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**University of California, Berkeley
Department of Psychology**

Psychology 164
Fall 2015

Final Examination

Feedback on Exam and Final Grades

Here is the guide used to score the exam, with item analysis. Full feedback on the Final Exam appears below.

In addition, here are some details concerning the determination of final letter grades..

On the initial scoring of the exam, the average score was 68.66 ($SD = 17.94$), corresponding to 69%. Psychometric analysis yielded an excellent reliability (Cronbach's alpha) of .87.

To identify "bad" items, I examined the percentage scores for each item (items were worth from 2 to 10 points). The average item score, computed as a percentage of the points available for that item, was 71% ($SD = 17%$).

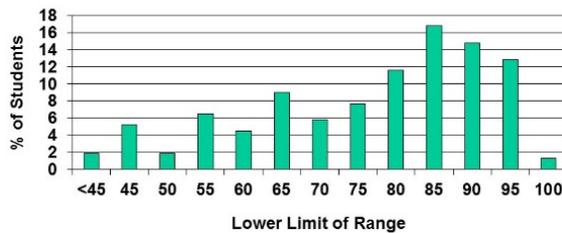
I also computed item-to-total correlations. All of these were acceptable, ranging from .25 to .66 (the lowest correlation was an artifact of restriction of range: everyone did so well on it that there was little variability).

By the standards outlined in the Exam Information page, only Item #16 was an outlier, more than 2 SD s below the mean for all exam items; but Item #2 was close. Both items were rescored, giving all students full credit.

Rescoring raised the mean Final Exam score to 78.87 ($SD = 15.53$), or 79%. The figure shows the distribution of Final Exam scores.

Distribution of Final Exam Scores
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$M = 78.83, SD = 15.53$



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Final letter grades were determined according to the procedure described in the Exam Information page.

Employing the “industry standards” for letter grades yielded the following percentages in each category (remember, I don’t give grades of A+):

Letter Grade	Minimum Score	% of Class
A	218	19.4
A-	211	16.1
B+	204	9.0
B	195	9.7
B-	188	12.9
C+	180	6.5
C	171	5.8
C-	164	4.5
D+	157	3.2
D	148	7.7
D-	141	3.2
F	<141	4.5

That’s a pretty good distribution of letter grades, but it’s a little low compared the average for upper-division courses in the Biological and Social Sciences (excluding Psychology), as described in the Exam Information page. There, for example, we find somewhere between 31-49% As, and between 25-37% Bs.

So, I adjusted my grading standards accordingly, by ratcheting the criteria down a notch. So, students who accrued at least 211 points received a solid A (35.5% of the class), while those who accrued at least 204 points got an A- (another 9.0% of the class), and so on all the way down (remember, as described in the Exam Information page, I assign letter grades based on points, not percentages). That resulted in 44.5% As and 29.11% Bs, right about in the middle of campus standards.

Remember, too, that I guarantee some kind of C to any student who accrues more than 50% of the available points, or 112 points; so those Ds, and some of the Fs, all converted into some kind of C.

Be sure to *print* your name and UCB Student ID on every page of the exam.

Your responses should be very concise. Write your answers in the space provided. If absolutely necessary, you may continue on the other side of the page. Write legibly in the space provided, and *please use ink*.

A scoring guide will be posted to the course website by 5:00 PM on Monday, December 14. Exams should be graded and scores posted by Friday, December 18. Watch Canvas for an announcement.

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Noncumulative Portion

Answer *all* 13 questions, for a total of 50 points. In every case, only five or six (5-6) sentences will do.

The Self

1. How do cases of amnesia and normal memory bear on John Locke's view of the self and identity? [4 points]

Mean score = 2.53 (63%), item-to-total $r_{pb} = .47$. Locke identified identity with memory, implying that if one did not have memory of the past, then one didn't have an identity – a sense of self – either. But amnesic patients like K.C. have a sense of self, in that they can accurately describe their personalities, even if they can't consciously remember events from their past. This suggests that there are two types of knowledge encoded in memory, episodic and semantic, and that they can be dissociated. Additional evidence for the independent representation comes from studies of priming: Retrieving episodic information about oneself does not facilitate retrieval of semantic self-knowledge, and vice-versa. [Lecture]

2. In the "Crovitz-Robinson" paradigm, subjects are asked to retrieve specific autobiographical memories in response to cues such as "car" and "lake". Discuss some limitations of this paradigm for the study of autobiographical memory. [4 points]

$M = 1.94$ (48%), $r_{pb} = .41$. This item was a little more difficult than intended, and so I rescored it giving full credit to all students. There's more to autobiographical memory than the ability to recall specific episodes from one's past life. In the first place, the memories recalled may not be true – although it's not clear whether a memory must be accurate to be important. Moreover, the C-R paradigm doesn't allow us to explore how individual autobiographical memories are related to each other. These relations may be temporal, forming a simple sequence of memories. More interestingly, they may be causal, in that one event led to another in some way. The method, by itself, doesn't allow us to identify truly salient events in the person's life, such as those that define what Adler would call his/her life style such as important turning points in the person's life, or the experiences by which they acquired their belief system, or which provided models for behavior, etc. [Lecture]

3. How does the self-concept appear to differ in members of "independent" and "interdependent" cultures? [4 Points]

3.18 (80%), .48. Independent cultures emphasize individuality and encourage members to distinguish themselves from others. Interdependent cultures emphasize social relationships, and encourage members to adjust their behavior to accommodate other people. Members of independent cultures tend to view the self-concept – i.e., the

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attributes associated with the self – as relatively fixed, consistent from one situation to another and stable across both short and long periods of time. These attributes tend to focus on the person’s own abilities, beliefs, and feelings. Members of interdependent cultures have a self-concept – and present themselves – as more variable, both across situational contexts and across intervals of time. Their self-concepts emphasize more external, public features, such as social roles, social status, and interpersonal relationships. [Fiske & Taylor, Chapter 5]

Social-Cognitive Neuroscience

4. What is the Doctrine of Modularity and how does it provide the foundation for social-cognitive neuropsychology and neuroscience? [4 points]

3.25 (81%), .47. The doctrine of modularity holds that specific mental functions are performed by dedicated “mental modules” that operate more or less independently of each other. These modules, in turn, are associated with a fixed neural architecture localized in some region of the brain. It is similar to the idea of functional specialization of the brain, or localization of function. One implication is that some social-cognitive functions may be selectively lost if a patient has suffered damage (such as a lesion) to the part of the brain that serves that function. Another is that the location of these specialized regions can be revealed by comparing images of brain activity while a subject is performing a particular task, with images collected while performing a control task. [Lecture]

5. Discuss the hypothesis that the ability to recognize familiar faces is served by a particular brain structure. [4 points]

3.5 (88%), .52. The fusiform gyrus, located in the temporal lobe near the occipital lobe, is commonly known as the “fusiform face area” because it is damaged in prosopagnosia, and because brain-imaging studies show differential activation of that region when neurologically intact subjects are asked to identify familiar faces. However, other, more carefully controlled studies show that this same regions is activated when experts classify objects in the area of their expertise, such as birds, cars, or snowflakes. It may be that the fusiform area is specialized for classification at subordinate levels of categorization – of which facial recognition is a special, and universal case. [Lecture]

6. What conclusions did Lieberman (2007) reach concerning the localization of specific social-cognitive functions in the brain? [4 points].

2.65 (66%), .47. First, that there was functional specialization of brain tissue with respect to social cognition. Based on neuropsychological and brain-imaging evidence, he identified some different brain regions implicated in specifically social-cognitive tasks, including the “fusiform face area” and “mirror neuron systems”. Surveying the

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pattern of results obtained so far, Lieberman identified four separate systems: an “X” system, mediating automatic or reflexive processes; a “C” system, mediating controlled processes; a system for processing information about one’s own or another’s interior, subjective life; and another for processing visible (physical) features of people (including oneself) and their behavior. [Lieberman]

Social-Cognitive Development

7. Why is the traditional “False Belief Task” insufficient as a criterion for the Theory of Mind? [4 points]

3.29 (82%), .47. The traditional FBT is verbal in nature, and may underestimate the Theory of Mind in individuals who do not have adequate language skills, such as infants and autistic children (and adults). In fact, nonverbal versions of the FBT have revealed a Theory of Mind in infants as young as 15 months – though apparently not in chimpanzees or orangutans. The traditional FBT also assesses only “first-order” false beliefs. “Second-order false beliefs, e.g., X’s beliefs about y’s beliefs, emerge much later than age 5. Finally, the FBT task taps only one aspect of ToM, which is the explicit understanding of *false beliefs*. But there are other aspects of ToM, which may emerge earlier, or later, than age 4. [Lecture]

8. What is the current status of research on the Theory of Mind in nonhuman animals? [4 points]

3.37 (84%), .44. The very idea of ToM was based on experiments with a chimpanzee named Sarah, who seemed to be able to understand, and solve, the problems faced by a human experimenter. However, studies with large samples of apes shows that they do not perform well on a nonverbal version of the False Belief Task. Sarah may be an unrepresentative animal, or she may possess some aspect of ToM that is not tapped by the FBT. On the other hand, chimps raised and tested in more naturalistic environments might perform differently. [Lecture]

9. What makes us think that the child’s theory of mind is really a *theory*, somehow analogous to scientific theories? [4 points]

2.69 67%), .36. First and foremost, the theory of mind is a theory in that goes beyond describing observable behavior to postulates abstract, unobservable structures and functions that explain the behavior of other people – in particular, their beliefs. The ToM also generates predictions about what people will do, based on the child’s understanding of their beliefs. Children with different theories of mind will generate different predictions. And if these predictions are not confirmed, then the child will – eventually, after going through a number of different phases, including ignoring contrary evidence entirely - revise his or her theory, producing a new theory that can be tested

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against the evidence of behavior. So, according to this view, the child doesn't *get* a theory of mind once s/he can pass the FBT; rather, passing the FBT shows that s/he has got a *new* theory of mind. [Gopnik & Wellman]

Social Cognition and Personality

10. In what sense is Rotter's version of social-learning theory cognitive, instead of behavioristic? [4 points]

3.32 (83%), .50. Behavioristic theories, like Skinner's, make no reference to cognitions (percepts, memories, beliefs) or other mental states (feelings, drives). Behavior is explained in terms of stimulus, response, and reinforcement. Rotter accepts this general framework, but redefines these terms in terms of the *subjective* stimulus situation, its meaning as experienced by the individual; in terms of *subjective* values attached to reinforcements; and in terms of subjective contingencies of reinforcement (such as internal versus external locus of control, which may differ from objective probabilities; and the individual's trust that other people will deliver the reinforcements they have promised..

11. Why do theorists like Zajonc argue that cognition and emotion are mediated by separate systems? What are some problems with this argument?

2.69 (67%), .59. Basically, Zajonc argues that emotional responses occur more quickly than cognitive analyses. First we evaluate an object or event, generating a positive or negative emotional response, which then colors our decision-making and other "cognitive" responses. For example, we can evaluate something as good or bad without being able to explain why we do so. More critically, he points out that affective reactions can occur to "subliminal" stimuli of which we are not consciously aware. Moreover, emotional reactions can also occur in the absence of memory for details of the stimulus situation. Any of the arguments listed on p. 386 of Fiske & Taylor will do; it's not necessary, though, for the student to list *all* of them. [Fiske & Taylor, Chapter 14]

12. What are some problems with Zajonc's argument about the primacy of emotion over cognition – and the independence of emotion and cognition?

2.72 (68%), .51. On the other hand, it's a mistake to identify cognition with *conscious* cognition; if perception and other aspects of cognition can occur unconsciously, then the emotional response may reflect *unconscious* appraisal. Moreover, fast, automatic, cognition-free emotions may be limited to broad positive or negative reactions, or maybe Ekman's emotions; more nuanced affective reactions may require conscious, controlled cognition. But even if cognition and emotion are mediated by separate systems, those systems are by no means independent. Fiske & Taylor spend their

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entire Chapter 13 detailing how cognition affects emotion (Lazarus; Smith & Ellsworth, etc.). And much of Chapter 14 is devoted to the influences of emotion on cognition. So, emotion and cognition interact to influence behavior. [Fiske & Taylor, Chapters 13 and 14]

13. What is a personal construct? [2 points]

1.45 (73% -- remember, this was a 2-point item), .47. In Kelly's theory, a personal construct is a dichotomous concept used to categorize people and situations. It is *personal* because two individuals might not share the same set of constructs. [Lecture]

Cumulative Portion

Answer *all* 5 questions, worth 10 points each, for a total of 50 points. In every case, no more than ten (10) sentences is necessary.

14. Summarize (in one or two sentences) the five models of the social thinker described by Fiske and Taylor. Then choose one model which seems to fit the research data less well, and one model which seems to fit the research data more closely, and explain your choice. If you have an alternate model that strikes you as better than any of those described by Fiske and Taylor, briefly describe it and explain why you prefer it to any of theirs. [10 Points]

7.21 (72%), .66. The models in question are: (a) Consistency-Seeker, (b) Naïve Scientist, (c) Cognitive Miser, (d) Motivated Tactician, and (e) Activated Actor. The best answers will list all five, along with a brief definition or a theoretical example. Then, for one model, the student should indicate *one way* in which the available evidence is supportive of the model; and for the other one, how the available data is strongly supportive. It doesn't matter which models the student chooses, so long as the answer is adequately defended. [Fiske & Taylor, Chapter 1]

15. Briefly describe Brunswik's "lens model", and show how it can be used to understand the problem of accuracy in lie detection.

5.87, .64. Brunswik's lens model is a framework for understanding how perceivers (or judges) make use of stimulus information in order to construct a mental representation of (or make a judgment concerning) an object or event. The stimulus object itself provides ecologically valid cues as to its states. In this case, "state: means whether the person is lying or telling the truth. Then the perceiver (or judge) utilizes cues to make inferences (or judgments) about the stimulus. To the extent that the perceiver (or judge) utilizes ecologically valid cues, perception (or judgment) will be accurate. So, in order to understand why lie-detection is so poor, we first must determine whether there are, in

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fact, any ecologically valid cues to deception. Research indicates there are such cues, but they are relatively weak, and they are best used in combination, rather than relying on any single cue. Then we have to determine what cues perceivers utilize when forming their impression (or making their judgment). Research indicates that perceivers (judges) often utilize cues that are ecologically invalid – that is, cues that do not, in fact, indicate whether the target is lying. Moreover, when they do use ecologically valid cues, they often weight these cues inappropriately, believing them to be more valid than they are; and they rely on single cues, rather than on a combination of cues that would have more ecological validity. [Lecture]

16. Briefly describe Weiner's theory of attributions concerning success and failure. How do these attributions lead to emotional response? [10 points]

1.91 (19%!), .47. An average score more than 2 SDs below the overall mean!. A bad item, I think, because I didn't emphasize Weiner's theory of attributions concerning achievement in the first half of the course. Modeled on Kelley's covariation calculus for causal attribution, Weiner's theory postulates three dimensions: the stability (vs. changeability) of the outcome, how controllable the outcome was, and where the locus of control lay (internal or external). And as with Kelly's calculus, this information is usually obtained from multiple observations. For example, stable, uncontrollable outcomes generate attributions to *aptitude*, while controllable outcomes (whether the outcome is stable or not) generate attributes to *effort*; stable, uncontrollable, external outcomes generate attributions to *task difficulty*; while unstable, uncontrollable outcomes, regardless of locus of control, generate attributions to *luck*. As a general rule, the *locus* and *controllability* dimensions determine the person's emotional reaction to success and failure. For example, controllable failures attributed to the self give rise to guilt, while controllable successes attributed to another person give rise to gratitude. At the same time, the stability dimension determines the intensity of the emotion. [Fiske & Taylor, Chapters 6 and 13]

17. What makes us think that Christopher is autistic? What makes us think that Christopher might not be autistic after all, or that autism might not entail deficits in social cognition?

9.06 (91%), .25. Haddon never exactly calls Christopher autistic. Maybe he has Asperger's syndrome, though, which would place him on the "autistic spectrum". Maybe he's just some kind of savant. He definitely lacks social skills or even much social interest; he has a lot of trouble understanding other people's motives and attitudes; and he's very interested in mathematics and logic. So in some ways he fits the profile of autism spectrum disorder, even if he's not classically "autistic" in Kanner's sense. But while Christopher is odd, no doubt, he's also very interested in logic and mathematics, and he has difficulty dealing with people, but that doesn't necessarily make him autistic. Maybe he just hasn't had the kind of upbringing that would help him to better understand what is going on around him. *Any of the following points, among others, will*

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do: (a) Christopher has pretty good language skills, and does OK at school, suggesting that he might have Asperger's syndrome, not classic autism. (b) He seems to care about Wellington, the dog -- his death isn't just a puzzle to be solved. (c) During his trip to London, he escapes being detected by police who are looking for him, so he seems to have the ability to think about what other people think. (d) He cared about his pet rat, Toby, and at the end of the book, he seems to care about his new dog, Sandy, so he does appear to take an interest in animate objects. (e) Christopher seems to actually get along with his mother. (f) Sherlock Holmes was odd, too, but that didn't make him autistic.

18. Compare and contrast social and nonsocial cognition.

8.15 (82%), .64. The underlying purpose of social cognition is the same as that of nonsocial cognition: to acquire knowledge of the world that can be used to guide adaptive behavior. However, there are some important differences between the two. Some of these differences are quantitative, differences in degree. For example, the social environment is arguably more ambiguous than the nonsocial environment, presenting the perceiver with many cues that are vague, fragmentary, and conflicting – forcing him or her to “go beyond the information given” in the stimulus – even more so than in the nonsocial case. The context or background is probably more important for social perception, precisely because the stimulus itself is so ambiguous; and it, too, is vague, fragmentary, and ambiguous, full of conflicting cues. Emotion and motivation play a greater role in social cognition, not least because we have more emotional involvement with objects in the social world. On the action side, social behavior is, arguably, more complex than nonsocial behavior – or, at least the social behaviors studied by personality and social psychologists are arguably more complex than the nonsocial behavior studied by traditional cognitive psychology. Other differences, however, appear to be qualitative, differences in kind. It seems likely, for example, that there may be separate and independent brain modules specialized for certain social-cognitive functions, like facial recognition or emotion perception. In person perception, the object is him- or herself a sentient being, who is trying to control how s/he is perceived by others; the perceiver, therefore, must “read between the lines” of overt behavior to figure out what the person is *really* like, what s/he *really* believes and feels and wants. In self-perception, the distinction between object and subject is dissolved -- which doesn't happen in nonsocial perception. (In self-perception, the person may be trying to control how s/he perceives him- or herself!). And finally, the objects of social cognition often do not have an existence independent of the mind of the knower. By virtue of the self-fulfilling prophecy, many of the features of those whom we're trying to perceive are themselves products of expectancy confirmation effects – whether behavioral confirmation or perceptual confirmation. And many of the categories into which we slot people are themselves social constructions, of the sort studied by cognitive sociologists. [Lecture; Zerubavel]