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Group Influences on Young Adult Warfighters' Risk-Taking

Laurence Steinberg, Ph.D.

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Temple University
Philadelphia, Pennsylvania 19122

U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

During this research period, we obtained local IRB approval of the protocol and related documents, added and trained key research personnel (4 volunteer research assistants to help a graduate student in the simultaneous enrollment of multiple subjects in either experimental condition, as well as data entry, obtaining consent, etc.), added instruments and tasks to the experimental procedures (the NEO questionnaire; the First Person Shooter Task), piloted all tasks, obtained additional testing space to enhance efficiency, and expanded recruitment–related activities to secure maximal recruitment through online postings, flyers, and advertisements. We have now been able to complete the testing of 34 individual and 16 “peer” subjects (with an additional 48 participants in the “peer” role), and are continuing recruitment, enrollment, instruments, IRB, data collection, key personnel, experimental condition, tasks, piloting, active data collection.
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## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>Body</td>
<td>6</td>
</tr>
<tr>
<td>Key Research Accomplishments</td>
<td>15</td>
</tr>
<tr>
<td>Reportable Outcomes</td>
<td>15</td>
</tr>
<tr>
<td>Conclusion</td>
<td>15</td>
</tr>
<tr>
<td>References</td>
<td>17</td>
</tr>
<tr>
<td>Appendices</td>
<td>19</td>
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I. Introduction

The purpose of this research is to study the impact of peers on risk-taking and decision-making among 18-22 year old males who are demographically similar to current warfighters. In an initial series of experiments we explore peer influences on a set of decision-making tasks that differentially emphasize key processes implicated in risky decision making and investigate whether increased levels of mental fatigue, a common element in combat situations, might exacerbate the peer effect. In subsequent experiments, we will investigate whether the inclusion of a single, older team member can moderate younger decision-makers’ increased inclination toward risk-taking, and whether it is possible to train or condition individuals to be more resistant to the peer effect. Our ultimate interest is in comparing decision-making by individuals acting within groups that are composed in different ways, under varying situational circumstances.
II. Body

A. Summary of progress to date

To date, we have successfully obtained IRB approval of the present protocol, assembled the battery of research tasks, and completed piloting of all tasks on individual participants as well as groups of peers. We have made necessary corrections to the research tasks and software to secure uniform and efficient administration, hired and trained study personnel, and obtained IRB approval for additional recruitment methods to advance recruitment efficiency, including flyers, online recruitment tools such as social networks and University recruitment web sites. We have initiated active testing of individual and group participants and obtained additional testing space to accommodate participants and their peers. At present, efforts are focused on recruitment and testing of individual and group participants utilizing all new available resources.

B. Overview of research tasks

1. Probabilistic Gambling Task

   This task enables us to systematically examine how decision-making is influenced by the perceived probability of success or failure, by the magnitude of the potential reward or loss, and by the degree of uncertainty inherent in the decision. The task thus allows us to manipulate these three variables systematically (probability, magnitude, and certainty) in order to better understand the task conditions under which the peer effect is more or less potent. In this task, the subject is presented with a computerized picture of a circular “wheel of fortune,” and has been told that the wheel will spin and that he must bet or not bet that the outcome of the spin will result in a gain of points. The circle has been divided into three pie-shaped slices of different widths: green (where
the size of the “slice” indicates the likelihood that the outcome of the spin will produce a reward), red (indicating the likelihood that the outcome will produce a loss), or gray (indicating uncertainty in the outcome). The only decision to be made is whether to bet (engage in risk-taking) or pass. The wheel then spins, and it stops on one of the three colors. The result of the spin determines whether coins are added to or subtracted from the participant’s bank. Uncertain spins will have an equal probability of resulting in a gain or loss. We have created pre-determined configurations of green-red-gray slices to examine performance as a function of the likelihood of reward, likelihood of cost, and degree of uncertainty, and will compute outcome measures reflecting the frequency with which the participant chose to bet under these conditions. We are especially interested in the degree to which participants choose to bet when potential costs are high and/or uncertain. In one previous study, we have shown that individuals make riskier choices when with peers than when alone (2).

2. **Modified Iowa Gambling Task**

The Iowa Gambling Task is a neurocognitive measure that has been extensively used in studies of individuals who persistently engage in risky behavior despite experiencing negative consequences, such as compulsive gamblers or substance abusers. In the original version of the task, participants are presented with four decks of cards, turned face-down, and told that two of the decks are winning decks and two are losing decks. They are then asked to draw cards from the decks so as to maximize their winnings. The task was modified for our purposes, such that participants make a play/pass decision with regard to one of 4 decks pre-selected on each trial, rather than deciding to choose to draw from any of 4 decks on any trial, as in the original task. This modification allows us to determine the independent effects of reward-seeking and cost-avoidance on card selection. For each trial, one of the four decks is highlighted with an arrow, and participants are given 4 seconds in which to decide to play or pass that card. If participants choose to play, a
monetary outcome is displayed on the card and the total amount of money earned is updated and appears on the screen. If participants pass on a given card, the image of the card on the screen displays the message “Pass,” no outcome information is given, and the total amount of money earned does not change. As in the original task, two of the decks are advantageous and result in a monetary gain over repeated play. The other two decks are disadvantageous and produce a net loss over repeated play. In addition, within each type of deck (advantageous vs. disadvantageous), there is one deck in which the losses or rewards experienced are infrequent but relatively large, and one in which they are consistent and relatively small. The task is administered in 6 blocks of 20 trials each. Performance is operationalized in three ways: percentage advantageous deck choices (reward-seeking), percentage disadvantageous decks not chosen (cost avoidance), and net score (the difference between the percentage advantageous and disadvantageous decks chosen). Importantly, the percentage of advantageous decks chosen in a given block is not contingent upon the percentage of disadvantageous decks avoided, which permits the computation of independent reward-seeking and cost avoidance scores. This task has been used in previous studies as a measure of reward sensitivity, but has not been employed to date in studies of peer influence (3,4).

3. **Delay Discounting task**

The Delay Discounting task assesses subjective preference for smaller, but more immediate, rewards relative to larger, delayed, rewards. In our adaptation of the task, the amount of the delayed reward was held constant at $1,000. We vary the time to delay in 6 blocks (1 day, 1 week, 1 month, 3 months, 6 months, and 1 year), presented in a random order. For each block, the starting value of the immediate reward is $200, $500, or $800, randomly determined for each participant. The respondent is asked to choose between an immediate reward of a given amount and a delayed reward of $1,000. If the immediate reward is preferred, the subsequent question presents an
immediate reward midway between the prior one and zero (i.e., a lower figure). If the delayed reward is preferred, the subsequent question presents an immediate reward midway between the prior one and $1,000 (i.e., a higher figure). Participants then work their way through a total of nine ascending and descending choices until their responses converge and their preference for the immediate and delayed reward are equal, at a value reflecting the discounted value of the delayed reward, known as the “indifference point.” As is customary in studies using this task, two dependent variables are computed: the average “indifference point” and the discount rate ($k$), (with a lower indifference point and higher discount rate indicating stronger reward sensitivity). This task has been used in previous studies as a measure of preference for immediate reward, which we have shown is intensified in the presence of peers (5-10).

4. **First Person Shooter Task**

This task simulates the situation in which an individual must immediately decide whether another person is or is not a threat, by determining whether the object held by the person is a weapon or something that only appears to be a weapon (like a phone). It requires participants to quickly recognize if a person is a “friend” or an “enemy,” according to task instructions. Participants are simply asked to press a button if they see a “friend” on the screen, and another button is they see an “enemy.” The task seeks to examine whether decision making and attention allocation under time constraints influence a person’s ability to respond accurately to relevant stimuli. It is a measure of the impact of time pressure on accurate decision-making. It has not been previously used to examine peer influences on decision making.
5. **The Stoplight Game**

The Stoplight Game is a simple driving task in which subjects control the progress of their vehicle along a straight track by deciding whether to brake as they approach a series of intersections, each with a traffic signal that has turned yellow. Participants are told that traveling through the intersection without incident will cost no time, that stopping and waiting for the signal to turn red and cycle back to green will cost some time, and that attempting to cross the intersection but crashing into a crossing car will cost a great deal of time. Importantly, both the timing of the traffic signals and the probability of a crash in the associated intersections are varied so as to be unpredictable by the participant. Risk-taking (i.e., not braking for the yellow light) is encouraged by offering monetary incentives for completing each course in a timely fashion. Successfully traveling through an intersection saves time, whereas braking and waiting for the signal to turn green wastes time. This task has been used in previous studies as a measure of sensation-seeking, and performance is made more risky by the presence of peers (1).

**Self-Report Measures**

We administer the following self-report measures, which will be used to predict individual differences in susceptibility to the peer effect: Global Assessment Test (GAT) (14); Zuckerman Sensation-Seeking Inventory (15); Barratt Impulsivity Scale (16); Benthin Risk-Processing Scale (17); Resistance to Peer Influence scale (18), the NEO-FFI questionnaire (11,12, 13), and the BIS/BAS scale.

**C. Recruitment and enrollment**

The main efforts during this first reporting period involved developing the test battery (which will be used in all subsequent experiments), securing IRB approval (Temple University and
U.S. Army) of the protocol and recruitment procedures, hiring and training staff, and pilot testing the battery. Official data collection began recently.

To date, and not including pilot participants, we have recruited, enrolled, and completed testing of 98 participants, of whom 34 were tested individually, 16 were tested in groups, and 48 participated as same-age, same-sex peers. Participants’ age ranged from 18 to 22, with a mean of 19.86 years. One participant was withdrawn from the study after enrollment because he did not meet the age criteria. All participants but one completed all tasks and instruments, and one subject did not complete the Stoplight game due to technical problems which were subsequently resolved. A breakdown of demographic information is available in Table 1.

Table 1. Recruitment to date

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*MOR = More than one race.
D. Problem areas and implemented modifications to address issues encountered during the course of this report period

During this reporting period, we experienced a few technical difficulties with some of the tasks included in the battery, which is to be expected. These difficulties were encountered during the piloting phase, and regarded configuring task parameters with newer versions of the testing software. These problems were addressed and solved and recruitment resumed.

There was some difficulty recruiting participants in the early stages of the study. To increase recruitment efficiency, we submitted modification requests to the Temple University Institutional review Board requesting the approval of additional recruitment materials, such as flyers, online postings, and recruitment ads placed in public transportation. Recruitment improved once the fall semester began and students returned to campus. Finally, we experienced a delay in launching the study while anticipating approval documents from the IRB in relation to added instruments and personnel.

We are always cognizant of future problems that could primarily affect recruitment. To prevent or minimize such difficulties in the future, we have submitted an amendment to the Temple University IRB requesting approval to provide class credits for participation (in combination with cash) and encourage study enrollment in students. This request was recently approved and we can now enroll participants from our student population who would prefer compensation via study credits. We anticipate that this method of compensation will enhance recruitment throughout the semester.
III. Key Research accomplishments

During this reporting period, we have recruited, added, and trained key research staff—a graduate student and 4 research assistants, have added instruments and tasks (the NEO-FFI questionnaire, the First Person Shooter task), and have made protocol modifications to increase recruitment efficiency via online postings and flyers.

IV. Reportable Outcomes

Because data collection began only very recently, we have no reportable outcomes at this time.

V. Conclusion

During this reporting period, we were able to secure IRB approval of the present protocol and all protocol-related documentation, including consent forms, questionnaires, and study tasks. We have requested and obtained IRB approval of modifications to the protocol allowing the inclusion of an additional instrument (the NEO questionnaire) and a task (The First Person Shooter Task) key to the goals of the study. We have recruited, added, and trained key research personnel (four research assistants, a graduate student) to enable the simultaneous recruitment and enrollment of study participants in both the “alone” and “peer” conditions, as well as to facilitate efficient and timely data collection, data checking and management, and data entry. To maximize participant enrollment, we have utilized multiple strategies for recruitment, such as online postings, flyers, and advertisements throughout the university campus. Finally, we have secured additional testing space to enable testing of multiple groups of participants simultaneously and thus increase data collection. These efforts, and the return of students for the fall semester, have marked a significant
improvement in scheduling and successfully running study participants. We are continuing active data collection at this time.
VI. References


VII. Appendices

BIS BAS Questionnaire

Each item of this questionnaire is a statement that a person may either agree with or disagree with. For each item, indicate how much you agree or disagree with what the item says. Please respond to all the items; do not leave any blank. Choose only one response to each statement. Please be as accurate and honest as you can be. Respond to each item as if it were the only item. That is, don't worry about being "consistent" in your responses. Choose from the following four response options:

1 = very true for me
2 = somewhat true for me
3 = somewhat false for me
4 = very false for me

1. A person's family is the most important thing in life. ______
2. Even if something bad is about to happen to me, I rarely experience fear or nervousness. ______
3. I go out of my way to get things I want. ______
4. When I'm doing well at something I love to keep at it. ______
5. I'm always willing to try something new if I think it will be fun. ______
6. How I dress is important to me. ______
7. When I get something I want, I feel excited and energized. ______
8. Criticism or scolding hurts me quite a bit. ______
9. When I want something I usually go all-out to get it. ______
10. I will often do things for no other reason than that they might be fun. ______
11. It's hard for me to find the time to do things such as get a haircut. ______
12. If I see a chance to get something I want I move on it right away. ______
13. I feel pretty worried or upset when I think or know somebody is angry at me. ______
14. When I see an opportunity for something I like I get excited right away. ______
15. I often act on the spur of the moment. ______
16. If I think something unpleasant is going to happen I usually get pretty "worked up." ______
17. I often wonder why people act the way they do. ______
18. When good things happen to me, it affects me strongly. ______
19. I feel worried when I think I have done poorly at something important. ______
20. I crave excitement and new sensations. ______
21. When I go after something I use a "no holds barred" approach. ______
22. I have very few fears compared to my friends. ______
23. It would excite me to win a contest. ______
24. I worry about making mistakes. ______
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<th>Really True for Me</th>
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<td>❑</td>
<td>❑</td>
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<tr>
<td></td>
<td>Some people go along with their friends just to keep their friends happy</td>
<td>BUT</td>
<td>Other people refuse to go along with what their friends want to do, even though they know it will make their friends unhappy</td>
<td>❑</td>
</tr>
<tr>
<td>2.</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
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<td></td>
<td>Some people think it is more important to be an individual than to fit in with the crowd</td>
<td>BUT</td>
<td>Other people think it is more important to fit in with the crowd than to stand out as an individual</td>
<td>❑</td>
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<td>3.</td>
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<td>For some people it’s pretty easy for their friends to get them to change their mind</td>
<td>BUT</td>
<td>For other people it’s pretty hard for their friends to get them to change their mind</td>
<td>❑</td>
</tr>
<tr>
<td>4.</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td></td>
<td>Some people would do something that they knew was wrong just to stay on their friends’ good side</td>
<td>BUT</td>
<td>Other people would not do something that they knew was wrong just to stay on their friends’ good side</td>
<td>❑</td>
</tr>
<tr>
<td>5.</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td></td>
<td>Some people hide their true opinion from their friends if they think their friends will make fun of them because of it</td>
<td>BUT</td>
<td>Other people will say their true opinion in front of their friends even if they know their friends will make fun of them because of it</td>
<td>❑</td>
</tr>
<tr>
<td>6.</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td></td>
<td>Some people will not break the law just because their</td>
<td>BUT</td>
<td>Other people would break the law if their friends said</td>
<td>❑</td>
</tr>
</tbody>
</table>
friends say that they would that they would break it

7. Some people change the way they act so much when they are with their friends that they wonder who they “really are”
   BUT Other people act the same way when they are alone as they do when they are with their friends

8. Some people take more risks when they are with their friends than they do when they are alone
   BUT Other people act just as risky when they are alone as when they are with their friends

9. Some people say things they don’t really believe just because they think it will make their friends respect them more
   BUT Other people would not say things they didn’t really believe just to get their friends to respect them more

10. Some people think it is better to be an individual even if people will be angry at you for going against the crowd
    BUT Other people think it’s better to go along with the crowd than to make people angry at you
### My Personality

Directions: If you agree with a statement or decide that it describes you, answer TRUE. If you disagree with a statement or feel that it is not descriptive of you, answer FALSE. Answer every statement either True or False even if you are not entirely sure of your answer.

<table>
<thead>
<tr>
<th>Statement</th>
<th>TRUE</th>
<th>FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I tend to begin a new job without much advance planning on how I will do it.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2. I usually think about what I am going to do before doing it.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>3. I often do things on impulse.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>4. I very seldom spend much time on the details of planning ahead.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>5. I like to have new and exciting experiences and sensations even if they are a little frightening.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>6. Before I begin a complicated job, I make careful plans.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>7. I would like to take off on a trip with no pre-planned or definite routes or timetable.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>8. I enjoy getting into new situations where you can’t predict how things will turn out.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>9. I like doing things just for the thrill of it.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>10. I tend to change interests frequently.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>11. I sometimes like to do things that are a little frightening.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>12. I’ll try anything once.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>13. I would like the kind of life where one is on the move and traveling a lot, with lots of change and excitement.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>15. I like to explore a strange city or section of town by myself, even if it means getting lost.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>16. I prefer friends who are excitingly unpredictable.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>17. I often get so carried away by new and exciting things and ideas that I never think of possible complications.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>18. I am an impulsive person.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>19. I like wild and uninhibited parties.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>
Thank you for taking the time to complete the Global Assessment Tool (called the “GAT”) survey. This survey allows you to assess yourself on the dimensions of emotional, spiritual, social, and family fitness. You will navigate through 7 screens, which contain approximately 100 questions. The survey will take about 10-15 minutes of your time and at the end you will be presented with a rapid estimate of your individual fitness in the four dimensions.

Of primary importance, no one other than you will have access to your answers to the questions, individualized assessments, or scores. The GAT will NOT be used as a selection tool for promotion, command, or schooling. Primarily designed as a self-assessment for you, when personal identifiable information is removed, the aggregate scores of the Army population will help us determine which training is most effective in building strength in these important areas.

You will be assessed on your emotional, spiritual, social, and family fitness. The spiritual dimension questions on the GAT pertain to the domain of the Human Spirit: they are not “religious” in nature. The Comprehensive Soldier Fitness Program defines spiritual fitness as strengthening a set of beliefs, principles, or values that sustain a person beyond family, institutional, and societal sources of support. Also, spiritual fitness provides a person a sense of purpose, meaning, and the strength to persevere and prevail when faced with significant challenges and responsibilities. It promotes general well-being, enhances self-confidence, and increases personal effectiveness.

Used over time, from accession and over a career, the GAT will enable you to see your individual performance change in response to training, experience, and maturity. The self-development training modules will provide you with real-time and interactive multi-media training. Most training and information will be offered and available virtually; however, depending on where you are assigned, you might be able to participate in training offered at your local installation. Additionally, your leadership may mandate training for your unit that will “count” as training in one or more categories. A complete transcript and record of the courses you complete will be stored in a database that allows you to display your training as a component of the Army Career Tracker.

You will also have the opportunity to engage in related training and educational activities such as Resilience Training (to include Master Resilience Training). The goal of these training activities is to offer you a systematic approach to prepare you, your family members, buddies, and co-workers for the mental challenges that might be confronted throughout your career and life.

Again, thank you for your time and attention. Your results will be available for your personal use as you determine how you would like to improve.

Privacy Act Statement (5 U.S.C. 522a)

AUTHORITY: 10 U.S.C. 3013 PURPOSE: The purpose of this assessment is to systematically collect, analyze, interpret, and provide personal and individual evaluations to increase the resilience of Soldiers and Families by increasing their physical, emotional, social, spiritual, and Family strengths through self guided structured education and training. ROUTINE USES: None. DISCLOSURE: Mandatory for all Army personnel (Active Duty, Reserves, and National Guard), failure to provide the requested information may result in administrative or disciplinary action in accordance with UCMJ, applicable Army, or other federal regulations.

During the past four weeks, how have you felt about your relationship (spouse/significant other) and your family?
Not at all satisfied
Somewhat satisfied
Neither agree nor disagree
Satisfied
Extremely satisfied
Not Applicable - no family or relationship

How satisfied are you with your marriage/relationship?
How satisfied are you with your family?

Creativity—coming up with new ideas Curiosity or interest
Critical thinking, open-mindedness, or good judgement
Love of learning
Perspective or wisdom
Bravery or courage
Persistence
Honesty
Zest or enthusiasm
Love or closeness with others (friends, family members)
Kindness or generosity to others
Social skills or social awareness or street smarts

Teamwork Fairness Leadership Forgiveness or mercy Modesty or humility Prudence or caution Self-control Appreciation of beauty and excellence Gratitude and thankfulness
Hope or optimism Playfulness or humor Spirituality
Think about how you have acted in actual situations during the past four weeks. Please answer only in terms of what YOU actually did. Please read carefully. Select a number from 0 to 10 according to how often you showed/used the qualities listed?

<table>
<thead>
<tr>
<th>Never</th>
<th>Always</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

Think about how you have acted in actual situations during the past four weeks. Please answer only in terms of what YOU actually did. Please read carefully. Select a number from 0 to 10 according to how often you showed/used the qualities listed?

<table>
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<th>Never</th>
<th>Always</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

---

**How well do these statements describe you?**

I am good at changing myself to adjust to changes in my life.
It is difficult for me to adjust to changes. I can usually fit myself into any situation.

**How well do these statements describe you?**

For things I cannot change, I accept them and move on.
I control my emotions by changing how I think about things.
When something stresses me out, I try to avoid it or not think about it.
When something stresses me out, I try to solve the problem.
When bad things happen, I try to see the positive sides.
I usually keep my emotions to myself.
When something stresses me out, I have effective ways to deal with it.
When I am feeling upset, I keep my feelings to myself.

Not like me at A little like me Somewhat like Mostly like me Very much like all me
me  

---

PAGE #2
Answer in terms of whether the statement describes how you actually live your life.

Not like me at A little like me Somewhat like Mostly like me Very much like

I am a person of dignity and worth.
My life has meaning.
The job I am doing in the military has enduring meaning.
I believe there is a purpose for my life.

Answer in terms of how you usually think.

Please be as honest as possible
How often do you feel left out? How often do you feel close to people? How often do you feel part of a group?

Not like me at A little like me Somewhat like Mostly like me Very much like

Most of the time
Never

Hardly ever

Some of the time

Please be as honest and accurate as you can throughout. Answer according to your own feelings, rather than how you think most people would answer.

In uncertain times, I usually expect the best.
If something can go wrong for me, it will.
Overall, I expect more good things to happen to me than bad.

Strongly Disagree Neither agree Agree disagree nor disagree

How well do these statements describe your feelings about your job?
Not like me at A little like me Somewhat like Mostly like me Very much like all me

My work is one of the most important things in my life
I am committed to my job.
I would choose my current work again if I had the chance
How I do in my job influences how I feel.

How many people are there who you can always count on if you have serious problems?
None 1 2 3 4 or more

I have a best friend.
I am very close to my family.
I have someone to talk to when I feel down.
I have as much contact with friends and family members outside the Army as I want or need.

How many people are there who you can always count on if you have serious problems?

I spend time at interests or hobbies other than work.

My leaders respect and value me.
In the past four weeks, how often have you been bothered by any of the following problems?

- Not at all
- Several days
- More than half the days
- Nearly every day
- Every day

Little interest or pleasure in doing things

Feeling down, depressed, or hopeless

Trouble falling or staying asleep, or sleeping too much

Feeling tired or having little energy

Poor appetite or overeating

Feeling very angry

Feeling bad about yourself, or that you are a failure, or have let yourself or your family down

Trouble concentrating on things, such as reading the newspaper or watching television

Feeling very frustrated

Moving or speaking so slowly that other people could have noticed. Or the opposite -- being so fidgety or restless that you have been moving around a lot more than usual

Please indicate how strongly you agree or disagree with each of the following statements.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

- Not Applicable - no family

My family supports my decision to serve in the Army.

The Army meets my family's needs.

The Army makes it easy for my family to do well.

Here are a number of words that describe different feelings and emotions. How often you have felt this way during the past four weeks?

- joyful
- sad
- distressed
- peaceful/calm
- excited
- ashamed
- amused/playful
- upset
- inspired
- hopeful
- angry
- guilty
- happy/content
- scared/fearful
- bored
- hostile
- love
- enthusiastic/energized
- proud
- anxious/nervous
- frustrated

Never
Here are a number of words that describe different feelings and emotions. How often you have felt this way during the

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Hardly Ever</th>
<th>Some of the Time</th>
<th>Often</th>
<th>Most of the Time</th>
</tr>
</thead>
</table>

Is your Expiration of Terms of Service (ETS) in the next 180 days?

As promised when you started, the Army will remove any and all identifying information about you (name, social security number, spouses name, and rank) but will use your responses to this survey to help determine the effect and value of various programs and experiences in the Army. Additionally, researchers would like to use your responses (after removing name, social security number, spouses name, and rank) in reports and to design future education and training, and in making recommendations to senior leaders. If you agree, your data may be used in research reports that are printed in the media, but we will only do so in aggregate (your responses averaged with responses from others who have taken this survey). May
Benthin Risk Measure

ACTIVITIES SCALE

Now I want to talk about different activities that people sometimes do. Here is a list of activities.

Activities:
- Drinking alcohol
- Vandalizing property
- Riding in a car with an intoxicated (drunk) driver
- Smoking cigarettes
- Having unprotected sex
- Stealing from a store
- Getting into a physical fight
- Going into a dangerous part of town
- Threatening or injuring someone with a weapon

I'm going to ask you a few questions about each one of these. (Question 1 is answered for each activity, then question 2, etc.)

The first question is, “If you did this activity, how scary are the things that could happen? I want you to answer using the scale here (point to “Scary” exhibit). See, a “1” means that the things that could happen are “not scary at all.” A “2” means that they are “a little scary.” A “3” means that they are “pretty scary” and a “4” means that the things that could happen are “very scary.”

Let’s answer first for drinking alcohol. If you drank alcohol, how scary are the things that could happen?
1. If you did this activity, how scary are the things that could happen?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks are not scary at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks are a little scary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks are pretty scary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks are very scary</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. If you did this activity, how much are you at risk for something bad happening?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>I would be very much at risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be pretty much at risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be a little bit at risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would not be at risk</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

3. How would you compare the benefits (or pleasures) of this activity with the risks?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks are much greater than the benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks are somewhat greater than benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits are somewhat greater than risks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits are much greater than risks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. If something bad happened because of this activity, how serious would it be?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all serious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A little serious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretty serious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very serious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Have you ever done this before?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

5a. If yes, how many times have you engaged in this activity during the last six months?

<table>
<thead>
<tr>
<th>None</th>
<th>Once or twice</th>
<th>3-5 times</th>
<th>More than 5 times</th>
</tr>
</thead>
</table>
BARRATT IMPULSIVITY MEASURE

Almost    Not    Almost
Always Usually Very Often Never

1. I plan what I have to do.

2. I do things without thinking.

3. I make up my mind quickly.

4. I am carefree and happy-go-lucky.

5. I don't pay attention.

6. My mind races, and my thoughts
cchange quickly from one thing
to another.

7. I plan my spare time.

8. I am able to control myself.
9. I concentrate easily.

10. I save my money rather than spend it right away.

11. I can't sit still during movies.
   or when I have to listen to people talk for a long time.

12. I like to think carefully about things.

13. I try to plan for my future.


15. I like to think about complicated problems.
16. I change my mind about what I like to do.

17. I act "on impulse", doing whatever comes into my mind first.

18. I get easily bored when I have to figure out problems.

19. I act before I think.

20. I am a careful thinker.

21. I change my friends often.

22. I buy things without thinking about whether I need them.

23. I can only think about one problem at a time.

24. I change the things I like to do a lot.
25. I spend more money than I should.

26. When I think about one thing,
other thoughts pop up in my mind.

27. I am more interested in what's happening
now than in the future.

28. I find it hard to concentrate
when I have to listen to people
talk for a long time.

29. I like to solve games and puzzles.

30. I like to think about
how my life will be in the future.
Laurence Steinberg
Department of Psychology Temple University Philadelphia, PA 19122
(fax) laurence.steinberg@temple.edu www.temple.edu/psychology/lds

PRESENT POSITIONS
Department of Psychology Temple University Philadelphia, PA 19122
204-5539 (fax) laurence.steinberg@temple.edu www.temple.edu/psychology/lds
Distinguished University Professor, Temple University (1999-) Laura H. Carnell Professor of Psychology, Temple University (1998-) Professor of Psychology, Temple University (1988-)

EDUCATION
The Johns Hopkins University, Baltimore, Maryland (1970-71) Vassar College, Poughkeepsie, New York (1971-74)
Ph.D. in Human Development and Family Studies

PREVIOUS POSITIONS
Director of Graduate Studies, Department of Psychology, Temple University (1994-1999, 2001-2007)

PROFESSIONAL MEMBERSHIPS
Society for Research in Child Development Society for Research on Adolescence (President, 1998-2000) American Psychological Association (Fellow) (President, Division 7 (Developmental), 2007-2008) Association for Psychological Science (Fellow)
(vitae revised 9/4/2013)

EDITORIAL BOARDS

HONORS AND AWARDS
Phi Beta Kappa and Graduation with Honors and Distinction in Psychology, Vassar College (1974)
National Science Foundation Graduate Award, Honorable Mention (1975) Cornell University
Twenty Years of Life (1982) Command Performance (Student Initiated Teaching Award), University of
California, Irvine (1983) Faculty Scholar, William T. Grant Foundation, Program in the Mental Health
of Children (1983-1988) Fellow, American Psychological Association, Division 7 (Developmental
Psychology) (elected 1987) Faculty Excellence Award, University of Wisconsin School of Family
Resources and Consumer Sciences
Information (1992) Great Teacher Award, Temple University (1994) Scientific Core Group Member,
John D. and Catherine T. MacArthur Foundation Research Network on
Psychopathology and Development (1994-2000) Anathan Family Foundation Visiting Professorship,
Western Psychiatric Institute and Clinic, University of
Pittsburgh Medical Center (November, 1995) Top Developmental Psychology Authors in Productivity
for non-fiction, Booklist (for Beyond the Classroom) (1996) President, Society for Research on Adolescence
Laura H. Carnell Professor of Psychology, Temple University (1998-) Gallagher Lecturer, Society for
Professor of Adolescent Medicine, Morristown Memorial Hospital (December, 1999) 22nd Annual
Konopka Lecturer, University of Minnesota (2000) John P. Hill Memorial Award for Outstanding
Contributions to the Study of Adolescence, Society for
Invited Master Lecture, Society for Research in Child Development (2003) Urie Bronfenbrenner Award
for Lifetime Contribution to Developmental Psychology in the Service of
Science and Society, American Psychological Association (2003) Invited Master Lecture, Italian
Conference on Developmental Psychology, Associazione Italiana di Psicologia
(2004-)
Distinguished Scientist Lecturer, American Psychological Association (2005) Invited address, American
Psychological Society (2005) Barbara Lemann Memorial Lecture on Emerging Trends in Mental Health,
Tulane University Health Sciences
Center (2005) 5th Annual Russell Barkley Lecture, Department of Psychiatry, University of
Massachusetts Medical School
(2006) President, Division of Developmental Psychology, American Psychological Association (2007-
Address, Joint Meeting on Adolescent Treatment Effectiveness
Psychological Association (2008) Fellow, Association for Psychological Science (elected 2008) Award
for Distinguished Contributions to Research in Public Policy, American Psychological Association
Klaus J. Jacobs Research Prize for Productive Youth Development (2009) Stauffer Award for
Outstanding Faculty Service, Temple University Alumni Association (2010) Social Policy Book Award,
Society for Research on Adolescence (for Rethinking Juvenile Justice) (2010) Member, John D. and
Catherine T. MacArthur Foundation Research Network on Law and Neuroscience
Visiting Professor, Baldwin-Wallace College (2011) Henry and Bryna David Lectureship, National

SELECTED RECENT PROFESSIONAL ACTIVITIES

BOOKS AND EDITED VOLUMES


**RESEARCH ARTICLES**

(*denotes former or current student or postdoctoral fellow) in press


2013


2011


Burchinal, M., McCartney, K., Steinberg, L., Crossnoe, R., Friedman, S., & McLoyd, V. (2011). Examining the black-white achievement gap using the NICHD study of early child care and youth development. *Child Development*, 82, 1404-1420. PMCID:


2008


2007


2002


2001


Steinberg, L. (2001). We know some things: Adolescent-parent relationships in retrospect and prospect. *Journal of Research on Adolescence*, 11, 1-20. (Reissued in 2011 as part of the journal’s “virtual issue” containing the 10 most frequently cited articles during the decade 2000-2010.)


1999


1998


1997


1996


1995


1994


1993


1992


17


1991


1990


18


1983


1981


1979


1978


ESSAYS, EDITORIALS, AND BOOK REVIEWS


**RESEARCH GRANTS, AWARDS, AND CONTRACTS**

**Department of Defense, U.S. Army Medical Research and Materiel Command**

Laurence Steinberg (PI), “Group Influences on Young Adult Warfighters’ Risk-Taking” (2012-2015) (Role: Principal Investigator)

**National Institute of Child Health and Human Development**

25


**National Institute on Alcohol Abuse and Alcoholism**

Kathryn Harden (PI), “Genetic Influences on Adolescent Decision-Making and Alcohol Use” (2012-2014) (Role: Co-Investigator)

**National Institute on Drug Abuse**


**MacArthur Foundation Research Network on Law and Neuroscience**

BJ Casey (PI), “Neural and Behavioral Correlates of Age Differences in Psychological Capacities Relevant to Judgments of Criminal Responsibility” (2011-2013) (Role: Co-Principal Investigator)

**Pennsylvania Department of Health (Health Research Formula Fund Grant)**

Laurence Steinberg (PI), “Social Influences on Alcohol Consumption in Adolescent Versus Adult Mice” (2011-2012) (Role: Principal Investigator)

**Robert Wood Johnson Foundation (via subcontract from University of Pennsylvania)**

Laurence Steinberg (PI), “Correlates and Consequences of Positive Health in Adolescence” (2011-2013) (Role: Principal Investigator)
National Institute on Alcohol Abuse and Alcoholism
Jason Chein (PI), “Combined Effects of Alcohol and Peer Context on Behavior and Neural Correlates of Risk-Taking” (2011-2016) (Role: Co-Investigator)

**John D. and Catherine T. MacArthur Foundation**
Laurence Steinberg (PI), “Models for Change Research Initiative, Phase V” (2010-2013) (Role: Principal Investigator)

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**
Elizabeth Cauffman (PI), “Crossroads: Formal versus Informal Processing in the Juvenile Justice System” (2010-2013) (Role: Co-Principal Investigator)

**John D. and Catherine T. MacArthur Foundation**
Laurence Steinberg (PI), “Models for Change Research Initiative, Phase IV” (2009-2010) (Role: Principal Investigator)

**Jacobs Foundation**
Klaus J. Jacobs Research Prize in Productive Youth Development (2009-2014) (Role: Inaugural Prize Recipient)

26

**John D. and Catherine T. MacArthur Foundation**

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**
Edward Mulvey (PI), “Pathways to Desistance: A Prospective Study of Serious Adolescent Offenders, Renewal Proposal” (2008-2009) (Role: Co-Principal Investigator)

**National Institute of Justice, U.S. Department of Justice**
Edward Mulvey (PI), “Pathways to Desistance” (2008-2010) (Role: Co-Principal Investigator)

**John D. and Catherine T. MacArthur Foundation**

**John D. and Catherine T. MacArthur Foundation**

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**
Edward Mulvey (PI), “Pathways to Desistance: A Prospective Study of Serious Adolescent Offenders” (2007-2009) (Role: Co-Principal Investigator)

**Pennsylvania Council on Crime and Delinquency**
Edward Mulvey (PI), “Pathways to Desistance: A Prospective Study of Serious Adolescent Offenders” (2007-2008) (Role: Co-Principal Investigator)

**National Institute of Drug Abuse**
Laurence Steinberg (PI), “Peer Effects on Neural and Behavioral Markers of Risk-Taking” (2006-2010) (Role: Principal Investigator)

**John D. and Catherine T. MacArthur Foundation**
Laurence Steinberg (PI), “Continuation of the Pathways to Desistance Study: Renewal Proposal” (2006-2009) (Role: Principal Investigator)

**Pennsylvania Council on Crime and Delinquency**
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders in Philadelphia” (2006-2007) (Role: Co-Principal Investigator)

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders, Renewal Proposal” (2006-2007) (Role: Co-Principal Investigator)

**National Institute of Drug Abuse**
Edward Mulvey (PI), “Pathways to Desistance from Substance Use Problems and Crime” (2005-2010) (Role: Co-Principal Investigator)

**National Institute of Child Health and Human Development**

**Pennsylvania Council on Crime and Delinquency**

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**

**Pennsylvania Council on Crime and Delinquency**

**National Institute of Mental Health**
Nathan Fox (PI), “The Effects of Early Temperament on Social Behavior in Adolescence” (2004-2007) (Role: Co-Principal Investigator)

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**

**Pennsylvania Council on Crime and Delinquency**

**National Institute of Mental Health**

**William T. Grant Foundation**
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders” (2002-2005) (Role: Co-Principal Investigator)

**John D. and Catherine T. MacArthur Foundation**

**William Penn Foundation**
Laurence Steinberg (PI), “A Prospective Study of Serious Juvenile Offenders in Philadelphia” (2002-2005) (Role: Principal Investigator)

**Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice**

Robert Wood Johnson Foundation
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders” (2001-2004)  (Role: Co-Principal Investigator)

William T. Grant Foundation
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders” (2001-2004)  (Role: Co-Principal Investigator)

Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice

National Institute of Justice, U.S. Department of Justice
Edward Mulvey (PI), “A Prospective Study of Serious Adolescent Offenders, Renewal Proposal” (2000)  (Role: Co-Principal Investigator)

Open Society Institute, The Soros Foundations

John D. and Catherine T. MacArthur Foundation

MacArthur Foundation Research Network on Psychopathology and Development

MacArthur Foundation Research Network on Psychopathology and Development

John D. and Catherine T. MacArthur Foundation

MacArthur Foundation Research Network on Psychopathology and Development

MacArthur Foundation Research Network on Psychopathology and Development

MacArthur Foundation Research Network on Psychopathology and Development

MacArthur Foundation Research Network on Psychopathology and Development

John D. and Catherine T. MacArthur Foundation

MacArthur Foundation Research Network on Psychopathology and Development
Laurence Steinberg (PI) “Child and Adolescent Life Events Development” (1996-1997) (Role: Principal Investigator)

MacArthur Foundation Research Network on Psychopathology and Development

John D. and Catherine T. MacArthur Foundation

MacArthur Foundation Research Network on Psychopathology and Development

MacArthur Foundation Research Networks on Successful Pathways Through Middle Childhood and on Psychopathology and Development:

William T. Grant Foundation

Temple University Biomedical Research Fund

The Lilly Endowment:
Laurence Steinberg (PI), “Family, Peer, and Community Influences on Adolescent Achievement” (1990-1993) (Role: Principal Investigator)

Temple University Research Incentive Fund

Graduate School Research Committee, University of Wisconsin--Madison

National Center on Effective Secondary Schools, U.S. Department of Education

William T. Grant Foundation
Laurence Steinberg (PI) “Adolescent Autonomy and Family Relations” (1987-1988) (Role: Principal Investigator)

National Center on Effective Secondary Schools, U.S. Department of Education

Graduate School Research Committee, University of Wisconsin
National Center on Effective Secondary Schools, U.S. Department of Education
Laurence Steinberg (PI), “Student Achievement and Responsibility” (1985-1986) (Role: Principal Investigator)

Graduate School Research Committee, University of Wisconsin
Laurence Steinberg (PI), “Changes in Family Relations During Adolescence” (1984-1985) (Role: Principal Investigator)

William T. Grant Foundation
Laurence Steinberg (PI) “Faculty Scholars Award” (1983-1988) (Role: Principal Investigator)

University of California Focused Research Program
Ellen Greenberger (PI) “Early Work Experience and Adolescent Stress” (1979-1982) (Role: Co-Principal Investigator)

The Ford Foundation

The Spencer Foundation

National Institute of Education
Ellen Greenberger (PI), “Early Adolescents at Work: Costs and Benefits to Learning and Social Development” (1979-1981) (Role: Co-Principal Investigator)

National Institute of Education
Ellen Greenberger (PI), “Early Adolescents at Work: Effects of Part-Time Employment on Literacy and Maturity” (1978-1979) (Role: Co-Principal Investigator)

Committee on Instructional Development, University of California
Laurence Steinberg (PI), “Development of Instructional Materials for ‘Human Development over the Life Cycle’.” (1978) (Role: Principal Investigator)

College of Human Ecology, Cornell University

COLLOQUIA, CONFERENCE PRESENTATIONS, AND INVITED ADDRESSES


Steinberg, L. (August, 1977). Research in the ecology of adolescent development: A longitudinal study of the impact of physical maturation on changes in the family system in early adolescence. Paper


Invited discussant, Symposium on Maternal Stress, Western Psychological Association, Honolulu, April, 1980.

Invited speaker, National Center for Vocational Education, Ohio State University, May, 1980.


Paper presented at the annual meeting of the American Psychological Association, Los Angeles. Invited speaker, Bush Foundation Program in Child Development and Social Policy, UCLA, September,


34


Steinberg, L. (March, 1986). Recent research in adolescent development. Invited workshop at the annual meeting of the Society for Adolescent Medicine, Boston.


Invited lecture, Laboratory for the Study of Adolescence, Department of Psychiatry, Michael Reese Hospital and the Committee on Human Development, University of Chicago, May, 1988.


Invited speaker, Department of Child and Family Development, University of North Carolina at Greensboro, February, 1992.


Invited colloquium, Department of Human Development and Family Studies, Penn State University, April, 1992.


Invited participant, Social Science Research Council working group meeting on Community and Neighborhood Influences, New York, May 14, 1992.


Matthew Vassar Lecture, Vassar College, Poughkeepsie, New York, September, 1996. Invited presentation, National Academy of Sciences, Commission on Behavioral and Social Sciences and

Invited presentation, Center for Research on Young Children and Families, Teachers College, Columbia University, June 18, 1997.
Invited workshop leader, Vice President and Mrs. Gore’s “Family Re-Union” conference on Families and Learning, Nashville, June 24-25, 1997.


Invited participant, the High School of Tomorrow Forum, National Association of Secondary School Principals, Hershey, PA, October 13-14, 1999.


Steinberg, L. (December, 1999). Adolescent Violence: The Roles of Parents, Peers, and Communities. Cummins Endowment for Adolescent Medicine Lecture, Morristown Memorial Hospital, Morristown, NJ.


Invited colloquium, Irving B. Harris School of Public Policy, University of Chicago, June, 2001.


Steinberg, L. (June, 2004). A developmental perspective on risk-taking in adolescence. Paper presented as part of an invited plenary symposium sponsored by the National Institute of Drug Abuse at the meeting of International Society for Addiction Medicine, Helsinki.

Steinberg, L. (September, 2004). Adolescent development in the family context. Invited Master Lecture, XVIII Congresso di Psicologia dello Sviluppo, Sciacca, Italy.


Grand rounds, Department of Child Psychiatry, Tulane University School of Medicine, New Orleans, March 11, 2005.
APA Distinguished Scientist Lecture, Rocky Mountain Psychological Association, Phoenix, April, 2005.
Steinberg, L. (June, 2005). You and your adolescent. Invited lecture, Young Presidents’ Organization Southern 7 Chapter, Greenbrier, West Virginia.
Steinberg, L. (June, 2005). The ten basic principles of good parenting. Invited lecture, Young Presidents’ Organization Southern 7 Chapter, Greenbrier, West Virginia.


5th Annual Russell Barkley Lecture, Department of Psychiatry, University of Massachusetts Medical School, Worcester, Massachusetts, November 2, 2006.


Rankin, L., & Steinberg, L. (March, 2008). Does parenting have enduring effects on patterns of competency and adjustment among serious juvenile offenders? Poster presented at the biennial meetings of the Society for Research on Adolescence, Chicago.


Invited keynote address, Minnesota Association For Children’s Mental Health, Duluth, Minnesota, April 28, 2008.


Steinberg, L. (August, 2008). Adolescent development, social policy, and the law: Lessons from a decade in the trenches. Presidential address, Division of Developmental Psychology, American Psychological Association annual meeting, Boston.


Invited colloquium, Sackler Institute for Developmental Psychobiology, Weill Medical College of Cornell University, March 26, 2009.


Invited colloquium, Department of Psychology and Center for Drug Abuse Research Translation, University of Kentucky, April 16, 2009.


Invited speaker, Conference on Learning and the Brain, Learning and the Brain Society, Washington, May 9, 2009.


Invited lecture, Harris School of Public Policy Studies, University of Chicago, February 25, 2010.


Steinberg, L. (March, 2010). Does Exposure to Sexy Media Lead Adolescents to Have Sex? A Reanalysis and a New Conclusion. Paper presented as part of a symposium titled “Using Propensity Score Matching to Control for Selection Effects in Research on Extracurriculars, Employment, and


Invited presentation, “Workshop on Development as Action in Context,” German Psychological Association, Dornburg, Germany, June 16-18, 2010
Invited lecture, “Workshop on Development as Action in Context,” German Psychological Association,
Dornburg, Germany, June 16-18, 2010. Invited participant, National Institute of Child Health and Human Development conference on Cognition,
Invited speaker, conference on Adolescence: Exploration and Self-Regulation of the Unknown, Jacobs Foundation Conference, Marbach, Germany, April 6-8, 2011.


Steinberg, L. (March, 2012). Toward a positive psychology of adolescence. Paper presented as a part of a symposium entitled “Positive Adolescent Health” at the biennial meeting of the Society for Research on Adolescence, Vancouver.


Grand rounds, Department of Pediatrics, Cooper Medical School of Rowan University, Camden, New Jersey, October 31, 2012.


Invited colloquium, Committee on Education and Center for Human Potential and Public Policy, University of Chicago, April 2, 2013.


Invited plenary presentation, SRCD Teaching Institute, biennial meeting of the Society for Research in Child Development, Seattle, April, 2013.

Invited speaker, SRCD preconference on evolutionary psychology, biennial meeting of the Society for Research in Child Development, Seattle, April, 2013.

Undergraduate and Graduate Courses Taught
Cornell University (1976-77) Adolescence and Adulthood Adolescence in Modern Society
University of California, Irvine (1977-83) Introduction to Human Behavior Human Development Over the Life-Cycle Abnormal Behavior
Adolescent Development Perspectives on Child Rearing Seminar in Human Development (Graduate)

TEACHING
University of Wisconsin--Madison (1983-88) Development from Middle Childhood to Late Adulthood Adolescence Development in Social Context Adolescence, Family, and Work (Graduate) Adolescence and the Family (Graduate) The Family at Mid-Life (Graduate) Interdisciplinary Perspectives on Adolescent Development (Graduate)
Temple University (1988-) Introduction to Psychology (Developmental Psychology Unit) Developmental Research Methods Adolescent Development Capstone Course in Psychology Core Course in Developmental Psychology (Graduate) Developmental Research Methods (Graduate) Seminar in Socioemotional Development (Graduate) Seminar in Adolescent Development (Graduate) Seminar in Developmental Psychopathology (Graduate) Supervision of Master’s Students (Committee Chair/Thesis Advisor)

56
57


Supervision of Doctoral Students (Committee Chair/Dissertation Advisor)


Marguerite Clark (1987). “Patterns of Friendship among Middle-Aged Adults.” School of Social Sciences, University of California, Irvine.


Michael Fraser (2001). “An Examination of the Specificity of the Link Between Stress and Disorder Using the Adolescent Life Events and Difficulties Schedule.” Department of Psychology, Temple University.
Supervision of Postdoctoral Fellows

University of California, Irvine
Committee on Courses (1982-83)

UNIVERSITY-LEVEL SERVICE
CURRICULUM VITAE

Jason M. Chein

Temple University
Philadelphia, PA 19122-6085
E-mail: jchein@temple.edu
URL: http://www.temple.edu/tunl

Positions and Academic History:

2006- Temple University, Philadelphia, PA
Assistant Professor, Department of Psychology

2006- Princeton University, Princeton, NJ
Visiting Researcher, Center for the Study of Brain, Mind, & Behavior

2004-2005 Princeton University, Princeton, NJ
Postdoctoral Fellow, Center for the Study of Brain, Mind, & Behavior

2001-2004 Univ. of Pittsburgh, Pittsburgh, PA
Ph.D., Cognitive Psychology
Center for the Neural Basis of Cognition (Carnegie Mellon Univ./ Univ. of Pittsburgh)
Dissertation: Evaluating alternative models of working memory with neuroimaging

2002 Chatham College, Pittsburgh, PA
Adjunct Faculty Member, Department of Biology

1997-2001 University of Pittsburgh, Pittsburgh, PA
M.S., Cognitive Psychology
Center for the Neural Basis of Cognition (Carnegie Mellon Univ./ Univ. of Pittsburgh)
Thesis: Evidence of a domain general learning network: An FMRI investigation with verbal and nonverbal paired-associates

1992-1997 Temple University, Philadelphia, PA
B.A., (Summa Cum Laude)
Majors in Psychology & Computer Science, minor in Cognitive Neuroscience

Fellowships, Awards, and Honors:

2001 Tim Post Award For Research Excellence (University of Pittsburgh)
2001 Temple University Alumni Gallery of Success (Temple University)
2000 Trainee Travel Award, Organization for Human Brain Mapping
1998 Center for the Neural Basis of Cognition Fellowship (National Science Foundation)
1998 National Science Foundation Graduate Student Fellowship, Honorable Mention
1997 College of Arts & Sciences Graduation Ceremony Speaker (Temple University)
1997 President’s Scholar (Temple University)
1997  Phi Beta Kappa National Honor Society
1997  General Alumni Award For Academic Achievement (Temple University)
1997  Clifford M. Kliger Scholarship For Outstanding Work In Psychology (Temple University)
1996  Jerry Zaslow Award For Achievement in Academics and Service (Temple University)

**Professional Memberships:**

1997-present  Cognitive Neuroscience Society
1997-present  Society for Neuroscience
2006-present  American Psychological Association
2007-present  Organization for Human Brain Mapping

**Professional Activities:**

Review Editor, *Frontiers in Human Neuroscience*

**Ad-hoc Reviews**

**Research Support (Active)**

<table>
<thead>
<tr>
<th>Grant No.</th>
<th>PI (Name and Institution)</th>
<th>Start/End Date</th>
<th>Role</th>
</tr>
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<tbody>
<tr>
<td>NIH R21 DA022546-01</td>
<td>Steinberg</td>
<td>9/30/2006 - 8/31/2010</td>
<td>Co-Principal Investigator</td>
</tr>
<tr>
<td>NIH R01 MH059256-06</td>
<td>Fiez</td>
<td>6/1/2000 -12/31/2010</td>
<td>Consultant</td>
</tr>
</tbody>
</table>

**Peer-Reviewed Publications:**


**Manuscripts under review and in revision:**

Chein, J.M. & Morrison, A.B. (under review). Expanding the mind's workspace: Training and transfer effects with a complex working memory span task.


Berryhill, M.E., Chein, J.M., Olson, I.R. (under review). At the intersection of attention and memory: the mechanistic role of the posterior parietal lobe in working memory.

**Manuscripts in preparation:**


**Book Chapters:**


**Published Conference Proceedings/Abstracts:**


Schneider, W., Chein, J., Smith, T., & Shrager, J. (1998). FMRI of domain general learning. Published abstracts of the 28th annual meeting of the Society for Neuroscience, Los Angeles
Conference Presentations and Invited Lectures:


**Chein, J.M.** (1997). The Interface Between Computer Science and Psychology. Invited lecture at the Southwest China Normal University, Chongqing, China.

**Popular Media Coverage:**


**Teaching Experience:**

<table>
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<tr>
<th>Year</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>2006-present</td>
<td>Foundations in Cognitive Psychology (Temple University, undergraduate)</td>
</tr>
<tr>
<td>2006 (graduate)</td>
<td>Topical Seminar on Functional Magnetic Resonance Imaging (Temple University,</td>
</tr>
<tr>
<td>2002</td>
<td>Psychology Research Methods Laboratory (University of Pittsburgh, undergraduate)</td>
</tr>
</tbody>
</table>
2002  Functional & Clinical Neuroanatomy (Chatham College, graduate)
1999-2000  Systems Neuroanatomy (Teaching Fellow, Univ. of Pittsburgh, graduate)
1998  Introduction to Psychology  (Teaching Assistant, University of Pittsburgh, undergraduate)
1996, 1997  Freshman Skills Seminar (Co-instructor, Temple University, undergraduate)

University & Departmental Service:

College of Liberal Arts Academic Technology Committee (2008-present)
Department of Psychology Colloquium Committee (2007-present)
Department of Psychology Space Committee (2008-present)
Department of Psychology Cognitive Neuroscience Search Committee (2007)