation for spending a sabbatical year in Sri Lanka. My wife and I had the great good fortune to have Jim as our language teacher for one of those two years, gaining a lot from his rich knowledge of the country as well as its language." Gair's work led to major contributions in the field of language pedagogy; pedagogical materials he and his collaborators created have trained generations of scholars and remain in use. His work has also contributed significantly to the scientific study of first and second language acquisition, language loss in dementia and related cognitive science. He received several Fulbright awards for study in Sri Lanka, as well as awards from the American Institute of Indian Studies, the National Science Foundation and the National Endowment for the Humanities. He was a founding member of the Association for Asian Studies, and served on the board of directors for the American Institute for Sri Lankan Studies. He is survived by his widow, Barbara Lust, professor of human development and a member of the fields of cognitive science, linguistics and psychology, a son and two grandchildren. A memorial is planned for the spring.
OL13	John J. Ohala died in Berkeley, California on August 22, 2020. Born in Chicago on July 19, 1941, he received his A.B. in English from Notre Dame in 1963. In 1966 he received an M.A. in Linguistics from UCLA, and in June, 1969 he completed his PhD also at UCLA under the direction of Peter Ladefoged. After a one-year post-doc at Tokyo University, he started his career at Berkeley in April, 1970 and by 1977 he was a full professor. In 2004, he retired from teaching. Professor Ohala was awarded an honorary PhD by the University of Copenhagen in 1992 (the same year that he was elected as a Fellow of the Acoustical Society of America). In 2004 he was awarded the Berkeley Citation, and in 2006 he was awarded the Medal for Scientific Achievement by the International Speech Communication Association. In 2015, he was awarded the Silver Medal in Speech Communication by the Acoustical Society of America (one of only 14 recipients in the history of the Society) 'for advancing the understanding of speech production and perception and applying phonetic principles to the study of spoken language change over time.' Two festschrifts in John Ohala's honor have been published. The first, sixteen papers edited by Jeri Jaeger, was published in 1992 as the first two issues of Language and Speech, Volume 35, and the second, twenty-three chapters edited by Solé, Beddor, and M. Ohala, was published by Oxford University Press in 2007. The papers in these collections include contributions from colleagues around the world as well as from his Berkeley students and peers. One of the most fascinating and intellectually influential figures in 20th century linguistics, Ohala insisted that the sound systems of language, their phonologies, are constrained by the physiology of speech production and speech perception. He noted, for example, that the aerodynamic conditions which are required to produce vocal fold vibration (the AVC - "aerodynamic voicing constraint") underlie cross-linguistic patterns of pitch patterning, and (de)voicing processes. A key feature of this approach, distinguishing it from the approach that was dominant at this period in Linguistics in North America, concerns the role of corpus-external information in linguistic explanation. At the time, the dominant way to explain phonological patterns found in a corpus of elicited forms was to state the phonological patterns in a formal grammar that is maximally simple and universal. Ohala critiqued this as more of a 'reification' of observations than an explanation, and argued that a deeper understanding of language sound patterns is to be found by reference to aerodynamic, articulatory, and auditory constraints that are external to the linguistic corpus.

	Constraint-based approaches for describing and explaining phonology, which were pioneered by Ohala, are now the standard view in linguistics. His theory of the listener as a source of sound change was similarly influential. In his theory of how words come to be pronounced differently by subsequent generations, he rejected 'teleological' explanations of change – the idea that change somehow improves the fitness of a language by making it easier to produce or perceive, as if these were the goals of sound change. Instead, he assumed that speakers aim to faithfully reproduce words as they have heard them, and that listener misperceptions sometimes introduce change. Just as he rejected the notion of an unseen divine hand in the shaping of the physical world, he also rejected the idea that speakers and hearers would be guided by a desire to optimize the sound system of their language for maximal communicative efficiency. He saw any tendency for optimality as emergent from the cumulative effects of individual acts of speaking – the articulatory slop (his word) and misperception that is inherent in speech communication. Ohala was deeply interested in the ethology of sound symbolism. He felt that sound symbolism was an understudied field where most work lacked scientific rigor. HIs goal was to develop "a unifying, ethologically based and phonetically plausible theory of aspects of sound symbolism." He focused on what he called the "frequency code," with a high F0 innately signaling a "small vocalizer," and a low F0 to "large vocalizer." Referring to work by animal ethologists on agonistic and submissive behaviors, Ohala proposed humans and other animals either automatically display or even manipulate a high F0 to signal "smallness, non-threatening attitude, desire for goodwill of the receiver, etc.," and a low F0 to convey "largeness, threat, self-confidence and self-sufficiency." From this universal base can be derived large swaths of gestural symbolism, such as the smile, and beyond to size sound-symbolic language such as the choice of certain consonants and vowels, and enhancement of high or low frequencies in speech. Ohala's desire to stimulate the field and increase the amount of scientifically sound literature on sound symbolism led him to initiate and host a major conference on the subject at UC Berkeley. The results of this conference became the 1994 Cambridge volume Sound Symbolism, still the most-cited work on the topic. Ohala's contribution to sound symbolism became known as the "Frequency Code Hypothesis," which has stimulated many related studies. John was an avid hiker in the East Bay Hills and an accomplished photographer of nature, but also of protest marches in the '60's and '70's, and action shots of linguists at conferences. His linguistics photographs are an invaluable historical record of linguistics in the late 20th century, and his interest in the history of science was also expressed in his extensive collection of early scientific literature, especially books on human speech production. He would often report on a trip to a conference in two parts – the research presented at the meeting, and the volumes that he found in the local book shops. Many of his research articles have a literature review that starts in the seventeenth century. He envisioned and was the head editor of A Guide to the History of the Phonetic Sciences in the United States, in addition to his service on the editorial boards of fourteen different professional journals over the course of his career.
OL14	Yvan Sag, the Sadie Dernham Patek Professor in Humanities and a professor of linguistics and of symbolic systems at Stanford, died Sept. 10 after a long battle with cancer. He was 63. The author or co-author of 10 books, Sag made notable contributions to the fields of syntax, semantics, pragmatics and language processing. Using his own precise, formal theories of grammar, Sag "uncovered new phenomena, provided counter-examples to widely held beliefs about what is and is not possible in languages, and shed new light on the relationship between form and meaning in language," said Tom Wasow, the chair of the Stanford Department of Linguistics. A fellow of the American Academy of Arts and Sciences and the Linguistic Society of America, Sag will be remembered for his intellectual integrity and infectious enthusiasm for the field of linguistics. "Ivan was really passionate about linguistics, about understanding what makes human language possible, and he had great charisma for communicating this passion. You couldn't be around him without wanting to understand the answers to the questions he was always asking," said his colleague in the Department of Linguistics Professor Dan Jurafsky. Intersecting with cognitive science and psycholinguistics, Sag's research advanced natural language processing (NLP) and

contributed to computational linguistics by providing grammars that were sufficiently explicit to be implemented on computers. Sag's influential publications include Generalized Phrase Structure Grammar, Head-Driven Phrase Structure Grammar and Syntactic Theory: A Formal Introduction. "No other linguist matched his combination of attention to formal rigor, empirical grounding and broad coverage," said Wasow, who co-authored numerous works with Sag. Sag was a senior researcher at the Center for the Study of Language and Information (CSLI), which he helped to found in 1983. Sag also sat on the committee that created Stanford's Symbolic Systems Program, and served as the program's director for five years (2000-01 and 2005-09). Sag "saw grammatical theories as components of theories of how the human mind functions," and his contributions, Wasow said, are "very influential among those natural language processing researchers who think a truly robust NLP system will ultimately have to incorporate grammatical knowledge." Sag's work formed the basis of a number of computational systems around the world, including the CSLI LinGO system, which is being used as a tool for teaching writing in Memphis public schools. Colleagues said Sag was nothing short of a keystone in the linguistics world, mentoring students well into their careers and rallying the linguistics community to promote the discipline. "He got things done: workshops organized, contacts made, groups of people brought together, collaborative projects developed," said linguistics scholar Geoff Pullum, a longtime academic collaborator and friend of Sag's. For more than three decades, Sag was an active member of the Linguistic Society of America (LSA), organizing numerous conferences and events. He taught in at least 10 of the LSA's summertime linguistics institutes, which are hosted at a different university biennially. He directed the 1987 institute at Stanford and served as associate director at three other institutes. As Wasow recounted, Sag liked to rent large houses so institute participants could live together. Those houses, Wasow said, were "crucibles for new ideas and collaborations." In 2005, citing Sag as an "effective citizen of the larger linguistics community, not just here in America but throughout the world," the LSA awarded him the Victoria A. Fromkin Lifetime Service Award for distinguished contributions to the field of linguistics. In 2011, he held the Edward Sapir Professorship at the LSA's Linguistic Institute at the University of Colorado-Boulder. "Ivan had a great wisdom for helping students develop the ability to criticize constructively, whether it was a paper they were reading or just questioning each other's assumptions," said Jurafsky. During the last 30 years of his career, Sag developed and refined formal theories of grammar that were, as Wasow put it, "precise enough to be computationally implementable and well suited to expressing linguists' insights about language structure." Sag was one of the originating developers of Generalized Phrase Structure Grammar (GPSG), Head-Driven Phrase Structure Grammar (HPSG) and Sign-Based Construction Grammar (SBCG), with each stage developing out of the last. Born in Alliance, Ohio, in 1949, Sag became interested in linguistics at the University of Rochester, where he studied Indo-European languages, sociolinguistics and Sanskrit. After receiving a BA from the University of Rochester in 1971, he went to the University of Pennsylvania, where he earned a master's degree in 1973. Pursuing his interest in grammatical theory at the Massachusetts Institute of Technology, Sag wrote a dissertation on ellipsis (advised by Noam Chomsky). Sag earned his PhD from MIT in 1976. Before joining the faculty at Stanford in 1979, Sag was an assistant professor at the University of Pennsylvania for three years. Sag was Professor Honoris Causa at the University of Bucharest (Romania, 2001). He was a fellow at the Center for Advanced Study in the Behavioral Sciences (Stanford, 2002-03); at Logica, the Dutch Research School in Logic (Utrecht, 1994); an Ameritech Fellow (Chicago, 1987-88); and a Mellon Fellow (Stanford, 1978-79). He also served on the editorial boards of several journals, including Journal of Linguistics, Linguistics and Philosophy, Semantics and Pragmatics, French Review of English Linguistics, Journal of Language Modelling and Constructions. There will be no public memorial service, but Sag's family, friends and colleagues have joined with the LSA to found the Ivan Sag Linguistic Institute Fundto support the continuing efforts of the LSA to sponsor and organize the biennial Linguistic Institute, including student fellowships and the Sapir Professorship.

OL15	Emmon Bach, 85, professor emeritus of linguistics, died Nov. 28 at his home in Oxford, England, of pneumonia-induced sudden respiratory failure. Born in Kumamoto, Japan, he was the the youngest of six children of Danish missionary parents who moved with their family from Japan to the U.S. in 1941, where he grew up in Fresno, Calif., and Boulder, Colo. He did his undergraduate and graduate work at the University of Chicago, with a Ph.D. in Germanic studies in 1959. From 1955-56, he was a Fulbright scholar at the University of Tubingen in West Germany. He taught at the University of Texas from 1959-72, first in the German department and then in linguistics, then at Queens College and the Graduate Center of the City University of New York in 1972–73. He came to Amherst in 1973-74 as a visiting professor at the university and Hampshire College. In 1974, was appointed professor of linguistics and was named the Edward Sapir Professor of Linguistics in 1985. He also served as department head from 1977-85. He retired in 1992. "Emmon was a key part of the strength in semantics that helped to put UMass on the map within just a few years of the department's 1970 creation," said his former wife, Barbara Partee, distinguished professor emerita of linguistics and philosophy. "He was co-director of the memorable 1974 Linguistic Institute at UMass, which included an unprecedentedly strong semantics and philosophy of language component, with leading scholars here to teach and participate in research workshops." Partee added, "And he was a big influence on the warm collegiality of the department. As a teacher and mentor, he encouraged students to follow their own interests and develop their own ideas, never trying to impose his own ideas or agenda." His campus honors included a Faculty Fellowship in 1982 and the Chancellor's Medal in 1985 as a Chancellor's Lecturer. He was also a fellow of the Institute for Advanced Study in the Humanities. Bach had also been interested in linguistic fieldwork from several years before he came to UMass. His first periods in Kitimat, British Columbia, working on the Haisla language were around 1970–71. He resumed that interest in the late 1970s and spent quite a few summers and some sabbatical (and retirement) years in Kitimat, including all of 1989–90 and 1994–95, with continuing trips there until quite recently. His work on Haisla led him into a great interest in the nature of the word in agglutinative languages. His research garnered a fellowship at the Center for Advanced Study in Behavioral Sciences, supported in part by the National Endowment for the Humanities. He was also a visiting research scholar at the Max Planck Institute for Psycholinguistics in the Netherlands. Starting a few years after his retirement, he held an appointment as a professorial research associate at SOAS (University of London), where he taught semantics and field methods. In 2007 he became affiliated with Oxford University, where he gave graduate lectures in semantics and participated in the Syntax Working Group. He served as president of the Linguistic Society of America in 1996 and was president this year of the Society for the Study of Indigenous Languages of the Americas. He leaves his wife Wynn Chao, his son Eric Bach and a grandson, his stepsons Morriss, David and Joel Partee, his stepchildren Christopher and Gabriella Lewis, three step-grandchildren and a step-great-grandson. His funeral will take place on Saturday, Dec. 13 at 11:15 a.m. at St John's Chapel, Oxford Crematorium, Bayswater Rd, Headington, Oxford OX3 9RZ.
OL16	Calvert Watkins, the Victor S. Thomas Professor of Linguistics and the Classics, emeritus, died earlier this month at the age of 80. A towering figure in historical and Indo-European linguistics and a pioneer in the field of Indo-European poetics, Watkins presided over the expansion of Harvard's Department of Linguistics in the 1960s, and served as its chair several times between 1963 until his retirement in 2003. From then until his death, he served as professor in residence at the University of California, Los Angeles. "He was an inspirational teacher," said Jay H. Jasanoff, the Diebold Professor of Indo-European Linguistics and Philology and interim chair of the Department of Linguistics. "He was brilliant and all-knowing. He seemed to know every language you had ever heard of, and he produced forms in languages like Sanskrit and Old Irish and Hittite with such panache that if you were interested in those subjects to begin with, he made you more interested." Taking a course with Watkins as an undergraduate, Jasanoff said, inspired him to pursue Indo-European linguistics. Watkins was his doctoral advisor and mentor, a fact Jasanoff acknowledged in the preface of his most recent book. "My debt to my teacher — now my

colleague — Calvert Watkins is of a different sort," Jasanoff wrote. "No one familiar with his writings on the Indo-European verb will fail to see how deeply they have influenced mine, even on points where we disagree. Without his 'Celtic Verb' and his 'Geschichte der Indogermanischen Verbalflexion,' this book could never have been written, and without his example I would never have learned what constitutes a problem worth working on, and what constitutes a solution worth looking for." Richard Thomas, the George Martin Lane Professor of the Classics and Harvard College Professor, joined Harvard's Classics Department in 1977, and formed a fast friendship with Watkins that would endure for the rest of his life. "Cal Watkins was a man with a tremendous intellect and a tremendous personality, and a good heart. It is hard to think a person so alive is no longer with us," Thomas said. "He was Harvard's Indo-European guru, the glue that held together scholars and teachers across the University, and was immensely proud of the generations of students he trained who now hold positions in Indo-European and historical linguistics across the country. "His departure 10 years ago for Los Angeles, where his Sanskritist wife, Stephanie Jamison, took up a professorship at UCLA, was much lamented by colleagues and students alike," Thomas continued. "He was an avid gardener, in North Cambridge, in his farm in Vermont, and in the recent years in Los Angeles. Travel, food, drink, and companionship, with his beloved Stephanie, with family, friends, and the family of friends — he was my daughter's godfather — these were what occupied him in his leisure. And even at leisure, his mind remained engaged with the issues of language and linguistic culture that made him such a bright star in our firmament. Those lucky to have been part of his world will cherish our memories." Watkins spent nearly his entire academic career at Harvard. He was a member of the Harvard Class of 1954, and was awarded a Ph.D. in linguistics in 1959. He was also a member of the Society of Fellows, and taught exclusively at Harvard until his retirement and his move west. Watkins' research was focused on the linguistics and the poetics of all the earlier Indo-European languages and societies, particularly Greek, Latin and Italic, Celtic (especially Early Irish), Anatolian (especially Hittite and Luvian), Vedic Indic, and Old Iranian. Much of his work was also focused on historical linguistic theory and method and Indo-European genetic comparative literature. Watkins was the author of several books, including, "How to Kill a Dragon: Aspects of Indo-European Poetics," which was awarded the American Philological Association's Goodwin Prize in 1998. Other books by Watkins include "Indo-European Origins of the Celtic Verb I," "The Sigmatic Aorist," and "Indogermanische Grammatik III/1." Watkins contributed to dozens of other publications, and authored more than 150 scholarly articles and reviews, more than 50 of which were published in three volumes as selected writings. On a more popular level, he was the editor of the Indo-European root appendix to the "American Heritage Dictionary," first published in 1969. Together with an accompanying essay, the appendix was later published in a separate edition and included in subsequent editions of the dictionary. Accessibly written, it reached a large public and inspired an interest in linguistics and Indo-European in many casual readers, as well as in some who went on to enter the profession. Watkins was also particularly active in the academic world, serving as president of the Linguistic Society of America in 1988, and was an honorary member of the Royal Irish Academy, a fellow of the American Academy of Arts and Sciences, a member of the American Philosophical Society, a corresponding fellow of the British Academy and of the Académie des Inscriptions et Belles-Lettres, correspondant etranger, associé etranger, membre de l'Institut. He gave the Gaisford Lecture by invitation of the faculty of Classics of the University of Oxford in May 2000. Watkins is survived by his wife and by four children, Cynthia Watkins, David Cushman, Catherine Cushman, and Nicholas Watkins, and by eight grandchildren. Plans for a memorial service are not known at this time.