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Con mucho respeto,

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For **Microsoft 2003** and previous versions, and **Macintosh** versions of Word:

- o Under the File menu select: Save As > Tools (or Options with a Mac) > Security > Remove personal information from file properties on save > Save.

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1. Under the File menu select "Properties."
2. Under the Summary tab remove all of the identifying information from all of the fields.
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1. Under the File menu select "Prepare for sharing."
2. Click on the "Check for issues" icon.
3. click on "inspect document" icon.
4. Uncheck all of the checkboxes except "Document Properties and Personal information".
5. Run the document inspector, which will then do a search of the document properties and indicated if any document property fields contain any information.
6. If the document inspector finds that some of the document properties contain information it will notify you and give you the option to "Remove all," which you will click to remove the document properties and personal information from the document.

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1. En el menú Archivo, seleccione "Propiedades".
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3. Guarde el archivo.

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1. Haga clic en el botón de la oficina en la esquina superior izquierda de la aplicación de oficina
2. Seleccione "Preparar" en las opciones del menú.
3. Seleccione "Propiedades" para las opciones del menú "Preparar".
4. Elimine toda la información de los campos de propiedades del documento que aparecen en las opciones del menú principal.
5. Guarde el documento y cierre la sección del campo de propiedad del documento.

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1. En el menú Archivo, seleccione "Preparar para compartir".
2. Haga clic en el icono "Buscar problemas".
3. Haga clic en el icono "inspeccionar documento".
3. Desactive todas las casillas de verificación excepto "Propiedades del documento e información personal".
4. Ejecute el inspector de documentos, que realizará una búsqueda de las propiedades del documento e indicará si cualquier campo de propiedad del documento contiene información.
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## Principales preguntas (Generales) para guiar la evaluación de artículos de revistas

### **Resumen**

1. ¿El resumen proporciona los propósitos principales del estudio?
2. ¿El resumen proporciona quién fue estudiado (muestra, tamaño de la muestra, características especiales)? ¿Cómo fueron seleccionados los participantes?
3. ¿En el resumen se proporcionan las condiciones, si las hubiera, a los participantes?
4. ¿El resumen proporciona qué tipo de diseño se utilizó?
5. ¿El resumen proporciona conclusiones y conclusiones principales?
6. ¿Cuál es tu calificación general del resumen.

### **Introducción**

1. ¿Ofrece la introducción el contexto y el contexto del estudio?
2. ¿Ofrece la introducción lo que en la teoría actual, la investigación o el trabajo clínico hace que este estudio sea útil, importante o de interés?
3. ¿La introducción proporciona lo que es diferente o especial sobre el estudio en el enfoque, los métodos o el diseño para atender una necesidad en el área?
4. ¿La introducción proporciona una clara justificación con respecto a los constructos a evaluar?
5. ¿Ofrece la introducción cuáles son específicamente los propósitos, las predicciones o las hipótesis?

### **Metodología**

#### **Participantes**

1. ¿La metodología provee quiénes fueron los participantes y cuántos de ellos estaban en este estudio?
2. ¿La metodología provee por qué fue seleccionada esta muestra a la luz de los objetivos de la investigación?
3. ¿La metodología proporciona cómo se obtuvo, reclutó y seleccionó esta muestra?
4. ¿La metodología proporciona cuáles son las características demográficas de los participantes de la muestra (por ejemplo, género, edad, origen étnico, raza, estado socioeconómico)? ¿Qué sucede si se invocan criterios de inclusión y exclusión (es decir, reglas de selección para obtener participantes)?
5. ¿La metodología proporciona cuántos de los participantes elegibles o reclutados realmente fueron seleccionados y participaron en el estudio?
6. ¿La metodología provee si y se informó el consentimiento solicitado? ¿Cómo y de quién, si se usaban poblaciones especiales?

#### **Diseño**

1. ¿La metodología proporciona cuál es el diseño (por ejemplo, longitudinal, transversal, relación, comparación) y cómo se relaciona el diseño con las metas del estudio?

2. ¿La metodología proporciona como fueron los participantes asignados a grupos o condiciones?
3. ¿La metodología proporciona como muchos grupos fueron incluidos en el diseño?
4. ¿La metodología proporciona cómo fueron los grupos similares y diferentes en cómo fueron tratados en el estudio?
5. ¿La metodología proporciona por qué estos grupos eran críticos para abordar las cuestiones de interés?

### **Evaluación**

1. ¿La metodología proporciona los constructos de interés y cómo se midieron?
2. ¿La metodología proporciona los datos relevantes de confiabilidad y validez de investigaciones anteriores (y del presente estudio) que apoyan el uso de estas medidas para los propósitos presentes?
3. ¿La metodología proporciona múltiples medidas y métodos utilizados para evaluar los constructos?
4. ¿La metodología proporciona conjuntos de respuestas o estilos relevantes para el uso e interpretación de las medidas?
5. ¿La metodología proporciona cómo se llevó a cabo la evaluación? ¿Por quién (como evaluadores / observadores)? ¿En qué orden se administran las medidas?
6. ¿La metodología proporciona si los evaluadores fueron utilizados en cualquier aspecto de la evaluación, ¿cuál es la confiabilidad (consistencia inter o intrajuzgados) en rendir sus juicios / calificaciones?

### **Procedimientos**

1. ¿La metodología proporciona dónde se realizó el estudio (establecimiento)?
2. ¿La metodología proporciona qué materiales, equipos o aparatos se usaron en el estudio?
3. ¿La metodología proporciona cuál fue la secuencia cronológica de los eventos a los que los participantes fueron expuestos?
4. ¿La metodología proporciona los intervalos que transcurrieron entre diferentes aspectos del estudio (por ejemplo, ocasiones de evaluación)?
5. ¿La metodología proporciona qué verificaciones de procedimiento se completaron para evitar posibles fuentes de sesgo en la implementación de la manipulación y las evaluaciones?
6. ¿La metodología proporciona qué controles se hicieron para asegurar que las condiciones se llevaran a cabo según lo previsto?
7. ¿La metodología proporciona qué otra información necesita saber el lector para entender cómo se trató a los participantes y qué condiciones se proporcionaron?

### **Resultados**

1. ¿Los resultados proporcionan las medidas primarias y los datos de los cuales dependen las predicciones?
2. ¿Los resultados proporcionan las puntuaciones sobre las medidas de interés para los diferentes

grupos y la muestra en su conjunto (por ejemplo, medidas de tendencia central y variabilidad)?

3. ¿Los resultados proporcionan cómo las puntuaciones se comparan con las de otras muestras de estudio, normativas o de normalización?
4. ¿Los resultados proporcionan los grupos de interés dentro del estudio similares en medidas y variables que podrían interferir con la interpretación de las hipótesis?
4. ¿Los resultados proporcionan los análisis se utilizaron y cómo específicamente se dirigen a las hipótesis originales y los propósitos?
6. ¿Los resultados proporcionan los supuestos de los análisis de datos cumplidos?
7. ¿Los resultados proporcionan si se usaron múltiples pruebas, qué medios se proporcionaron para controlar las tasas de error?
8. ¿Los resultados proporcionan si más de un grupo fue delineado, eran similares en las variables que de otra manera podrían explicar los resultados (por ejemplo, el diagnóstico, la edad)?
9. ¿Los resultados se obtienen si faltan datos debido a medidas incompletas (no completadas por los participantes) o debido a la pérdida de participantes? De ser así, ¿cómo se manejaron en el análisis de datos?
10. ¿Proporcionan los resultados análisis auxiliares que pudieran informar aún más los análisis primarios o los análisis exploratorios que podrían estimular el trabajo adicional?

## **Discusión**

1. ¿La discusión proporciona cuáles fueron los principales hallazgos del estudio?
2. ¿Los resultados proporcionan cómo estos hallazgos agregan a la investigación y cómo apoyan, refutan o informan la teoría actual? ¿Qué interpretaciones alternativas se pueden colocar en los datos?
3. ¿Los resultados proporcionan qué limitaciones o calificativos se deben colocar en el estudio dado la metodología y las ediciones del diseño? ¿Qué investigación se desprende del estudio para avanzar en el campo?

## **Major Questions to Guide Journal Article Evaluation**

### **Abstract**

1. Does the abstract provide the main purposes of the study?
2. Does the abstract provide who was studied (sample, sample size, special characteristics)? How were participants selected?
3. Does the abstract provide what conditions, if any, were participants exposed?
4. Does the abstract provide what type of design was used?
5. Does the abstract provide main findings and conclusions?

## **Introduction**

1. Does the introduction provide the background and context for the study?
2. Does the introduction provide what in current theory, research, or clinical work makes this study useful, important, or of interest?
3. Does the introduction provide what is different or special about the study in focus, methods, or design to address a need in the area?
4. Does the introduction provide a clear the rationale regarding the constructs to be assessed?
5. Does the introduction provide what specifically were the purposes, predictions, or hypotheses?

## **Methodology**

### **Participants**

1. Does the methodology provide who were the participants and how many of them were there in this study?
2. Does the methodology provide why was this sample selected in light of the research goals?
3. Does the methodology provide how was this sample obtained, recruited, and selected?
4. Does the methodology provide what are the participant (s) demographic characteristics of the sample (e.g., gender, age, ethnicity, race, socioeconomic status)? What if any inclusion and exclusion criteria were invoked (i.e., selection rules to obtain participants)?
5. Does the methodology provide how many of those participants eligible or recruited actually were selected and participated in the study?
6. Does the methodology provide if and it was informed consent solicited? How and from whom, if special populations were used?

### **Design**

1. Does the methodology provide what is the design (e.g., longitudinal, cross-sectional, relationship, comparison) and how does the design relate to the goals of the study?
2. Does the methodology provide how were participants assigned to groups or conditions?
3. Does the methodology provide how many groups were included in the design?
4. Does the methodology provide how were the groups similar and different in how they were treated in the study?
5. Does the methodology provide why were these groups critical to address the questions of interest?

## **Assessment**

1. Does the methodology provide the constructs of interest and how were they measured?
2. Does the methodology provide the relevant reliability and validity data from previous research (and from the present study) that support the use of these measures for the present purposes?
3. Does the methodology provide multiple measures and methods used to assess the constructs?
4. Does the methodology provide response sets or styles relevant to the use and interpretation of the measures?
5. Does the methodology provide how was the assessment conducted? By whom (as assessors/observers)? In what order were the measures administered?
6. Does the methodology provide if raters were used in any facet of assessment, what is the reliability (inter- or intrajudge consistency) in rendering their judgments/ratings?

## **Procedures**

1. Does the methodology provide where was the study conducted (setting)?
2. Does the methodology provide what materials, equipment, or apparatuses were used in the study?
3. Does the methodology provide what was the chronological sequence of events to which participants were exposed?
4. Does the methodology provide what intervals elapsed between different aspects of the study (e.g., assessment occasions)?
5. Does the methodology provide what procedural checks were completed to avert potential sources of bias in implementation of the manipulation and assessments?
6. Does the methodology provide what checks were made to ensure that the conditions were carried out as intended?
7. Does the methodology provide what other information does the reader need to know to understand how participants were treated and what conditions were provided?

## **Results**

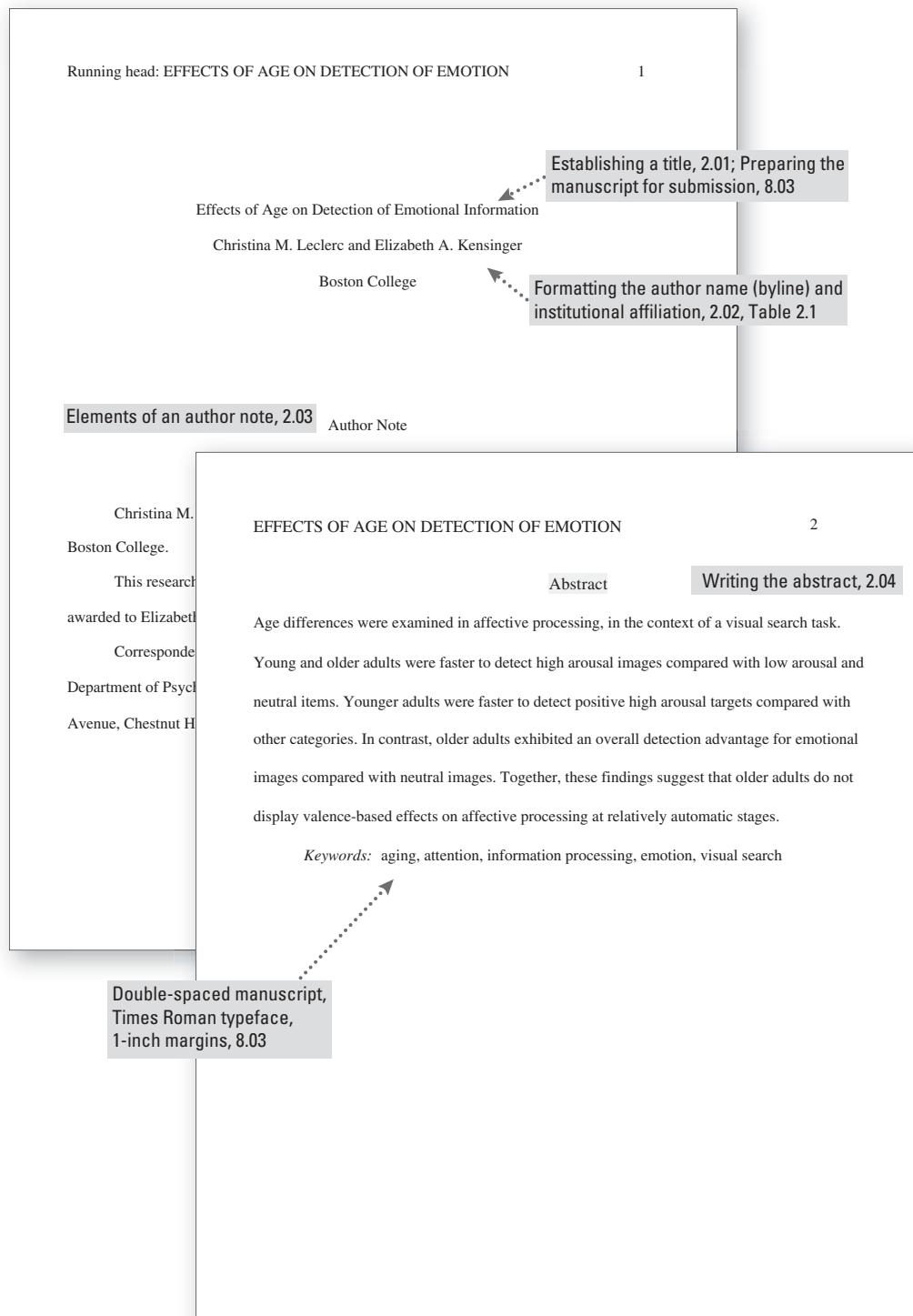
1. Does the results provide the primary measures and data on which the predictions depend?
2. Does the results provide the scores on the measures of interest for the different groups and sample as a whole (e.g., measures of central tendency and variability)?
3. Does the results provide how the scores compare with those of other study, normative, or standardization samples?

4. Does the results provide the groups of interest within the study similar on measures and variables that could interfere with interpretation of the hypotheses?
5. Does the results provide the analyses were used and how specifically did these address the original hypotheses and purposes?
6. Does the results provide the assumptions of the data analyses met?
7. Does the results provide if multiple tests were used, what means were provided to control error rates?
8. Does the results provide if more than one group was delineated, were they similar on variables that might otherwise explain the results (e.g., diagnosis, age)?
9. Does the results provide if data was missing due to incomplete measures (not filled out completely by the participants) or due to loss of participants? If so, how were these handled in the data analyses?
10. Does the results provide ancillary analyses that might further inform the primary analyses or exploratory analyses that might stimulate further work?

## **Discussion**

1. Does the discussion provide what were the major findings of the study?
2. Does the results provide how do these findings add to research and how do they support, refute, or inform current theory? What alternative interpretations can be placed on the data?
3. Does the results provide what limitations or qualifiers must be placed on the study given methodology and design issues? What research follows from the study to move the field forward?

**Figure 2.1.** Sample One-Experiment Paper (The numbers refer to numbered sections in the *Publication Manual*.)



Paper adapted from "Effects of Age on Detection of Emotional Information," by C. M. Leclerc and E. A. Kensinger, 2008, *Psychology and Aging*, 23, pp. 209–215. Copyright 2008 by the American Psychological Association.

## Figure 2.1. Sample One-Experiment Paper (continued)

### EFFECTS OF AGE ON DETECTION OF EMOTION

3

#### Writing the introduction, 2.05

Effects of Age on Detection of Emotional Information

► Frequently, people encounter situations in their environment in which it is impossible to attend to all available stimuli. It is therefore of great importance for one's attentional processes to select only the most salient information in the environment to which one should attend. Previous research has suggested that emotional information is privy to attentional selection in young adults (e.g., Anderson, 2005; Calvo & Lang, 2004; Carretié, Hinojosa, Marin-Lloches, Mecado, & Tapia, 2004; Nummenmaa, Hyona, & Calvo, 2006), an obvious service to evolutionary drives

Ordering citations within the same parentheses, 6.16

#### Selecting the correct tense, 3.18

to approach rewarding situations and to avoid threat and danger (Davis & Whalen, 2001; Dolan & Vuilleumier, 2003; Lang, Bradley, & Cuthbert, 1997; LeDoux, 1995).

#### Numbers expressed in words, 4.32

For example, Ohman, Flykt, and Esteves (2001) presented participants with  $3 \times 3$  visual arrays with images representing four categories (snakes, spiders, flowers, mushrooms). In half of the arrays, all nine images were from the same category, whereas in the remaining half of the arrays, eight images were from one category and one image was from a different category (e.g., eight flowers and one snake). Participants were asked to indicate whether the matrix included a discrepant stimulus. Results indicated that fear-relevant images were more quickly detected than

Numbers that represent statistical or mathematical functions, 4.31

Use of hyphenation for compound words, 4.13, Table 4.1

#### Continuity in presentation of ideas, 3.05

### EFFECTS OF AGE ON DETECTION OF EMOTION

4

Calvo & Lang, 2004; Carretié et al., 2004; Juth, Lundqvist, Karlsson, & Ohman, 2005; Nummenmaa et al., 2006).

► From this research, it seems clear that younger adults show detection benefits for arousing information in the environment. It is less clear whether these effects are preserved across the adult life span. The focus of the current research is on determining the extent to which aging influences the early, relatively automatic detection of emotional information.

#### No capitalization in naming theories, 4.16

Regions of the brain thought to be important for emotional detection remain relatively intact with aging (reviewed by Chow & Cummings, 2000). Thus, it is plausible that the detection of emotional information remains relatively stable as adults age. However, despite the preservation of emotion-processing regions with age (or perhaps because of the contrast between the preservation of these regions and age-related declines in cognitive-processing regions; Good et al., 2001; Hedden & Gabrieli, 2004; Ohnishi, Matsuda, Tabira, Asada, & Uno, 2001; Raz, 2000; West, 1996), recent behavioral research has revealed changes that occur with aging in the regulation and processing of emotion. According to the socioemotional selectivity theory

Citing one work by six or more authors, 6.12

(Carstensen, 1992), with aging, time is perceived as increasingly limited, and as a result, emotion regulation becomes a primary goal (Carstensen, Isaacowitz, & Charles, 1999). According to socioemotional selectivity theory, age is associated with an increased motivation to derive emotional meaning from life and a simultaneous decreasing motivation to expand one's knowledge base. As a consequence of these motivational shifts, emotional aspects of the

**Figure 2.1.** Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION

To maintain positive affect in the face of negative age-related change (e.g., limited time remaining, physical and cognitive decline), older adults may adopt new cognitive strategies. One such strategy, discussed recently, is the positivity effect (Carstensen & Mikels, 2005), in which older adults spend proportionately more time processing positive emotional material and less time processing negative emotional material. Studies examining the influence of emotion on memory (Charles, Mather, & Carstensen, 2003; Kennedy, Mather, & Carstensen, 2004) have found that compared with younger adults, older adults recall proportionately more positive information and proportionately less negative information. Similar results have been found when examining eye-tracking patterns: Older adults looked at positive images longer than younger adults did, even when no age differences were observed in looking time for negative stimuli (Isaacowitz, Wadlinger, Goren, & Wilson, 2006). However, this positivity effect has not gone uncontested; some researchers have found evidence inconsistent with the positivity effect (e.g., Grühn, Smith, & Baltes, 2005; Kensinger, Brierley, Medford, Growdon, & Corkin, 2002).

Based on this previously discussed research, three competing hypotheses exist to explain age differences in emotional processing associated with the normal aging process. First, emotional information may facilitate detection of emotional information. This hypothesis is based on the idea that older adults are more efficient at processing emotional information than younger adults. The primary goal of this study was to test this hypothesis. To do so, we employed a

Using the comma between elements in a series, 4.03

Punctuation with citations in parenthetical material, 6.21

Citing references in text, inclusion of year within paragraph, 6.11, 6.12

5 Using the colon between two grammatically complete clauses, 4.05

Capitalization of words beginning a sentence after a colon, 4.14

Hypotheses and their correspondence to research design, Introduction, 2.05

Using the semicolon to separate two independent clauses not joined by a conjunction, 4.04

to think that the positivity effect may be operating only at later stages of processing (e.g., strategic, elaborative, and emotion regulation processes) rather than at the earlier stages of processing involved in the rapid detection of information (see Mather & Knight, 2005, for discussion). Thus, the first two hypotheses, that emotional information maintains its importance across the life span or that emotional information in general takes on greater importance with age, seemed particularly applicable to early stages of emotional processing.

Indeed, a couple of prior studies have provided evidence for intact early processing of emotional facial expressions with aging. Mather and Knight (2006) examined young and older adults' abilities to detect happy, sad, angry, or neutral faces presented in a complex visual array. Mather and Knight found that like younger adults, older adults detected threatening faces more quickly than they detected other types of emotional stimuli. Similarly, Hahn et al. (2006) also found no age differences in efficiency of search time when angry faces were presented in an array of neutral faces, compared with happy faces in neutral face displays. When angry faces, compared with positive and neutral faces, served as nontarget distractors in the visual search arrays, however, older adults were more efficient in searching, compared with younger adults.

Prefixes and suffixes that do not require hyphens, Table 4.2

**Figure 2.1.** Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION

7

negative stimuli were not of equivalent arousal levels (fearful faces typically are more arousing than happy faces; Hansen & Hansen, 1988). Given that arousal is thought to be a key factor in modulating the attentional focus effect (Hansen & Hansen, 1988; Pratto & John, 1991; Reimann & McNally, 1995), to more clearly understand emotional processing in the context of aging, it is necessary to include both positive and negative emotional items with equal levels of arousal.

In the current research, therefore, we compared young and older adults' detection of four categories of emotional information (positive high arousal, positive low arousal, negative high arousal, and negative low arousal) with their detection of neutral information. The positive and negative stimuli were carefully matched on arousal level, and the categories of high and low arousal were closely matched on valence to assure that the factors of valence (positive, negative) and arousal (high, low) could be investigated independently of one another. Participants were presented with a visual search task including images from these different categories (e.g., snakes, cars, teapots). For half of the multi-image arrays, all of the images were of the same item, and for the remaining half of the arrays, a single item was included. Participants were

the array, and their reaction times were differences in response times (RTs) based on categories. We reasoned that if young information, then we would expect similar stimuli for the two age groups. By contrast, if older adults were younger adults, older adults should detect emotional items (relative to the neutral

Prefixed words that require hyphens, Table 4.3

Using abbreviations, 4.22; Explanation of abbreviations, 4.23; Abbreviations used often in APA journals, 4.25; Plurals of abbreviations, 4.29

## EFFECTS OF AGE ON DETECTION OF EMOTION

8

for the arousing items than shown by the young adults (resulting in an interaction between age and arousal).

### Method

Elements of the Method section, 2.06; Organizing a manuscript with levels of heading, 3.03

#### Participants

Younger adults (14 women, 10 men,  $M_{age} = 19.5$  years, age range: 18–22 years) were recruited with flyers posted on the Boston College campus. Older adults (15 women, nine men,  $M_{age} = 76.1$  years, age range: 68–84 years) were recruited through the Harvard Cooperative on Aging (see Table 1, for demographics and test scores).<sup>1</sup> Participants were compensated \$10 per hour for their participation. There were 30 additional participants, recruited in the same way as described above, who provided pilot rating values: five young and five old participants for the assignment of items within individual categories (i.e., images depicting cats), and 10 young and 10 old participants for the assignment of images within valence and arousal categories. All participants were asked to bring corrective eyewear if needed, resulting in normal or corrected to normal vision for all participants.

#### Materials and Procedure

Participant (subject) characteristics, Method, 2.06

The visual search task was adapted from Ohman et al. (2001). There were 10 different types of items (two each of five Valence  $\times$  Arousal categories: positive high arousal, positive low arousal, neutral, negative low arousal, negative high arousal), each containing nine individual exemplars that were used to construct 3  $\times$  3 stimulus matrices. A total of 90 images were used, each appearing as a target and as a member of a distracting array. A total of 360 matrices were presented to each participant; half contained a target item (i.e., eight items of one type and one target item of another type) and half did not (i.e., all nine images of the same type). Within the

Identifying subsections within the Method section, 2.06

Using numerals to express numbers representing age, 4.31

Numbering and discussing tables in text, 5.05

**Figure 2.1.** Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION		9
	<p>matrix. Within the 180 target trials, each of the five emotion categories (e.g., positive high arousal, neutral, etc.) was represented in 36 trials. Further, within each of the 36 trials for each emotion category, nine trials were created for each of the combinations with the remaining four other emotion categories (e.g., nine trials with eight positive high arousal items and one neutral item). Location of the target was randomly varied such that no target within an emotion category was presented in the same location in arrays of more than one other emotion category (i.e., a negative high arousal target appeared in a different location when presented with positive high arousal array images than when presented with neutral array images).</p> <p>The items within each category of grayscale images shared the same verbal label (e.g., mushroom, snake), and the items were selected from online databases and photo clipart packages. Each image depicted a photo of the actual object. Ten pilot participants were asked to write down the name corresponding to each object; any object that did not consistently generate the intended response was eliminated from the set. For the remaining images, an additional 20 pilot participants rated the emotional valence and arousal of the objects and assessed the degree of visual similarity among objects within a set (i.e., how similar the mushrooms were to one another) and between objects across sets (i.e., how similar the mushrooms were to the snakes).</p> <p><b>Valence and arousal ratings.</b> Valence and arousal were judged on 7-point scales (1 = <i>negative valence or low arousal</i> and 7 = <i>positive valence or high arousal</i>). Negative objects received mean valence ratings of 2.5 or lower, neutral objects received mean valence ratings of 3.5 to 4.5, and positive objects received mean valence ratings of 5.5 or higher. High-arousal objects received mean arousal ratings greater than 5, and low-arousal objects (including all neutral stimuli) received mean arousal ratings of less than 4. We selected categories for which both young and older adults agreed on the valence and arousal classifications, and stimuli were</p>	Latin abbreviations, 4.26 Numbers expressed in words at beginning of sentence, 4.32
Italicization of anchors of a scale, 4.21	overall similarity of the object categories ( $p > .20$ ). For example, we selected particular mushrooms and particular cats so that the mushrooms were as similar to one another as were the cats (i.e., within-group similarity was held constant across the categories). Our object selection also assured that the categories differed from one another to a similar degree (e.g., that the mushrooms were as similar to the snakes as the cats were similar to the snakes).	10 positive high arousal h arousal. between-categories exemplars (e.g., a set the rest of the cipants made these ual dimensions in ated how similar ilar the mushrooms equated on within- s well as for the
	<b>Procedure</b>  Each trial began with a white fixation cross presented on a black screen for 1,000 ms; the matrix was then presented, and it remained on the screen until a participant response was recorded. Participants were instructed to respond as quickly as possible with a button marked <i>yes</i> if there was a target present, or a button marked <i>no</i> if no target was present. Response latencies and accuracy for each trial were automatically recorded with E-Prime (Version 1.2) experimental	



## Figure 2.1. Sample One-Experiment Paper (continued)

### EFFECTS OF AGE ON DETECTION OF EMOTION

11

software. Before beginning the actual task, participants performed 20 practice trials to assure compliance with the task instructions.

#### Results

Elements of the Results section, 2.07

Analyses focus on participants' RTs to the 120 trials in which a target was present and was from a different emotional category from the distractor (e.g., RTs were not included for arrays containing eight images of a cat and one image of a butterfly because cats and butterflies are both positive low-arousal items). RTs were analyzed for 24 trials of each target emotion category. RTs for error trials were excluded (less than 5% of all responses) as were RTs that were  $\pm 3 SD$  from each participant's mean (approximately 1.5% of responses). Median RTs were then calculated for each of the five emotional target categories, collapsing across array type (see

Table 2 for raw RT values for each of the two age groups). This allowed us to examine, for example, whether participants were faster to detect images of snakes than images of mushrooms, regardless of the type of array in which they were presented. Because our main interest was in examining the effects of valence and arousal on participants' target detection times, we created scores for each emotional target category that controlled for the participant's RTs to detect neutral targets (e.g., subtracting the RT to detect neutral targets from the RT to detect positive high arousal targets). These difference scores were then examined with a  $2 \times 2 \times 2$  (Age [young, older]  $\times$  Valence [positive, negative]  $\times$  Arousal [high, low]) analysis of variance (ANOVA). This ANOVA revealed only a significant main effect of arousal,  $F(1, 46) = 8.41, p = .006, \eta^2 = .16$ , with larger differences between neutral and high-arousal images ( $M = 137$ ) than between neutral and low-arousal images ( $M = 93$ ; i.e., high-arousal items processed more quickly across both age groups compared with low-arousal items; see Figure 1). There was no significant main effect for valence, nor was there an interaction between valence and arousal. It is critical that the analysis

Abbreviations accepted as words, 4.24

Nouns followed by numerals or letters, 4.17

Numbering and discussing figures in text, 5.05

Symbols, 4.45; Numbers, 4.31

Reporting *p* values, decimal fractions, 4.35

Statistical symbols, 4.46, Table 4.5

**Figure 2.1.** Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION 12

revealed only a main effect of age but no interactions with age. Thus, the arousal-mediated effects on detection time appeared stable in young and older adults.

The results described above suggested that there was no influence of age on the influences of emotion. To further test the validity of this hypothesis, we submitted the RTs to the five categories of targets to a  $2 \times 5$  (Age [young, old]  $\times$  Target Category [positive high arousal, positive low arousal, neutral, negative low arousal, negative high arousal]) repeated-measures ANOVA.<sup>2</sup> Both the age group,  $F(1, 46) = 540.32, p < .001, \eta_p^2 = .92$ , and the target category,  $F(4, 184) = 8.98, p < .001, \eta_p^2 = .16$ , main effects were significant, as well as the Age Group  $\times$  Target Category interaction,  $F(4, 184) = 3.59, p = .008, \eta_p^2 = .07$ . This interaction appeared to reflect the fact that for the younger adults, positive high-arousal targets were detected faster than targets from all other categories,  $t_{(23)} < -1.90, p < .001$ , with no other target categories differing significantly from one another (although there were trends for negative high-arousal and negative low-arousal targets to be detected more rapidly than neutral targets;  $p < .12$ ). For older adults, all emotional categories of targets were detected more rapidly than were neutral targets,  $t_{(23)} > 2.56, p < .017$ , and RTs to the different emotion categories of targets did not differ significantly from one another. Thus, these results provided some evidence that older adults may show a broader advantage for detection of any type of emotional information, whereas young adults' benefit may be more narrowly restricted to only certain categories of emotional information.

As outlined previously, there were three plausible alternatives for young and older adults' performance on the visual search task: The two age groups could show a similar pattern of enhanced detection of emotional information, older adults could show a greater advantage for

**Statistics in text, 4.44**

**Elements of the Discussion**

**Spacing, alignment, and punctuation of mathematical copy, 4.46**

**Capitalize effects or variables when they appear with multiplication signs, 4.20**

## Figure 2.1. Sample One-Experiment Paper (continued)

### EFFECTS OF AGE ON DETECTION OF EMOTION

13

emotional detection than young adults, or older adults could show a greater facilitation than young adults only for the detection of positive information. The results lent some support to the first two alternatives, but no evidence was found to support the third alternative.

In line with the first alternative, no effects of age were found when the influence of valence and arousal on target detection times was examined; both age groups showed only an arousal effect. This result is consistent with prior studies that indicated that arousing information can be detected rapidly and automatically by young adults (Anderson, Christoff, Panitz, De Rosa, & Gabrieli, 2003; Ohman & Mineka, 2001) and that older adults, like younger adults, continue to display a threat detection advantage when searching for negative facial targets in arrays of positive and neutral distractors (Hahn et al., 2006; Mather & Knight, 2006). Given the

relative preservation of  
& Bennett, 2004; Jenni

to take advantage of the

However, despite the five categories of emotion, the present age-related enhancement for high-arousal images (as compared to neutral images) suggests a broader influence for the hypothesis that a

It is interesting that the positivity effect

Clear statement of support or nonsupport of hypotheses, Discussion, 2.08

### EFFECTS OF AGE ON DETECTION OF EMOTION

14

processing, given that no effects of valence were observed in older adults' detection speed. In the present study, older adults were equally fast to detect positive and negative information, consistent with prior research that indicated that older adults often attend equally to positive and negative stimuli (Rosler et al., 2005). Although the pattern of results for the young adults has differed across studies—in the present study and in some past research, young adults have shown facilitated detection of positive information (e.g., Anderson, 2005; Calvo & Lang, 2004; Carretié et al., 2004; Juth et al., 2005; Nummenmaa et al., 2006), whereas in other studies, young adults have shown an advantage for negative information (e.g., Armony & Dolan, 2002; Hansen & Hansen, 1988; Mogg, Bradley, de Bono, & Painter, 1997; Pratto & John, 1991; Reimann & McNally, 1995; Williams, Mathews, & MacLeod, 1996)—what is important to note is that the older adults detected both positive and negative stimuli at equal rates. This equivalent detection of positive and negative information provides evidence that older adults display an advantage for the detection of emotional information that is not valence-specific.

Thus, although younger and older adults exhibited somewhat divergent patterns of emotional detection on a task reliant on early, relatively automatic stages of processing, we found no evidence of an age-related positivity effect. The lack of a positivity focus in the older adults is in keeping with the proposal (e.g., Mather & Knight, 2006) that the positivity effect does not arise through automatic attentional influences. Rather, when this effect is observed in older adults, it is likely due to age-related changes in emotion regulation goals that operate at later stages of processing (i.e., during consciously controlled processing), once information has been attended to and once the emotional nature of the stimulus has been discerned.

Although we cannot conclusively say that the current task relies strictly on automatic processes, there are two lines of evidence suggesting that the construct examined in the current

Use of an em dash to indicate an interruption in the continuity of a sentence, 4.06; Description of an em dash, 4.13

**Figure 2.1.** Sample One-Experiment Paper (continued)

EFFECTS OF AGE ON DETECTION OF EMOTION 15

research examines relatively automatic processing. First, in their previous work, Ohman et al. (2001) compared RTs with both  $2 \times 2$  and  $3 \times 3$  arrays. No significant RT differences based on the number of images presented in the arrays were found. Second, in both Ohman et al.'s (2001) study and the present study, analyses were performed to examine the influence of target location on RT. Across both studies, and across both age groups in the current work, emotional targets were detected more quickly than were neutral targets, regardless of their location. Together, these findings suggest that task performance is dependent on relatively automatic detection processes rather than on controlled search processes.

Although further work is required to gain a more complete understanding of the age-related changes in the early processing of emotional information, our findings indicate that young and older adults

Use of parallel construction with coordinating conjunctions used in pairs, 3.23

Discussion section ending with comments on importance of findings, 2.08

EFFECTS OF AGE ON DETECTION OF EMOTION 16

study provides further evidence that the detection of emotional images and faces is automatic (Fleischman et al., 2004). Although there is evidence that older adults process emotional information (e.g., Carstensen et al., 2003), the present results suggest that older adults' performance on these tasks require relatively

Construction of an accurate and complete reference list, 6.22; General description of references, 2.11

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## Figure 2.1. Sample One-Experiment Paper (continued)

### EFFECTS OF AGE ON DETECTION OF EMOTION

17

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forgettable nature

*Psychology: C*

### EFFECTS OF AGE ON DETECTION OF EMOTION

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I

### EFFECTS OF AGE ON DETECTION OF EMOTION

19

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Digital object identifier as article identifier, 6.31;  
Example of reference to a periodical, 7.01

Example of reference to a book chapter, print version, no DOI, 7.02, Example 25

## Figure 2.1. Sample One-Experiment Paper (continued)

<b>Article with more than seven authors, 7.01, Example 2</b>	EFFECTS OF AGE ON DETECTION OF EMOTION		20
	Nummenmaa, L., Hyona, J., & Calvo, M. G. (2006). Eye movement assessment of selective attentional capture by emotional pictures. <i>Emotion</i> , 6, 257–268. doi:10.1037/1528-3542.6.2.257		
Ohman, A., Flykt, A., & Esteves, F. (2001). Emotion drives attention: Detecting the snake in the grass. <i>Memory and Cognition</i> , 29, 109–116. doi:10.3758/bf03196470		7/0096-3-1	module
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	Wilson, B. A., Alderman, N., & Baddeley, A. D. (1994). <i>Memory and Cognition</i> , 22, 109–116. doi:10.3758/bf03196470		
	Footnotes		
	<sup>1</sup> Analyses of covariance were conducted with these covariates, with no resulting influences of these variables on the pattern or magnitude of the results.		
	<sup>2</sup> These data were also analyzed with a 2 × 5 ANOVA to examine the effect of target category when presented only in arrays containing neutral images, with the results remaining qualitatively the same. More broadly, the effects of emotion on target detection were not qualitatively impacted by the distractor category.		



## Figure 2.1. Sample One-Experiment Paper (continued)

### EFFECTS OF AGE ON DETECTION OF EMOTION

23

Table 1

#### *Participant Characteristics*

Measure	Younger group		Older group		<i>F</i> (1, 46)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Years of education	13.92	1.28	16.33	2.43	18.62	<.001
Beck Anxiety Inventory	9.39	5.34	6.25	6.06	3.54	.066
BADS-DEX	20.79	7.58	13.38	8.29	10.46	.002
STAI-State	45.79	4.44	47.08	3.48	1.07	.306
STAI-Trait	45.64	4.50	45.58	3.15	0.02	.963
Digit Symbol Substitution	49.62	7.18	31.58	6.56	77.52	<.001
Generative naming	46.95	9.70	47.17	12.98	.004	.951
Vocabulary	33.00	3.52	35.25	3.70	4.33	.043
Digit Span-Backward	8.81	2.09	8.25	2.15	0.78	.383
Arithmetic	16.14	2.75	14.96	3.11	1.84	.182
Mental Control	32.32	3.82	23.75	5.13	40.60	<.001
Self-Ordered Pointing	1.73	2.53	9.25	9.40	13.18	.001
WCST perseverative errors	0.36	0.66	1.83	3.23	4.39	.042

Table 2

#### *Raw Response Data*

Category
Positive hits
Positive misses
Neutral
Negative hits
Negative misses

*Note.* The Beck Anxiety Inventory is from Beck et al. (1988); the Behavioral Assessment of the Dysexecutive Syndrome—Dysexecutive Questionnaire (BADS-DEX) is from Wilson et al. (1996); the State-Trait Anxiety Inventory (STAI) measures are from Spielberger et al. (1970); and the Digit Symbol Substitution, Digit Span-Backward, and Arithmetic Wechsler Adult Intelligence Scale—III and Wechsler Memory Scale—III measures are from Wechsler (1997).

Generative naming scores represent the total number of words produced in 60 s each for letter *F*, *A*, and *S*. The Vocabulary measure is from Shipley (1986); the Mental Control measure is from Wechsler (1987); the Self-Ordered Pointing measure was adapted from Petrides and Milner (1982); and the Wisconsin Card Sorting Task (WCST) measure is from Nelson (1976).

All values represent raw, nonstandardized scores.

Elements of table notes, 5.16

Selecting effective presentation, 4.41;  
Logical and effective table layout, 5.08

#### EFFECTS

#### Table 2

#### Raw Response Data

Category
Positive hits
Positive misses
Neutral
Negative hits
Negative misses

*Note.* The Beck Anxiety Inventory is from Beck et al. (1988); the Behavioral Assessment of the Dysexecutive Syndrome—Dysexecutive Questionnaire (BADS-DEX) is from Wilson et al. (1996); the State-Trait Anxiety Inventory (STAI) measures are from Spielberger et al. (1970); and the Digit Symbol Substitution, Digit Span-Backward, and Arithmetic Wechsler Adult Intelligence Scale—III and Wechsler Memory Scale—III measures are from Wechsler (1997).

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All values represent raw, nonstandardized scores.

Elements of table notes, 5.16

**Figure 2.1.** Sample One-Experiment Paper (continued)

Principles of figure use and construction; types of figures; standards, planning, and preparation of figures, 5.20–5.25

25

## EFFECTS OF AGE ON DETECTION OF EMOTION

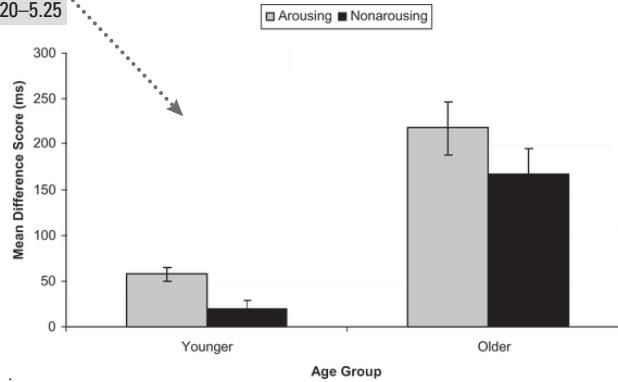


Figure 1. Mean difference values (ms) representing detection speed for each target category

subtracted from the mean detection speed for neutral targets. No age differences were found in the

arousal-mediated effects on detection speed. Standard errors are represented in the figure by the error bars attached to each column.

Figure legends and captions, 5.23