

GoodWork® Project Report Series, Number 30

“MEMES,” “GENES,” AND “SCENES”: A COMPARISON OF
VETERAN PROFESSIONALS WORKING IN JOURNALISM,
GENETICS, AND THEATRE¹

Becca Solomon, January, 2004

Jeff Solomon, Series Editor
GoodWork® Project
Harvard University

COPYRIGHT 2004. All Rights Reserved.

ABSTRACT

As part of the GoodWork Project, researchers have studied veteran professionals working in journalism, genetics, and theatre. The goal of this phase has been an examination of the relationship between two aspects of “good”: high-quality performance and social responsibility. While important similarities obtain among these three domains, theatre is distinct in several ways. Most instructive is the incredible *passion* theatre artists have for their work. As evidence, many of the artists interviewed described *theater as a calling*. Indeed, their work is their life, and more than professionals working in other areas, theatre artists evidence a *confluence between personal and professional goals*. Also unusual to theatre among these three professions is the importance of *collaboration* to the exclusion of competition. Finally, theatre artists describe their vital *connection to the audience*. Unlike journalists who write for a largely anonymous readership, or geneticists, who are similarly removed from the population affected by their work, the very breath and immediacy of the theatre audience shapes the artist’s work. These unique elements of theatre may prove enlightening in thinking about how to identify and accomplish “good work.”

“MEMES,” “GENES,” AND “SCENES”: A COMPARISON OF VETERAN
PROFESSIONALS WORKING IN JOURNALISM, GENETICS, AND THEATRE¹

Becca Solomon, January, 2004

One of the few things that is going to remain in any culture is what the artist is doing...Five thousand years from now...what the artists have done, perhaps, will remain. They are the diaries, the journals of our time...We go back to any culture what do we look at? We look at what the artists have done, not necessarily the scientists or mathematicians.

Robert Wilson, Artistic Director

¹ In addition to the GoodWork Project interviews, this paper draws from several key sources: Gardner, H., Csikszentmihalyi, M., and Damon, W. (2001). *Good work: When excellence and ethics meet*. New York: Basic Books; and Fischman, W., Solomon, B., Greenspan, D., and Gardner, H. (2004). *Making good: How young people cope with moral dilemmas at work*. Cambridge, MA: Harvard University Press. In addition, two unpublished papers provided integral information: Marshall, P., Reese, J., and Barberich, K. (2001). “GoodWork in Theatre” Cambridge, MA: Harvard Graduate School of Education, Project Zero, GoodWork Project (available from the GoodWork Project, 201 Larsen Hall, Harvard Graduate School of Education, Cambridge, MA 02138, tel: 617-496-4929, email: goodwork@pz.harvard.edu); and Marshall P. and Reese, J. (2002). “GoodWork in Theatre,” Cambridge, MA: Harvard Graduate School of Education, Project Zero, GoodWork Project (available on the GoodWork Project website: <http://www.goodworkproject.org/papers.htm>).

Every profession possesses its own incomparable challenges and rewards. These may vary according to the tasks required by the occupation, as well as individual workers' perceptions of what is valuable to them. For example, investment bankers work endless hours but may feel rewarded by the high pay that they earn; school teachers, in contrast, may be overlooked and underpaid, but often experience their work as emotionally and professionally rewarding; physicians may enjoy the substantial authority they possess in our society, but feel burdened by the grave responsibility for saving lives with which it comes. Each individual must determine her own boundaries around when the costs grow too high. The payment exacted differs by domain, but there are throughlines across professions.

The GoodWork Project, a collaboration among research teams under the direction of Howard Gardner at Harvard University, Mihaly Csikszentmihalyi at Claremont Graduate University, and Bill Damon at Stanford University, seeks to explore where these boundaries lie and how they are navigated by professionals in different domains at varied professional stages. In other words, the project examines the relationship between two aspects of "good": high-quality performance and social responsibility

As part of the GoodWork Project, studies have been conducted with professionals in a variety of domains at different professional stages. To date, the professions studied in the GoodWork Project include business, dance, genetics, higher education, journalism, law, medicine, philanthropy, and theatre. The GoodWork Project studies also address three professional stages: Core, Dedicated Young Professional, and Origins of GoodWork. Participants in the Core studies are veteran professionals who have long completed their training and have been working in their chosen field for a number of

years. Roughly speaking, they range in age from 35-85. Individuals included in the study of Dedicated Young Professionals are near the end of their training (e.g., scientists completing a Ph.D. program) or at the beginning of their careers (e.g., journalists starting out at a local newspaper). These young people are usually 25-35 years old. Participants in the Origins of GoodWork study are children and teenagers who are committed to an activity or domain (e.g., actors at a performing arts high school). The youngest are 10 and the oldest 18. In each of the GoodWork studies, we have conducted in-depth interviews focused on the participants' goals, values, beliefs, formative influences, and guiding principles, and learned about what inspires and obstructs professionals in the domains of study². Across professions and stages, there are four major questions to consider:

1. What are the *traditional values of the domain* and how do current practitioners think about them? For example, a traditional value for lawyers is to provide the best

² For more information on the Core journalists and geneticists see Gardner, H., Csikszentmihalyi, M., and Damon, W. (2001). *Good work: When excellence and ethics meet*. New York: Basic Books. For more information on journalists, geneticists, and actors in the Dedicated Young Professionals study and on teenage journalists, scientists, and actors in the Origins of GoodWork study, see Fischman, W., Solomon, B., Greenspan, D., and Gardner, H. (2004). *Making good: How young people cope with moral dilemmas at work*. Cambridge, MA: Harvard University Press. (The younger children in the Origins study—10-15 year olds—are not included in this book). For papers on other domains and stages, please see the GoodWork Project website (<http://www.goodworkproject.org/papers.htm>) or contact the GoodWork Project, 201 Larsen Hall, Harvard Graduate School of Education, Cambridge, MA 02138, tel: 617-496-4929, email: goodwork@pz.harvard.edu.

possible argument for their clients (Gardner, Csikszentmihalyi, & Damon, 2001). A practitioner may personalize this value by adhering to self-imposed rigorous standards of professional performance.

2. What *external factors* play a role in the profession? While many external factors potentially affect a domain, the current cultural climate leads us inevitably towards a consideration of *market pressures*. Specifically, how does a bottom-line focused economic atmosphere affect the profession—positively and negatively? How does the changing market affect how these professionals conduct their work?

3. Is the profession in *alignment*? In other words, to what extent are the goals and values of various parties either in alignment or conflict with one another: e.g., the profession's traditions, the current practitioners, the stakeholders (whether they be the consumers and appreciators of the domain, or shareholders who stand to profit), and/or the larger society's expectations.

4. What *intrapsychic factors* influence the professional? These factors include one's own sense of *balance* and well-being as well as the passion and commitment that one brings to the work.

Though each profession included in the GoodWork Project is important in distinct ways, a comparison among veteran professionals working in journalism, genetics, and theatre is instructive. In different ways, each of these three professions creates, conveys,

and controls information important to humanity: Journalists disseminate knowledge to inform society about what is happening, providing “memes”³—units of information with which people make sense of their world. Geneticists seek to uncover, understand, and even manipulate "genes," the basic building blocks of life. Theatre artists also endeavor to discover and share human truths by exploring humanity: they reflect these discoveries back to the audience in a way that allows those participating to gain insight into themselves and the world around them. In a sense, journalists have the information and tools to shape our minds, geneticists have the means and understanding to shape our bodies, and theatre artists have the ability to shape our hearts. Certainly, there are important similarities among these three professions. Distinctive qualities about theatre emerge, however, in comparison to journalism and genetics.

The singularity of theatre as a profession is apparent even at first glance. In spite of the many hardships, aspirants have always been drawn to the glamour of the stage. Perhaps what is most attractive about the theatre is that it is full of life, but is not actually life. Renowned acting teacher Constantin Stanislavsky comments that “the theatre...is the art of reflecting life” (1950 p.92). Actor Simon Callow describes theatre as “vivid and real, but quite other” (1986, p.3).

The veteran actors, artistic directors, producers, and playwrights included in the GoodWork study speak of the supports, challenges, traditions and changes of their profession. While important common issues emerge across professions, the differences among this handful of occupations are equally salient. Before turning to the main findings

³ The term “meme” was originated by British biologist Richard Dawkins in the 1970s to complement the term “gene” (Dawkins as cited in Gardner, Csikszentmihalyi, & Damon, 2001).

of the theatre study, it will be useful to review the ways in which the four questions posed above might be answered regarding journalism and genetics as a basis for comparison.

I. What we know about Journalism

As part of the GoodWork Project, we interviewed 90 veteran journalists throughout the United States, including professionals working in print, broadcast, internet, and documentary media. Reflecting the distribution within the domain, the majority of individuals we interviewed are focused in print or broadcast journalism. There were 37 men and 24 women included in the study. Most participants were Caucasian⁴, reflecting the field's demography, and ages ranged from 26 to 85. We learned a great deal from these journalists⁵. A few salient points are highlighted below in response to the four major questions posed above.

A. What are the traditional values of journalism and how do current practitioners think about them?

The history of the American press in many ways reflects the conflict between values currently apparent in journalism: on the one hand, the first newspapers rented space to the highest bidder, on the other hand, these same profit centered printers ascribed the ethical obligation of the press to present opinions with which they might disagree, as well as those that were to their liking. Newspapers were at once a commercial business

⁴ There were 47 white, 1 Asian, 9 African American, and 4 Latino/Hispanic participants.

⁵ For detailed findings, see Gardner, H., Csikszentmihalyi, M., and Damon, W. (2001). *Good work: When excellence and ethics meet*. New York: Basic Books.

and a forum for free speech (Gardner, Csikszentmihalyi, & Damon, 2001).

The information presented in these papers, however, was quite subjective. Objectivity became the standard at the end of the nineteenth century, heralded by the *New York Times*' owner, Adolph Ochs Sulzberger. He decreed that his paper would only report "All the news that's fit to print." Still, this shift in method and content was motivated by the bottom-line: newspaper owners realized that they could augment profit by increasing the quality of their product. This tension within journalism—earning profit for owners/shareholders and objectively informing the public of important news—has long been noted, but never resolved (Gardner, Csikszentmihalyi, & Damon, 2001).

The veteran journalists in our study described professional missions of informing the public, empowering the powerless, supporting democracy, and promoting social change. Current professionals continue to believe in these missions of their profession. The historical tension between these noble missions on the one hand, and owners/shareholders' desire for earning profit from news outlets on the other, however, also endures.

B. External factors: How does a bottom-line focused economic atmosphere affect journalism today—positively and negatively?

As corporations increasingly replace families in running the news media, there appears to be a trend of business people controlling the product, often shifting focus from news dissemination to the bottom line. Technological advances also seem to affect shifts in journalism. Specifically, the 24-hour cable news stations and internet news sources are competing with more traditional news media (i.e., newspapers, the six o'clock news),

putting additional financial strain on them to stay in business. The pressure on journalists to produce constant and titillating news challenges their ability to do their work accurately and well. With the emphasis on quick, sensational, profitable news, many journalists report that the ethics in the profession are eroding.

C. Is journalism in alignment?

Most notably, the veteran journalists with whom we spoke largely believe that their profession is in decline. Many of them entered the profession in order to uphold the weighty values mentioned above: informing the public, empowering the powerless, supporting democracy, and promoting social change. The pressure they experience to churn out constant sensational news in order to grab viewers' and readers' attention, however, creates misalignment within the domain. These pressures seem to be largely the result of the two external factors touched on above: 1. market pressure—specifically, the increased importance of profit in journalism, and 2. the advent of 24-hour news. Journalists today are acutely aware of the pressures and misalignment in their field. In fact, several interviewees pointed to differences between today's declining standards and the putatively idyllic era of journalism in the time of Edward R. Murrow. During that era, in their formulation, integrity was the rule, and quality aided rather than vied for profit (Gardner, Csikszentmihalyi, & Damon, 2001). Most of the veteran journalists with whom we spoke are troubled by the profession's current misalignment; paradoxically their very concern may be a healthful sign in a profession that is aware of the pitfalls and limitations that come with a changing world and could spur better alignment.

D. What intrapsychic factors influence the professional journalist?

In addition to the challenges posed by the requirement of breakneck speed in the profession, journalists also speak about the difficulty of balancing work with other priorities—especially family. Particularly among the young professionals we interviewed, the hectic and unpredictable pace of this work contributes to the high turnover rate within the domain. Additionally, the work schedule is often irregular: while most journalists have fairly set hours, no one can predict when a crucial breaking story must be covered. This erratic schedule can make it difficult to commit to other responsibilities such as family and friends. It should be noted, however, that most of the veteran professionals we interviewed are married with children.

II. What we have learned about Genetics

We interviewed 56 veteran geneticists: Ph.D. researchers, MD researchers, industry-based researchers (biotechnological company founders/employees), and genetic therapists (who explain genetic risks to patients). Like the journalists, among the 34 men and 22 women in the sample, most were Caucasian⁶, reflecting the field's demography. While these scientists differ from one another in notable ways, they also share foundational beliefs: the importance of science, especially in terms of its contributions to society; the need for unconstrained exploration; and the responsibility of scientists to conduct their work with accuracy and integrity. Most of the veteran geneticists interviewed also recognize the ethical, social, and political issues inherent in science.

⁶ There were 56 Caucasians and 3 Asian Americans included in the study.

There is less agreement on how these challenges should be handled, and by whom.

A. What are the traditional values of the profession of genetics and how do current practitioners think about them?

Traditionally, the profession of science has held discovery and exploration as most valuable. At the core of these values is the belief that exploration and discovery will benefit humanity either by creating useful application, or by augmenting knowledge. The means to achieve these ends long have been rooted in the importance of truth, accuracy, and integrity in conducting experiments and observations. According to the veteran scientists interviewed for the GoodWork study, these basic values and beliefs still hold true. What has shifted, however, are the experimental methods available to pursue this exploration.

B. External factors: How does a bottom-line focused economic atmosphere affect the profession of genetics—positively and negatively?

Genetics can now yield great financial gain. The advent of the biotechnology industry, which profits from the application of genetic discoveries, allows scientists the possibility of earning great wealth. At the same time, this bonanza may shape the way in which science is carried out: while historically there has been fierce competition in science, the added monetary lure may be pushing professional competition into an unprincipled brawl.

Some scientists view industry as antithetical to academic research, but many see how the two constructs complement one another. Dr. C. Thomas Caskey, for example,

senior vice president of research at Merck Genome Research Institute, points out that “98% of all discoveries come out of academics, 2.5% come out of the pharmaceutical industry; 95% of all drugs come out of the pharmaceutical industry, 5% come out of academics.” For scientists who value both discovery and application, the worth of both industry-based and academic research then becomes clear. The question of whether bottom-line pressure may degrade the practice and integrity of science, however, still remains.

C. Is the profession of genetics in alignment?

The veteran scientists in our study described the current era as a “golden age” of genetics. Using the discoveries around DNA and gene sequencing, scientists pursue their aspirations of locating combinations for specific diseases and reformulating treatments for them. In other words, genetics appears to be a profession in harmonious alignment. On the other hand, nowadays people raise serious ethical questions about genetics, for example, the consequences to humans and ecological systems of genetically modified crops, and the impact of genetically manipulating physical and intellectual traits to create “designer babies.” We were surprised that our subjects, interviewed in the middle to late 1990s, brushed aside these concerns. Can a profession which does not ask such questions of itself be in a state of health, or might it be described as a state of denial?

D. What are the intrapsychic factors that influence the professional geneticist?

Especially at the beginning of their careers, geneticists must remain at the bench for endless hours to obtain experiment results. Even at the top of their careers, however,

geneticists spend “long and crazy hours” working. With such time consuming work, there is little occasion for other activities. Similar to the complaints of journalists, therefore, it is difficult for geneticists to achieve a balanced life. Particularly women are concerned about the possibility of having a family as well as pursuing a career in genetics. The decision to have a family at all must be carefully considered. Then, strict discipline and boundaries are required. As one MD researcher with a family comments, “keeping everything together is what really dominates our lives.”

III. Enter Theatre: What have we learned about the profession?

Having reviewed relevant highlights of what the GoodWork Project has learned about genetics (genes) and journalism (memes), we can now return to theatre (scenes) to consider how a profession in theatre differs in important ways.

For the GoodWork theatre study, we conducted in-depth interviews with 35 theatre professionals who were nominated by their peers and/or recognized with awards for their exemplary contributions to the domain. This exceptional group includes 15 women and 20 men aged 35 to 80. They represent a variety of roles in the theatre, including 17 artistic directors, 3 producers, 8 actors, and 7 playwrights. Again, most participants were Caucasian (31), with 3 African Americans and 1 Asian American. While each of these people may at times work in the more lucrative worlds of film or television, almost all are focused primarily on the art of live theatre.

A. What are the traditional values of the theatre and how do current practitioners think about them?

Theatre is in some ways analogous to journalism or genetics. Journalists supply the information that helps society to make sense of what is happening in our world, whether to inform or to change; geneticists pursue discovery in order to facilitate humanity's understanding of the world, whether for knowledge itself or application. Theatre, too, is commonly thought to have originated in ritual for the purpose of making sense of the world around us (Brockett, 1974). The theatre has always been a place to live out fantasies as well as to reflect on reality through art. In spite of numerous obstacles—fierce competition, constant rejection, irregular hours and financial insecurity—the glamour of the theatre has always drawn many hopefuls.

The veteran theatre professionals in the GoodWork Project continue to endorse and uphold the traditional values and purposes of the profession. There were several related but distinct themes among them. To paraphrase dozens of pages of rich dialogue, according to our participants, theatre's purpose is to entertain, enlighten, teach, and/or move the spectator to think, act, or question themselves and their culture. Many of those in our study, for example, state a goal of stimulating the audience to personal or social action by providing reflection for individuals on themselves and society through theatre. Playwright Donald Margulies explains that what motivates his work is the opportunity "to crystallize aspects of experience, put them on stage in a new light that will compel the audience to see reflections of their own experience in ways that they may not otherwise stop to consider." Another playwright explains that through the audience's self-reflection in light of what is happening onstage, societal change will be provoked:

To me the goal of theatre is to bring about some sort of societal change...I want the dialogue to be so real that you forget that you're watching a play for a little while, and you can see these people as real people and then, you know, see, "Do they reflect—am I similar to that?" Or start to put yourself in relationship to those people on stage.

Other theatre professionals with whom we spoke point out that entertainment is inevitably theatre's objective. Representing the sentiments of many, actor Jane Alexander comments that "obviously theatre is there for entertainment value, for emotional catharsis— and I include laughter in that— and also sometimes for rapture." As suggested by the previous comment, many theatre professionals ascribe to the spiritual ritual of theatre. George Wolfe, director of Joe Papp Public Theatre, for example, believes that theatre reveals "the frailty of being a human," creating a spiritual communion between the theatre professionals and the audience. Indeed, the importance of "the physical presence of the audience" was emphasized by most of the professionals in the study. The reactions of those who observe the play are crucial for the cast, crew, and writers.

B. External factors: How do market pressures and new technology influence the profession of theatre?

Originally, theatre was a right—and indeed a rite—for all, not an expensive pastime for a select few. In Ancient Greece, theatre was originally free of charge, and even

later in Greece, when a small entrance fee was required, there was a public fund for those who could not afford it (Brockett, 1974). In contrast, contemporary American theatre is more commonly a commercial enterprise launched to entertain an audience. (Because of sizeable public subsidies, theatre occupies a somewhat different cultural and economic niche in Europe and elsewhere). The structure of theatre is commercial, and even the best play on Broadway has been produced to earn revenue, “not just to serve, enlighten or enrich the lives of those fortunate enough to afford the price of a ticket” (Hagen, 1973, p.15). While contemporary American critics may consider the focus on theatre as commodity rather than art a modern day problem, this same dilemma has been discussed for at least a century. In 1916, theatre writer Arthur Hornblow remarked,

It [theatre] has passed from the hands that ought to control it—the hands either of Actors who love and honor their art or of men endowed with the temperament of the actor and acquainted with his art and its needs—and, almost entirely, it has fallen into the clutches of sordid, money-grubbing tradesman, who have degraded it into a bazaar (p.33).

All of the veteran theatre professionals to whom we spoke are deeply committed to and passionate about live theatre. They portray the sentiment expressed by Uta Hagen: “I pursued my work for love. Then, the fact that I was paid was incidental to the love. At best, being paid meant that I was taken seriously in this love of my work” (1973, p.7).

Like individuals working in other domains, those who work in the theatre endure and/or enjoy aspects of their work. On the surface, the recompense of fame and fortune

appear to be great—what young person does not (at least now and again) dream of accolades and luxuries? Most theatre aspirants in reality, however, also battle fierce competition and constant rejection. Jane Alexander comments that in order to persevere in theatre, an individual must have “the ability to take rejection.” If you cannot “pop right up again...then you’ve got to get out of the business. You just can’t sustain that kind of depression.” Instead of regular acclaim or even employment, actors may win only a few roles during long stretches of joblessness; playwrights may craft their work in obscurity without ever seeing a play produced; and few directors gain the opportunity to demonstrate their gifts. When theatre professionals are employed, the hours are long and irregular, travel is often mandatory, and much of the process can be monotonous. Most who choose (or are chosen) to work in the theatre struggle, with only the most talented gaining regular employment, and even fewer achieving recognition (Occupational Outlook Handbook, 2002-2003).

The passion and perseverance that allow theatre professionals to view obstacles as strategies seems to give them strength to withstand or modulate the pressures of the market. It is true that many aspirants initially gravitate towards the notoriety and wealth they believe theatre (in particular acting) will bring. These rewards are much more likely, however, to be gained through film or television work, not live theatre. Before the advent of television and film, it may have been that theatre professionals were drawn to their work for fame and fortune. Very few in recent years have profited from live theatre. Film and television are the most lucrative areas for actors, and in 2001 those with speaking parts earned a minimum daily rate of \$636 or \$2,206 for a 5-day week. Still, because a few well known “stars” earn well above the minimum, there is a false impression that all

actors are highly paid. In fact, the average income that members of the Screen Actors Guild earn from acting is less than \$5,000 a year. Actors working in live theatre could expect somewhat lower salaries: The Actors Equity Association reports that in 2000 stage actors could expect a minimum weekly salary of \$1,252 for Broadway stage productions, between \$440 and \$551 for "off-Broadway" or smaller regional theatres, and \$500 to \$728 for Equity covered regional theatres. Actors appearing in traveling shows received about an additional \$106 per day for living expenses (Occupational Outlook Handbook: Actors, Directors, and Producers, 2002-2003). These seem like reasonable—if not luxurious—earnings. Fewer than 15 percent of Equity members, however, work during any given week. In 1998, less than half worked onstage at all. In 2000, the average earnings for those able to find employment were less than \$10,000 for the year (Occupational Outlook Handbook: Actors, Directors, and Producers, 2002-2003).

Producers' and directors' salaries are somewhat higher, but still not exceedingly profitable: the mean was \$41,030 in 2000. The middle 50 percent earned between \$29,000 and \$60,330. The lowest 10 percent earned less than \$21,050, and the highest 10 percent earned more than \$87,770. According to the Society of Stage Directors and Choreographers (SSDC), at a summer theatre directors usually earn \$2,500 to \$8,000 for a 3- to 4-week run, as well as royalties. The SSDC collective bargaining agreement indicates, for example, that the 2002 royalty rate was \$383 for each week of a show's performance at the largest theatres (Society of Stage Director and Choreographers and Traditional Summer Stock, Collective Bargaining Agreement, April 1, 2000-March 31, 2003). Directing at a dinner theatre usually earns less, but has more potential for income from royalties because the shows generally run for a longer time period. Directors in

residence for extended periods at regional theatres earn more over time, and depending on the size of the theatre. Finally, directors working on Broadway shows earn the highest average salary, usually \$50,000 for the run of the show, as well as a negotiated percentage of gross box office receipts (Occupational Outlook Handbook: Actors, Directors, and Producers, 2002-2003).

Because of the challenge of surviving financially in theatre work alone, 19 of 35 (54%) theatre professionals in our study reported that they have done work for TV and/or film to support or supplement their stage work. Still, the dedication that theatre professionals bring to their work is less related to monetary gain than most other professions. Based on our interviews with young theatre aspirants, notoriety and money is unlikely to be what initially attracts them to the profession. But even if fame and fortune were the attraction, they are no longer the draw by the time theatre professionals are entrenched in their work. A respected artistic director comments, “No theatre person is a rich person...If you’re in the theatre for money, you’re crazy...I don’t have a job; I have a life.” A Broadway actor puts it more pointedly,

If you absolutely have to do it, nobody is going to discourage you no matter what they say...[I]f you can discourage all those other people that don’t have that, you’re basically doing them a favor... Because you’ve got to be tenacious, and you really have to want it because if you don’t, it’s not going to happen, just because [the job] is going to go to one of the other two thousand people that have everything that you have and they’re tenacious and they want to do it and they’re willing to sacrifice for it and they’re still full of enthusiasm and excitement for the

job. That's whom the job's going to go to. Not the person who is burned out and tired.

This not to say that practitioners working in most other professions earn exorbitant salaries, nor that financial concerns are the only reasons most people work. Those who are most successful in their professions typically take great pleasure in their work: An expert in cardiovascular disease says of his work, "Understanding these issues is emotionally driving...It's just what excites me." In addition, professionals across domains do their work to contribute to society. As Ben Bradlee, noted former editor of the *Washington Post*, says of his work, "I really do believe that if you shed light in dark corners you make the world more understandable...you have made the world a better place." Still, theatre professionals (like other artists) are atypical because they must persevere regardless of financial survival in the profession. Even established artists continuously struggle financially. An internationally respected actor and director comments "[There have been] lots of times...when I couldn't see how if I continued to do what I do, I would be okay financially. Or if I continued to do what I do, I would have any money when I am older than I already am." In contrast, director André Gregory maintains that the artist should persevere regardless of financial hardships. On further questioning, he acknowledges that it helps to have a wealthy father (as he did). With so many challenges and such uncertain rewards, the passion for the work that marks theatre professionals of all ages is remarkable.

A majority of these veteran theatre professionals were originally drawn to theatre because they sought acceptance in some community. In many ways, these artists found

the support that they sought, and yet race and gender biases remain obstacles in theatre.

All of the people of color and the women we interviewed cited these challenges.

Respected actor Cherry Jones points out that it is difficult for women over a certain age to find work in this country: “And people can become very bitter and I don’t blame them because when [you] suddenly are 50 years old and there’s just nothing for you to do anymore.”

Rather than feeling defeated by the many barriers they encounter during the course of their work, the theatre professionals we interviewed viewed these challenges as strengthening. As David Dreyfoos, associate producer of the Oregon Shakespeare Festival, explains, "I don’t look at anything as a negative. I only look at things as a positive, because you always can use something out of them. From any situation, you can always take something out of it and put a different bent on it and incorporate it into whatever the next thing you’re moving into is." Many artists view such “mistakes” as opportunities for growth.

While these veteran theatre professionals gain strength from the struggles they encounter in their work, most also are troubled by the trends in theatre. Their concerns focus on the escalating costs of tickets and productions, a dwindling and aging audience, and the limited availability of affordable performance space. As Broadway, off-Broadway, and regional theatres struggle to survive, many agree that new work will be highly dependent on small, not-for-profit venues. And these veterans cannot help wondering about the life in store for those who are just entering the venerable profession of theatre.

C. Is the profession of theatre aligned?

With these many hardships and the uncertainty of reward, we might expect that *alignment* would be poor in this domain. That is, the goals of the practitioners in the profession would be in conflict with the current state of the domain (e.g., an artist's desire to reach a broad population thwarted by prohibitively high ticket prices) or society's expectations (e.g., a writer's mission to tell important but disturbing stories when the public prefers light-hearted musicals). Of course, theatre is not immune to society, or what we might refer to more broadly as the *market*. In fact, our interview subjects' most common complaint regards the negative changes in the profession. Frequently cited were concerns about the rising cost of tickets that allow only the rich and hence usually "grayer" population to attend the theatre. Similarly, high ticket prices promote conservative production choices among those who do splurge on tickets. Still, while these difficulties are real and acknowledged, the professionals we interviewed remain unimpressed: theatre has always been in this thorny position. Theatre professionals have always struggled between doing work with integrity versus paying the rent. A playwright declares, "Everybody's always sounding the death knell of theatre, but that's been going on for a hundred years. I feel like that's not realistic. I don't think theatre's going to die." This constant state of tension in theatre, then, does not seem to threaten the profession. What would it mean for theatre to experience harmonious alignment, and has this ever occurred? Theatre professionals might answer the first question with great variation, but all would likely agree that the profession of theatre has never enjoyed this type of utopia. For this reason, alignment may not be as salient an issue to those working in theatre as it appears to be for professionals in journalism and genetics. Theatre professionals are

almost always struggling to do rewarding work (both artistically and financially), and this has not changed much over the life of the domain. Nor has the domain of theatre changed much—in spite of the fact that numerous technological enhancements have been developed in recent years, opportunities for theatre professionals have shifted with the advent of regional theatres in the 20th century, and society’s opinion of those working in the theatre has vacillated from low to high and back again. As emphasized by one talented young actor, the needs to create theatre remain basic: an actor, a light, and an audience member. Perhaps when a domain has a long history of making do, those working within it have greater tolerance for misalignment, a less pressing desire for alignment, or simply a lower threshold for alignment. The importance of personal satisfaction in domains like theatre may even promote a redefinition or alternate understanding of alignment.

In fact, nonalignment and unbalance may even be welcome in some cases. As discussed earlier, from the onset theatre aspirants know that they have slim chances of working professionally in the domain, let alone becoming wealthy. Probably for these reasons, almost all of the veteran theatre professionals with whom we spoke seemed able to embrace the many obstacles they encountered, turning them around to utilize as strategies: A respected executive director of a small avante garde theatre explains that her “ideal way to work” would be to use “every obstacle that comes in the way to create.” She comments on the inevitable difficulties that arise in theatre:

No matter how perfect or how much money you have, you’re going to have adversity and you’re going to have obstacles. If you have a million dollar budget,

then you're going to have bigger obstacles and bigger adversity. That's all. You can get rid of it easier because you can pay for it. But, in this situation, without a lot of money, you have those problems but you find more creative ways to solve the problems.

While veteran journalists do not emphasize this idea, to varying degrees successful veteran geneticists endorse the belief that the self is the only true obstacle and all other obstacles can be overcome or transformed. Among theatre artists at all professional stages, however, this conviction is the norm. It is not clear whether especially optimistic, stalwart individuals are attracted to theatre, or whether this resilient attitude is adopted early as a coping mechanism among those so passionate about theatre that they feel driven to pursue it. Perhaps in a profession in which frequent personal rejection forces a constant evaluation of commitment, individuals are obliged to dedicate themselves more definitively to their careers. Certainly, in contrast to the geneticists and journalists with whom we spoke, the theatre professionals are faced with a distinctive daily challenge—how to work viably in their chosen profession.

D. What intrapsychic factors influence the theatre professional?

In addition to the demands placed on theatre professionals from external sources, there are several influential intrapsychic factors. Because of the extreme strain on theatre professionals' time and physical being, the struggle to maintain *balance* in their lives may be even more problematic than for other professionals. In spite of—or perhaps because of—these challenges, the veteran theatre artists spoke passionately about *theater as a*

calling.

1. Balance (or lack thereof)

In general, theatre artists have less regular lives than most other professionals. Unless they are working on a long running show with regular performances, they have a variable work schedule. They also often participate in shows in another locale, or in traveling shows. The lack of balance in their lives may make it difficult for them to have families and close relationships outside of their work. Many theatre professionals we interviewed discuss the all-consuming nature of their work as a difficulty. A theatre director comments that she is trying to shift this pattern in her life, “That’s probably been my biggest struggle—to feel drained, burnt out, totally like I have nothing left to give to a personal relationship, and, I have nothing left to give myself. And so, trying to focus more on taking care of myself—that’s been a struggle.” At the same time, most of them could never imagine leaving the theatre. Perhaps this is because, as Director Anne Bogart explains, in the theatre, “people are not ‘jobbed’ in, this is their life.” While other professionals are committed to their work, indeed they are often identified by their vocation, the passion that theatre professionals bring to their occupation may be unmatched.

2. Theatre as a calling: passion for the work

This passion for theatre often emerges at a young age among our study participants, and perseveres throughout their lives. When asked to describe how and why she was drawn to theatre, a distinguished actor explains,

I feel like I have almost never not been attracted to it. Although where I grew up there was no theatre, there was no live performance to speak of. I was 16 before I actually saw a live performance...And the first live performance I saw was Margot Fonteyn, *Swan Lake*. It was a road tour...I was 16. And actually I had been working in high school theatre before then and even in grammar school...I liked it. I was good at it...I felt focused at age 8. I never did anything really but the theatre.

Her recollection represents those of many with whom we spoke, though the reasons they give for the initial attraction differ. Many who dedicated their lives to theatre were introduced by family members who were theatre artists themselves or avid audience members. Others told us about their desire to craft reality and inhabit this world. Celebrated actor Cherry Jones, for example, became involved in theatre through her love of “make believe” and “heightened life.”

In addition to those drawn to theatre by positive enticements, several subjects also came to theatre for a refuge from negative aspects of their lives. A director who described himself as a “socially awkward” child says, “I started to feel at home in the theatre in a way that I didn’t feel anywhere else.” Similarly, directors Anne Bogart and Mark Lutwak each independently reported that they found the theatre to be a safe haven in new schools in the midst of their families’ frequent moves. A playwright summarizes this phenomenon by saying, “the artist really is born in the suffering child.” An artistic director simply expresses the feeling of most theatre professionals with whom we spoke,

saying, “I knew somehow that it was for me.”

This passion is elevated to a sense of spiritual “calling” by many participants. In the words of an artistic director, “I think that art beckons in just such a way, and that can’t be explained...I don’t know what does this for artists. I don’t know what calls you, but sometimes something does.” According to Director Liz Diamond, once this calling has been identified, performers are guided by the belief that “we have an obligation to use our gifts.” Her sense of what this means is to “to love what’s here and to taste it and experience it and know it and share it. But also, in exactly the same way, we must use our own gifts. I think we’re put here to, in a sense, spend ourselves.” She views this mission personally, saying,

At the risk of sounding grandiose, at the most basic level, I think that is what I am called upon to do when I direct actors. That is, to inspire them to trust their gifts, to believe in their gifts, to use their gifts—To know them in a dispassionate enough way that they can work them and think critically about them and exercise them and stretch them...To help them achieve a kind of mastery over their own instrument that enables them to wield it the way a dancer wields her body. And, in the actor’s case it’s the body, it’s the imagination, it’s the breath, it’s the critical and emotional relationship to a text. That’s really the task of the director.

IV. What is unique about theatre?

In addition to the aforementioned ways in which theatre differs from journalism and genetics, several aspects of theatre that seem characteristic of this profession should

be noted. In particular, most of the professionals with whom we spoke discussed the integral *connection with the audience* and drew little or no distinction between *personal and professional goals*.

A. Connecting with the audience:

As noted often by the veteran theatre professionals, theatre is collaborative in both effort and product. Such collaborative relations occur in numerous ways: between actor and text; among the actors on stage; among director, crew, costume designers, and lighting designers; and between actor/ensemble and audience. While journalists strive to connect with usually anonymous readers, and geneticists are rarely attentive to “audience” even when they are working on applications, the component of the live audience is a crucial element for the work of theatre professionals. Certainly there are other professions that are as integrally related to the audience: teaching, sports, electoral politics come to mind. Among the three professions considered here, however, audience is most vital to theatre.

The presence of the audience is the essence of live theatre, and differentiates theatre from film or television. Almost all of the theatre professionals interviewed (30 of 35 or 86%) addressed the importance of theatre as a dynamic, real-time, live interaction between actors and audience. An artistic director encapsulates the opinion of most when he says, "the thing that the theatre requires is the physical presence of the audience. And as soon as you don't have an audience it's not theatre anymore." Connection with a live audience fulfills the individual's need for relatedness, as well as an underlying goal of theatre to provoke, educate, and entertain.

Indeed, without the reactions of those who observe the play, the rewards are minimal for actor, director, and playwright. Award winning actress Cherry Jones explains that she reads the silence of her audience to gauge their connection. Another actor comments, "It's not just my relationship with my partner onstage. I also feel what's going on out there, and in responding to it as well... you [can] tell how the audience [is] reacting to what [is] going on. And, it just [helps] you focus in on the moment." And while actors are physically interacting with the audience, this connection with the audience is also salient for artists working in other aspects of the theatre. For example, one playwright describes how the connection her play makes with the audience relates to how she evaluates the success of her work. For her, the audience response is crucial not only to understanding the success of her work, but also in defining the meaning and direction of the piece:

I expect that my response in writing the first draft is the audience response...actually there's something that I call the first playwright phenomenon. First time a playwright writes a play, they don't know what the tone is yet. The way I call this is the *Arsenic and Old Lace* principle. *Arsenic and Old Lace* was written as a straight tragic play. It wasn't until they were in rehearsals, and it was this guy's first play. The director couldn't stop laughing, and he said to the playwright, "Do you know you wrote a comedy?" The guy didn't know! The playwright didn't know.

In fact, the audience's response was most frequently cited among these theatre professionals as how they determine the success of their work. The artistic director of a well known off-Broadway theatre captures the sentiments of many theatre professionals in our study when he explains:

When people come up and talk about how much they love my work, that's what gauges [sic] me. When people talk about how much they've enjoyed the play, that's what gauges [sic] me. When people come up and start talking about how the play affected them, then that's when I feel I've done a good job. It's when I'm doing what I'm supposed to be doing. When people start saying how they felt experiencing the play, that's when I feel as though I've done it. I [know I've] done what I'm supposed to do...when I'm watching [and] I can tell that there's another dynamic happening between the artist and the audience.

Certainly there is an audience for the work of other professionals, journalists and geneticists notwithstanding. The transmission of knowledge and information is a key element of all three professions. The integral element of interaction with members of a live audience, however—to read their breath and silence, gauge their response to the text, and draw energy from their reaction, distinguishes theatre.

B. The personal is the professional in goals of theatre artists:

Across professions, there are differences regarding the degree to which personal and career goals intertwine. Even when the same underlying values drive goals in both

realms, for example, the work day may have distinct physical or temporal boundaries separating professional from personal life. Among theatre artists, this is not the case. As renowned acting teacher Constantin Stanislavsky writes:

If your life is your work in art, can you possibly divide your life up? Cut out a piece of it and call it “studio” or “theatre” and separate yourself from the rest of the life that goes on round you? All your life will be true life only when your creative “I” has been merged with it (1950, p.231).

The view of life and art as merged is integral for the theatre professionals in our study. More than the other professionals we have interviewed, when asked questions about the goal of theatre and personal goals, theatre professionals indicated a confluence between them. For example, almost all (30 of 35, 86%) participants expressed the desire to understand self and others and to provoke the audience with insights about the human condition as a *personal* goal, and three quarters of the group (26 of 35, 74%) also reported this as a *theatre* goal.

Not only do participants indicate that the same goals are both personal and professional, but the nature of the goals themselves offer evidence of this fusion. An artistic director, for example, captures the outlook of many in the study when he explains the role of his personal self-exploration in his work:

As an artist, have I penetrated, or is the work penetrating, some intimate truth?
Have I directly penetrated some intimate truth inside of myself in relationship to

the world so that they are speaking and communicating to the audience? Until that happens, I feel as though I haven't done what I'm supposed to do.

In other words, in order to achieve his professional goal of communicating truths to the audience, this artist must achieve a personal goal of exploring the intimate truth within himself. It seems understandable that personal goals and goals for the theatre become merged when an artist pursues and/or achieves objectives for theatre itself through self-exploration. To be sure, self-knowledge must also be important in journalism and genetics; but in theatre—especially for actors—the self is the instrument and medium, and the tie between the self and the art may become indissoluble.

V. An important similarity among theatre, journalism, and genetics: the search for truth

As evidenced in the discussion above, theatre is exceptional in many ways among the professions that we have studied. At the same time, theatre shares important elements with journalism and genetics, and in conclusion it may be equally useful to point out the salient similarities among these three professions. In particular, the *search for truth* is an integral element and goal of journalism, genetics, and theatre.

The relentless pursuit of truth is common to the professionals with whom we spoke in all three domains, and seems to be crucial to achieving “good work” across professions. Because each domain differs in regard to the nature of the work and the manner in which it impacts the public, however, the idea of “truth” is conceptualized somewhat differently. As discussed previously, at the core of

journalism is a goal of objectively informing the public of the truth. This idea of truth refers to informing people about what has happened in the world. While there are countless perspectives on what has occurred in any single instance, the journalistic goal is to present information about events with as little bias as possible towards any one viewpoint. Though this is accomplished with varied levels of success, all of the veteran journalists we interviewed were passionate about the importance of truth and fairness of their work. NBC's veteran news anchor Tom Brokaw, for example, comments:

[The audience is] trying to get someone they can trust to kind of give them a fair idea of what happened that day, or what's likely to happen....And at the end of this long period of time of being out there in the middle of all that, people still trust my judgment and are willing to get their information from me. And have, by all of our measurable standards, faith in my integrity. I suppose that, more than any other single act, is something that I'm proud of.

Geneticists similarly discuss the importance of pursuing truth in their work. In this profession, the notion of truth indicates the most complete possible understanding of the physical organic world. Similar to journalists, geneticists may also encounter and report different aspects of a truth from one another because they must necessarily research discrete portions of what is certainly a larger question. Thus, at times discoveries contradict, but more frequently they build upon one another. In fact, because each result relies on the data of the other in order to make sense of a bigger picture, the importance

of doing work with integrity cannot be overstated. Simply put, as Beatrice Mintz of the Fox Chase Cancer Center remarks, “I can’t imagine that anybody would be a scientist without believing in the importance of truth and integrity.” Indeed, across both veteran journalists and geneticists, “Honesty and Integrity” was listed as one of the four most important professional values.

Also discussed previously, theatre professionals share with journalists and geneticists this passion for truth, honesty, and integrity. While journalists strive to convey information to the public that captures the truth of the situation as clearly as possible, and geneticists endeavor to discover truths about our physical world, theatre artists’ brand of truth may have more to do with authenticity—in the message of a text, in relationships among actors, or even faithfulness to one’s self. In the realm of the arts, the idea of “truth” may be less easily defined—for example, assessing the authenticity of a character in a performance is not a quantitative measure, but a complex experiential one. Diffuse as the definition of truth in theatre may be, the importance of working towards truth was emphasized by the theatre artists to whom we spoke. Jack O’Brien, artistic director of the Old Globe Theatre in San Diego, explains that “the theatre is trying...to tell a truth and it’s probably trying to retell a truth.” Twenty-eight theatre professionals in our study (80%) cited truth to self/integrity as a personal value that guided them in their lives. Similarly, when considering professional and personal values, “Honesty/integrity” received the second-highest ranking across the group.

In addition to the nature of the “truth” they seek, the way in which personal integrity is interwoven in this pursuit distinguishes the theatre professionals. Theatre artists emphasized that they cannot attain the goal of reaching an audience if they are not

first true to themselves. Journalists and geneticists may be able to deliver truths in their area of work without such self knowledge. Finding one's own sense of identity, however, seems to be a first step in pursuing truth or authenticity in theatre.

VI. Implications: What can we learn from theatre professionals that we could not discover from our studies of geneticists and journalists?

Following our comparison among theatre, journalism, and genetics, the distinguishing way in which theatre artists approach their work may be instructive. In particular, absolute passion for their work above all else stands out as singular among theatre professionals. In addition, though theatre is arguably a competitive profession, the theatre artists emphasized collaboration rather than competition.

A. Overwhelming passion for their work

While the journalists and geneticists with whom we spoke are devoted to their work—some of them are even as avid as the theatre professionals—as a group, the theatre artists demonstrated extraordinary passion. Certainly, as our study participants acknowledged, this passion comes with costs to physical health, financial stability, and relationships with people outside the theatre. Still, the artists with whom we spoke explain that they never would—or could—give up their work. Though, as quoted above, the attitude of theatre professionals overall is, “I don't have a job; I have a life.” More than any other veteran professionals with whom we spoke, theatre artists merge their personal and professional lives. It would be difficult to determine whether this merging is a result of their great passion for their work or the reverse. Perhaps the most important

message we can learn from the passion of theatre artists is stated in the age-old advice: “do what you love.” As youngsters begin to move into the world of work, they might be encouraged to think in terms of what will shape their lives, not what career to choose.

B. Collaboration, not competition

In the theatre—where there is intense competition for few parts, organizational funding, directing positions—we expected to hear about bitterness and rivalry among competing artists. In fact, in comparison with journalists and geneticists who often described the danger of having one’s story or findings “scooped,” and who emphasized the importance of beating the competitor to break the story or discovery first, theatre artists rarely framed competition in this way. It may be that those drawn to theatre have a distinct sensibility and are unlikely to view their peers in opposition; more likely, however, something in the structure of the theatre world defuses competition.

Instead, competition seems to be neutralized in the theatre world—at least in the process of doing the work itself. The counteracting agent is intense and constant collaboration. This is not to say that among all areas of work, theatre is the only pursuit that encourages and supports such collaboration. In sports, for example, teamwork is crucial. At the same time, among the three professions discussed here, theatre artists’ emphasis on collaboration with their colleagues stands out. While we heard to some degree about collaboration among geneticists (e.g., sharing of tools and knowledge), veteran theatre artists stressed the importance of collaboration among actors, crew, directors, playwright, and audience again and again.

This collaboration is not, however, gentle. In fact, it is often quite fierce. Perhaps

what theatre artists view as collaboration might be viewed as competitive in another setting, except that the ultimate goal of all involved is to come to an agreement that realizes the greatest potential. As one artist explained,

In collaboration you don't surrender. Surrender is not interesting. People think collaboration is compromise of vision and it's not. It's two incredibly involved visions doing this and this and then something else...it's the best of the people involved as opposed to the least of the people involved.

The veteran theatre artists all identify the collaborative effort as the crucial element of any production. As evidenced by the previous quote, such collaboration is not easy, nor even always friendly. Thus, it might be that theatre artists view as collaboration what could be viewed as competition in another arena; something about the endeavor of theatre invites collaboration, even if is built through contention. Professionals in other domains might learn from this notion of adamantly maintaining one's own viewpoint, but working together rather than in competition. Outside of idealized visions in which professionals work together to attain the highest quality in spite of market pressures, these realities are yet to be devised. Looking to theatre, however, might help to begin such reframing.

In addition to these more specific lessons, theatre artists' commitment to something that brings only intangible rewards is edifying. Theatre inherently is transient. Though it may be based on written text and concrete sets, live theatre has an energy of its own, and a magic. It may be impossible to measure the benefits that those working in the

theatre derive, and what the audience receives from the experience. Unlike medicine, where there may be a direct link from the surgeon's hand to the patient's health, the influence of theatre is less direct and less measurable. Perhaps the most important discovery we can learn from theatre, then, particularly at a time of relentless commodification, is the value that such an intangible continues to have for individuals.

References

Brecht, B. (1957). *Brecht on theatre* (Ed. and translated by Willett, J.). New York: Hill and Wang.

Brockett, O. G. (1974). *The theater: An introduction*, Third edition, New York: Holt, Rinehard and Winston, Inc.

Bureau of Labor Statistics, U.S. Department of labor, *Occupational outlook handbook, 2002-3 Edition*, Actors, Producers, and Directors, on the Internet at <http://www.bls.gov/oco/ocos093.htm> (visited August 22, 2003).

Callow, S. (1986). *Being an actor*. New York: St. Martin's Press.

Fischman, W., Solomon, B., Greenspan, D., and Gardner, H. (2004). *Making good: How young people cope with moral dilemmas at work*. Cambridge, MA: Harvard University Press.

Gardner, H., Csikszentmihalyi, M., and Damon, W. (2001). *Good work: When excellence and ethics meet*. New York: Basic Books.

Hagen, U. and Frankel, H. (1973). *Respect for acting*. New York: Macmillan publishing company.

Hornblow, A. (1916). *Training for the stage*. Philadelphia, PA: Lippincott.

Marshall, P., Reese, J., and Barberich, K. (2001). "GoodWork in Theatre." Cambridge, MA: Harvard Graduate School of Education, Project Zero, GoodWork Project.

Marshall P. and Reese, J. (2002). "GoodWork in Theatre." Cambridge, MA: Harvard Graduate School of Education, Project Zero, GoodWork Project.

Society of Stage Director and Choreographers and Traditional Summer Stock, Collective Bargaining Agreement, April 1, 2000-March 31, 2003, on the Internet at <http://www.ssd.org/forms/tssagreement.pdf> (visited November 3, 2003).

Stanislavsky, C. (1950). *Art of the stage*. London: Faber and Faber.

ACKNOWLEDGEMENTS

Support for the research included in this paper was generously provided by grants from the Carnegie Corporation of New York, the Christian A. Johnson Endeavor Foundation, the Ford Foundation, the William and Flora Hewlett Foundation, and the Louise and Claude Rosenberg Family Foundation.

I thank the many researchers who participated in the aspects of the GoodWork Project described in these pages: Kim Barberich, Lynn Barendsen, Wendy Fischman, Molly Galloway, Francie Green, Deborah Greenspan, Anne Gregory, Yael Harlap, Jonathan Heller, Jeremy Hunter, Paula Marshall, Mimi Michaelson, Laurinda Morway, Jeanne Nakamura, Kimberly Powell, Jennifer Reese, Sara Simeone, Jeff Solomon, David Stevens, and Susan Verducci.

I am especially grateful to Howard Gardner for the opportunity to write about this work, and for his support and guidance on this manuscript.