Fags and fat woo death
But sometimes not. Why, you ask.
Mystery of life

population the commonest cause of death—by far—is coronary heart disease. Everyone, in fact, is a high-risk individual for this uniquely mass disease."[21]

Health promotion messages may be more favourably received if they deal directly with the anomalies that lay and professional epidemiologists have long recognised. There is then the opportunity to emphasise that differences in survival between the two groups are dramatic: a quarter of the men at visibly high risk have died from coronary heart disease by the age of 70 compared with only one in 20 men at visibly low risk; and most people who survive despite apparent high risk ("anomalous survivals") have lower levels of less visible risk factors. The fact that there is a considerable minority who survive beyond three score years and ten, despite being at very high risk on a range of risk factors, indicates that a better understanding of this group's apparent lack of susceptibility to risk could be of public health importance.

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Longevity of screenwriters who win an academy award: longitudinal study

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Abstract

Objective To determine whether the link between high success and longevity extends to academy award winning screenwriters.
Design Retrospective cohort analysis.
Participants All screenwriters ever nominated for an academy award.
Main outcome measures Life expectancy and all cause mortality.
Results A total of 850 writers were nominated; the median duration of follow up from birth was 68 years; and 428 writers died. On average, winners were more successful than nominees, as indicated by a 14% longer career (27.7 *v* 24.2, P = 0.004), 34% more total films (23.2 *v* 17.3, P < 0.001), 58% more four star films (4.8 *v* 3.1, P < 0.001), and 62% more nominations (2.1 *v* 1.3, P < 0.001). However, life expectancy was 3.6 years shorter for winners than for nominees (74.1 *v* 77.7 years, P = 0.004), equivalent to a 37% relative increase in death rates (95% confidence interval 10 to 70). After adjustment for year of birth, sex, and other factors, a 35% relative increase in death rates was found (7% to 70%). Additional wins were associated with a 22% relative increase in death rates (3% to 44%). Additional nominations and additional other films in a career otherwise caused no significant increase in death rates.
Conclusion The link between occupational achievement and longevity is reversed in screenwriters who win academy awards. Doubt is cast on simple biological theories for the survival gradients found for other members of society.

Editorial by Davey Smith

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Academy awards—nominees and winners

Three wins
Billy Wilder: *The Lost Weekend (1945), Sunset Boulevard (1950), The Apartment (1960)*
Charles Brackett: *The Lost Weekend (1945), Sunset Boulevard (1950), Titanic (1953)*

Five or more nominations
At least one win
Woody Allen: *Hannah and Her Sisters (1986), Annie Hall (1977)*
Billy Wilder: (see above)
John Huston: *The Treasure of the Sierra Madre (1948)*
Charles Brackett: (see above)
Ben Hecht: *The Underworld (1928), The Scoundrel (1935)*
Carl Foreman: *The Bridge on the River Kwai (1957)*
Oliver Stone: *Midnight Express (1978)*
Robert Benton: *Kramer vs Kramer (1979), Places in the Heart (1984)*
Francis Ford Coppola: *Patton (1970), The Godfather (1972), The Godfather II (1974)*
Michael Wilson: *A Place in the Sun (1951), The Bridge on the River Kwai (1957)*
Joseph L Mankiewicz: *A Letter to Three Wives (1949), All About Eve (1950)*
Richard Brooks: *Elmer Gantry (1960)*
Robert Riskin: *It Happened One Night (1934)*

No wins
Federico Fellini
Ingmar Bergman
Stanley Kubrick

Introduction

The link between socioeconomic status and survival is enigmatic. Many studies have shown that high occupational achievement is related to better health, yet the underlying mechanisms remain disputed.[1–3] Writers on this topic can use behavioural or biological theories, or both, to explain the findings.[4] Behavioural theories assume that lifestyles of people in the upper social classes contribute to good health. Indeed, smoking is a notable cause of sickness and is somewhat more common among poor people than rich people.[5] Biological theories assume that internal processes related to success reduce susceptibility to disease.[6 7] For example, stress that prevails in states of relative deprivation may cause the immune system to malfunction.[8]

The link between occupational achievement and survival is further complicated by common misunderstandings. Firstly, the association is not due solely to a reverse causality artefact. Aside from a few diseases—for example, schizophrenia—most studies indicate that good health results from, rather than leads to, high achievement.[9 10] Secondly, the association is not limited to the poor only. Instead, several studies suggest that a link exists at average levels of achievement.[11] Thirdly, the association is unlikely to have a single explanation.[12] Furthermore, many determinants of survival—for example, command over resources, perceptions of social hierarchy, inequities in the material world—are compatible with both behavioural and biological theories.[13]

We wondered whether the lives of screenwriters might provide some insight into the relative contributions that behavioural and biological mechanisms make to the link between achievement and survival. We selected screenwriters because they labour in anonymity, yet their work is renowned. For example, millions of people know the movie *Lawrence of Arabia*, yet few would recognise the authors of the screenplay (Robert Bolt and Michael Wilson). Unlike other occupations, screenwriters can obtain high stature without a special upbringing or daily accountability. Without such guides for behaviour, successful screenwriters might gain little survival advantage according to a behavioural theory, yet they might gain great survival advantage according to a biological theory. Our study tests the long term survival of highly successful screenwriters.

Methods

Academy of Motion Picture Arts and Sciences—The Academy of Motion Picture Arts and Sciences currently has about 6000 members and is grouped into 13 branches—for example, the writers branch has about 300 members. The annual awards process is complex (see www.oscar.org for details). In December of each year the academy compiles a list of eligible films; each writer of these films is eligible to be nominated for a screenwriting award. In the following January the list is sent to academy members, and members of the writers branch are invited to nominate five films in each of two screenplay categories. In February the nominations are tabulated, the top five in each category are identified, and all academy members subsequently vote for each category. The academy award goes to the writers of the screenplay with the most votes.

Selection of writers—We identified all screenwriters nominated for an academy award for writing at any time during their career. Specific categories for original screenplay and for adapted screenplay were included; distinctions have been given different names over the years. The Academy of Motion Picture Arts and Sciences supplied a listing of all screenwriters nominated for writing. The period of selection spanned the time from inception to the most recent awards (1929-2001), amounting to 73 consecutive annual award ceremonies. Many films had more than one author, and we included every person who received writing credits. Some winners had multiple wins during their career; we recorded each one, along with the total number of films and total number of nominations of every screenwriter.

Births and deaths—We collected data on each person's date of birth, and date of death if applicable, from the internet through four databases: the AMG all movie guide (www.allmovie.com), the internet movie database (www.imdb.com), the Los Angeles public library obituary index (http://dbase1.lapl.org/pages/rip.htm), and the social security death index (www.ancestry.com). Each source aims to provide up to date information and undergoes public scrutiny. Data were checked by consulting 14 written publications, and conflicts were resolved by accepting printed sources over the internet.[14–27] We obtained additional data on births and deaths by inquiry to the national film information service and by contacting agents representing the screenwriters.

Individual characteristics—Personal details about individual screenwriters were retrieved by using similar methods to the above, with the following exceptions. We determined whether the screenwriter had received any formal education beyond high school by consulting the single most comprehensive source, the AMG all movie guide. The start and end dates of a career are often ambiguous, so we accepted the first and final years as listed in the guide's filmography of movie contributions for each person. Screenwriters write on varied topics, so each writer's genre was classified according to what was listed first by the AMG all movie guide. Similarly, film reviews are not necessarily an accurate measure of a film's quality, yet the all movie guide's five star ratings were accepted.

Statistical analysis—Our primary analysis compared the mortality of screenwriters who won an award with the mortality of screenwriters who were nominated but did not win. We plotted survival by using the Kaplan-Meier method and estimated life expectancy as the area under the curve. We based statistical significance on the log rank test. These methods are identical to methods used previously.[28] Multivariate analyses used the proportional hazards model to adjust for year of birth, sex, education (documented or not), film genre (drama or not), total films, total four star films, total nominations, age at first film, and age at first nomination. We used time dependent covariate analyses to evaluate writers who achieved victory years after their first nomination.[29 30] All tests were conducted using two tailed analyses.

Table 1 Characteristics of screenwriters nominated for an academy award. Results are numbers (percentages) unless stated otherwise

Characteristic	Winners (n=189)	Nominees (n=661)
Demographic factors		
Year of birth:		
Unknown	4 (2)	51 (8)
Before 1900	35 (19)	92 (14)
1900-19	68 (36)	219 (33)
1920-39	43 (23)	148 (22)
1940-59	31 (16)	123 (19)
1960-79	8 (4)	28 (4)
1980-99	0 (0)	0 (0)
Sex:		
Male	177 (94)	588 (89)
Female	12 (6)	73 (11)
Education:		
Documented	58 (31)	143 (22)
Professional factors		
Film genre drama	131 (69)	408 (62)
Mean (SD) age at first film (years)	32 (8)	33 (8)
Mean (SD) age at first nomination (years)	40 (8)	42 (9)
Mean (SD) total nominations	2.1 (1.7)	1.3 (0.7)
Mean (SD) total films	23 (22)	17 (17)
Mean (SD) total four star films	4.8 (4.6)	3.1 (3.6)
Mean (SD) age at latest film (years)	59 (14)	57 (13)
Derived measures*		
Mean (SD) length of career (years)	27.7 (15.4)	24.2 (14.7)
Mean (SD) films per year	0.8 (0.6)	0.7 (0.5)

*Measures are derived from preceding data as numerator and duration of career as final denominator.

KOBAL COLLECTION

Billy Wilder (1906-) (left) and Charles Brackett (1892-1969) (right) both won three academy awards for screenwriting. They are pictured here with Gloria Swanson, who starred in *Sunset Boulevard*, for which Wilder and Brackett won an academy award in 1950

Results

Overall, 850 screenwriters were nominated for an academy award; of these, 189 won at least once (see www.oscar.org) and 661 did not win. Winners and nominees had similar demographic characteristics (table 1). The median age at first film and first nomination was 32 and 41 years, respectively. For the winners, the median age at first victory was 41 years; most (171/185, 92%) achieved victory before 55 years of age and a few (24/189, 13%) had multiple victories. The most frequently nominated screenwriter was Woody Allen, who accumulated 13 nominations and two wins. Most wrote as teams, including Billy Wilder, who had 12 nominations and three wins. He won two of these awards with Charles Brackett. Most writers did not act or direct. The film that won an academy award for best picture was usually nominated for a screenwriting award also (66/73).

We assessed the length of each screenwriter's career as the interval from their first to their latest film. The degree of occupational achievement varied substantially (table 1). On average, winners had careers that lasted 14% longer than careers of nominees (27.7 *v* 24.2 years, $P = 0.004$), they worked on 34% more total films than nominees (23.2 *v* 17.3, $P < 0.001$), and wrote 58% more four star films (4.8 *v* 3.1, $P < 0.001$). Education was documented for 58 winners and 143 nominees; of these, most had attended some academic courses beyond high school (55/58 *v* 116/143, 95% *v* 81%, $P = 0.013$). Drama was the most common writing genre, accounting for the majority of screenwriters and having a slight tendency to be more frequent in winners than nominees (131/189 *v* 408/661, 69% *v* 62%, $P = 0.056$).

A total of 428 screenwriters had died by 6 April 2001, reflecting a median follow up from birth of 68 years. Winners had shorter lives than nominees (figure next page) and the difference in life expectancy was 3.6 years (74.1 *v* 77.7 years, $P = 0.004$). Analyses based only on men showed a 4.0 year difference in life

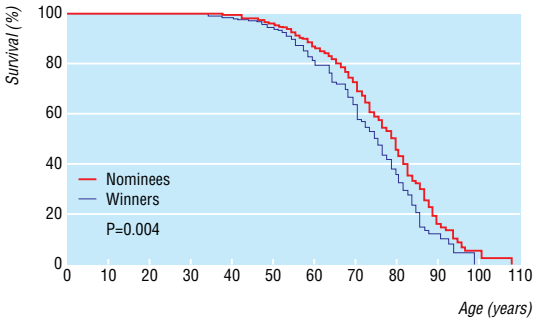
expectancy between winners and nominees (73.6 *v* 77.6 years, P = 0.002). The overall difference persisted after screenwriters who died before age 55 or were first nominated after age 55 were excluded (76.2 *v* 79.8 years, P = 0.003). Analyses based on survival after first film, rather than after birth, yielded a difference of 2.4 years (37.1 *v* 39.5 years, P = 0.008). Analyses based on survival after first nomination, rather than after birth, yielded a difference of 3.2 years (45.4 *v* 48.6 years, P = 0.002).

The generally higher mortality for winners compared with nominees was equivalent to about a 37% relative increase in death rates (95% confidence interval 10% to 70%). Adjusting for demographic factors yielded similar results (table 2). Analyses using a time dependent step function, in which winners were counted as nominees until the time of their first victory, yielded a relative increase in death rates of 48% (19% to 84%). Analyses that confined the group of winners to screenwriters who won at first nomination, and classified all others as nominees, yielded a relative increase in death rates of 40% (10% to 79%). Analyses that excluded all screenwriters with multiple victories yielded a relative increase in death rates of 39% (11% to 75%).

Screenwriters with long careers often received more nominations than did screenwriters with short careers. The winners accumulated a total of 396 nominations, of which 181 were defeats. The nominees accumulated a total of 827 nominations. The number of nominations in each group was equivalent to about 0.14 per year of career. We found no association between number of defeats and increased death rates, either for winners (−3, −13 to 9) or nominees (−8, −21 to 8). Analyses of both groups together showed that each victory was associated with a 22% (3% to 44%) increase in death rates, whereas each nomination not followed by a win offered no significant increase in death rates (−7%, −15% to 2%).

We focused further analyses on the winners to better understand their shorter survival. Winners who worked intensely, intensity being measured as films per year of career, had a 67% (19% to 134%) higher death rate than winners who worked less intensely, measured as the additional hazard per film per year. For example, screenwriters who averaged less than one film each year in their career lived about 4.5 years longer than screenwriters who averaged one or more films each year in their career (75.7 *v* 71.2 years, P = 0.035). The increased risk associated with work intensity was not unique to winners but was also observed when nominees averaging less than one film per year were compared with nominees averaging one or more films per year (79.0 *v* 73.7, P = 0.003).

Other analyses assessed how missing data might affect the robustness of the results. Overall, the proportion of screenwriters not known to be dead was smaller for the winners than for the nominees (77/189 *v* 345/661, 41% *v* 52%, P = 0.006). However, analyses based on screenwriters known to be dead showed a 20% (−5% to 47%) increase in death rates among the winners. In addition, 55 screenwriters were missing valid birth dates; more dates were missing for nominees than winners (table 1). For life expectancy to be equal for winners and nominees, however, all these missing screenwriters would need to have died at an average age of 15.



Survival of winners and nominees of academy awards for screenwriting. The graph shows the percentage of each group alive, plotted by using the Kaplan-Meier technique. Primary statistical analysis is based on a log rank test comparing winners to nominees (n=185, deaths=112 and n=610, deaths=316, respectively)

Table 2 Death rates for screenwriters who have won an academy award.* Values are percentages (95% confidence intervals) and are adjusted for the factor indicated

Factor	Relative increase in death rate for winners
Basic analysis	37 (10 to 70)
Adjusted analysis	
Demographic:	
Year of birth	32 (6 to 64)
Sex	36 (10 to 69)
Documented education	39 (12 to 73)
All three factors	33 (7 to 65)
Professional:	
Film genre	37 (10 to 70)
Total films	39 (12 to 73)
Total four star films	40 (13 to 75)
Total nominations	43 (14 to 79)
Age at first film	36 (9 to 68)
Age at first nomination	32 (6 to 64)
All six factors	40 (11 to 76)
All nine factors	35 (7 to 70)

*Results from Cox regression model with hazard ratios reported as relative increases.

Discussion

Winning an academy award for screenwriting is associated with a loss in life expectancy. The apparent decrease in survival was about three years, could not be explained by simple demographics, and was evident even though victory leads to a major gain in earnings.[31] A career with many nominations but no awards was not associated with decreased survival, even though such a career indicates a high level of skill. The increased mortality is not easily attributed to occupation, talent, social hierarchy, neomaterial conditions, reverse causality, or measurement error. Rather, the results highlight the importance of occupational activity on susceptibility to disease and indicates that higher status does not always confer greater longevity.

Explanations—Several explanations might account for why the link between success and survival does not extend to screenwriters who win academy awards. For example, screenwriters are not forced to preserve their

image by avoiding disgraceful behaviour, maintaining exemplary conduct, keeping physically fit, working regular hours, sleeping each night, or following the ideals of lifestyle. They are not surrounded by people who have a vested interest in the writer's reputation and who can enforce high standards. Outstanding screenwriters, furthermore, win early in their lives yet gain no special control (e.g. influence at work and in the community), ability to avoid stress, access to care, or celebrity privileges. Untangling the possible explanations is difficult because screenwriters are as diverse as their manuscripts.

Limitations—The main limitation of our research is the missing data on birth, death, and the intervening years. Missing birth data is not a major bias in our analysis because the screenwriters could not have died at an age earlier than the age of any screenwriter who has ever been nominated for an academy award. Likewise, missing data on deaths is not a major bias because differences in survival were still observed in screenwriters known to be dead and because most missing birth dates were for nominees known to be alive. Missing data on time before nomination could be a major bias if suffering in early life leads to outstanding writing in later life. We believe, however, that the priority for future research is to discover how winners and nominees behave after the award ceremony is over.

Behavioural factors—We suggest that behavioural factors account for the reduced life expectancy of winners, yet biological factors may still be relevant. That is, perhaps a biological factor is linked to both shortened survival and greater talent. If so, the benefits of winning might be masked, the gains from increased status hidden, and our inference misleading. However, such speculation is problematic because the determinants of talent are also prevalent in screenwriters with multiple nominations (but no wins). Such speculation also implies that it is possible to predict a winning manuscript before the film is produced. Finally, such speculation would not explain why writing is so different from other talents and is the first occupation where success leads to a large increase in all cause mortality.[32]

Joy of Oscarhood
Tempered by early winter;
Losers live longer

Writing versus acting—The results of this study are even more intriguing when compared with results on actors and actresses who have won academy awards.[28] In essence, winning an academy award for acting is associated with a large increase in life expectancy, whereas winning an academy award for screenwriting is associated with a large decrease in life expectancy. Both findings are hard to attribute to chance and the simplest explanation for the discrepancy could be the obvious—namely, that the life of an actor is different from the life of a writer. One unifying mechanism for the discrepant health effects may relate to the amount of daily monitoring and control, because actors lead lives of celebrity whereas writers lead lives of anonymity. More research is needed.

Our study is not about writers only, any more than the Whitehall study is about civil servants only.[33] The difference in life expectancy that we found was similar to the societal losses due to heart disease.[34 35] This difference occurred even though winners had longer careers, more films, and more nominations (all of which are measures of occupational achievement) than nominees who did not win. The implication is that greater success may lead to worse health in some groups. More generally, biological theories on the link between accomplishment and longevity are unlikely to be the only factors for all people. Behaviour might be a powerful factor that can modulate and even reverse the link between status and survival.

What is already known on this topic

High achievement has been associated with decreased all cause mortality for people in many different occupations

Such an association is compatible with behavioural and biological theories for the role of social determinants

What this study adds

Screenwriters nominated for an academy award show a paradoxical survival pattern, where greater success is associated with a large decrease in life expectancy

The paradox is not easily explained by talent, prestige, financial earnings, material conditions, reverse causality, measurement error, or simple demographics

It might reflect the unusual lifestyles of writers, where success is not linked to exemplary conduct or control; this underscores the importance of behaviour

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Contributors: DAR and SMS conceived the idea and designed the study, analysed and interpreted the data, drafted and revised the article, and gave final approval. SMS collected the data. DAR is the guarantor.

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In grandfather's room

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My maternal grandfather lived until the age of 111. He was lucid to the end, but a few years before he died, the family assigned me the task of talking to him about his problem with alcohol.

My aunt, with whom he had lived for the last 20 years of his life, had been a healthfood fanatic for as long as I could remember. She was considered somewhat of a crank when I was a child, but as the 1960s approached and we all started joining her in eating bean sprouts, she gained respectability. Being a teetotaler, she was worried about my grandfather's desire to indulge, three to four times a day, in a drink of his favourite whisky, fretting that he was about to become an alcoholic any day.

"Never get excited, go for a walk"

He could not understand her fears and would slip himself a few drinks above and beyond the watered-down ration she would dole out each evening before supper. I was a medical student at the time and not yet conscious of my future role as a geriatrician. However, because I represented the closest thing to medical authority, I was delegated by the extended family—my parents, two siblings, eight uncles and aunts, 11 cousins, various dogs, cats, and birds—to "speak to Zayde" about his problem.

Not exactly brimming with enthusiasm for the task, I walked the few blocks to his house and climbed the 20 steep stairs to his room. My family should have been less concerned about his tippling and more worried about his tripping down the stairs. Climbing up to his room, my heart pounding from the steepness of the ascent, I pondered how I should broach the delicate subject.

After all, I had great respect for my Zayde. If nothing else, he had outlived almost everyone in the world who was born in 1871. The fact that he had come to Canada penniless, devoid of all but three English words ("I vant vork"), and made it, bringing up a family and starting a hardware shop (which was to become a Toronto landmark), was impressive enough. That he was still alive more than a century after his mother gave birth to him in a cold, crowded hut near Kiev had always impressed me. In fact, my admiration for him may well have played a role in my later choosing geriatrics as my area of specialisation in medicine.

As usual, over hot tea, Zayde and I chatted. He asked me, as he always did, about my life—school, girlfriends, my parents, brother, sister. These apparently ritualistic questions and answers served as a kind of prologue to the real discussion that would always follow. I would ask him questions about his life in Russia and his role in the Russo-Japanese War of 1904-5. Officially, he had been a drummer in the tsarist army; unofficially, he taught fellow soldiers how to evade service by feigning all kinds of illnesses.

Can a blind man's eyes twinkle?

Zayde would tell me how he escaped Russia and crossed the border by a combination of bribery and good luck and how he came to Canada shortly afterward. "Russia no good, Canada wonderful," he said. He had theories about why he lived so