How to Approach Research Articles

You may need to read some parts **multiple times**. Take notes, highlight, and mark up the article to better focus your attention. **(See reverse side for other sections & questions for critical reading.)**
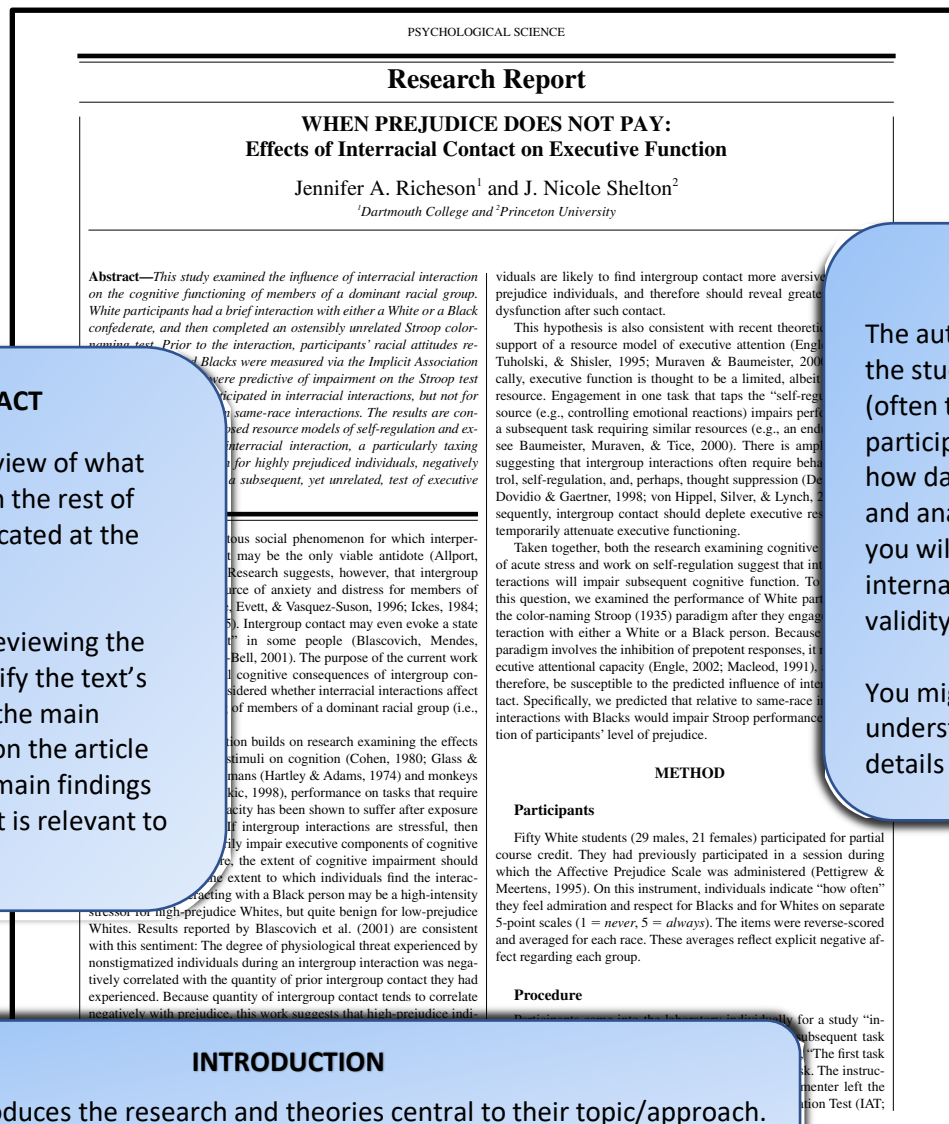
Reading Strategies

➜ Focus on the information in the article that is relevant to your research question (you may be able to skim over other parts)

➜ **Reading the article in this order may save you time:**

Read or skip each section based on your goals for using the article in your assignment.
- ▪ Abstract (read first, to determine if you should read further or move on to another article)
- ▪ Discussion/Conclusion
- ▪ Introduction
- ▪ Methods and Results (possibly skip)

➜ **Skimming strategy:** If you're not sure if a section is relevant, try reading at least the first sentence of each paragraph.

Research Report

WHEN PREJUDICE DOES NOT PAY:
Effects of Interracial Contact on Executive Function

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Abstract—This study examined the influence of interracial interaction on the cognitive functioning of members of a dominant racial group. White participants had a brief interaction with either a White or a Black confederate, and then completed an ostensibly unrelated Stroop color-naming test. Prior to the interaction, participants' racial attitudes regarding Blacks were measured via the Implicit Association [Test]... were predictive of impairment on the Stroop test ...participated in interracial interactions, but not for ...n same-race interactions. The results are con...sed resource models of self-regulation and ex... ...interracial interaction, a particularly taxing ...for highly prejudiced individuals, negatively ...a subsequent, yet unrelated, test of executive

...ous social phenomenon for which interper-...may be the only viable antidote (Allport, ...Research suggests, however, that intergroup ...rce of anxiety and distress for members of ...Evett, & Vasquez-Suson, 1996; Ickes, 1984; ...). Intergroup contact may even evoke a state ...t" in some people (Blascovich, Mendes, ...Bell, 2001). The purpose of the current work ...l cognitive consequences of intergroup con-...sidered whether interracial interactions affect ...of members of a dominant racial group (i.e.,

...tion builds on research examining the effects ...timuli on cognition (Cohen, 1980; Glass & ...mans (Hartley & Adams, 1974) and monkeys ...ic, 1998), performance on tasks that require ...city has been shown to suffer after exposure ...If intergroup interactions are stressful, then ...ly impair executive components of cognitive ...re, the extent of cognitive impairment should ...e extent to which individuals find the interac-...racting with a Black person may be a high-intensity stressor for high-prejudice Whites, but quite benign for low-prejudice Whites. Results reported by Blascovich et al. (2001) are consistent with this sentiment: The degree of physiological threat experienced by nonstigmatized individuals during an intergroup interaction was negatively correlated with the quantity of prior intergroup contact they had experienced. Because quantity of intergroup contact tends to correlate negatively with prejudice, this work suggests that high-prejudice indi-

viduals are likely to find intergroup contact more aversive...prejudice individuals, and therefore should reveal greate...dysfunction after such contact.

This hypothesis is also consistent with recent theoreti...support of a resource model of executive attention (Engl...Tuholski, & Shisler, 1995; Muraven & Baumeister, 200...cally, executive function is thought to be a limited, albeit...resource. Engagement in one task that taps the "self-reg...source (e.g., controlling emotional reactions) impairs perf...a subsequent task requiring similar resources (e.g., an end...see Baumeister, Muraven, & Tice, 2000). There is amp...suggesting that intergroup interactions often require beha...trol, self-regulation, and, perhaps, thought suppression (De...Dovidio & Gaertner, 1998; von Hippel, Silver, & Lynch, 2...sequently, intergroup contact should deplete executive res...temporarily attenuate executive functioning.

Taken together, both the research examining cognitive...of acute stress and work on self-regulation suggest that int...teractions will impair subsequent cognitive function. To...this question, we examined the performance of White par...the color-naming Stroop (1935) paradigm after they enga...teraction with either a White or a Black person. Because...paradigm involves the inhibition of prepotent responses, it...ecutive attentional capacity (Engle, 2002; Macleod, 1991)...therefore, be susceptible to the predicted influence of inte...tact. Specifically, we predicted that relative to same-race i...interactions with Blacks would impair Stroop performance...tion of participants' level of prejudice.

METHOD

Participants

Fifty White students (29 males, 21 females) participated for partial course credit. They had previously participated in a session during which the Affective Prejudice Scale was administered (Pettigrew & Meertens, 1995). On this instrument, individuals indicate "how often" they feel admiration and respect for Blacks and for Whites on separate 5-point scales ($1 = never$, $5 = always$). The items were reverse-scored and averaged for each race. These averages reflect explicit negative affect regarding each group.

Procedure

...ants came into the laboratory individually for a study "in-...subsequent task...k. "The first task...k. The instruc-...enter left the...ation Test (IAT;

ABSTRACT

A summary or preview of what will be discussed in the rest of the text, usually located at the top of the paper.

The main goal of reviewing the abstract is to identify the text's purpose. Look for the main problem or question the article answers, what its main findings are, and whether it is relevant to your research.

METHOD

The author(s) explain how the study was conducted (often this includes participants, design, and how data were collected and analyzed). This is where you will also examine the internal and external validity of the study.

You might not need to understand all of the details or 'jargon' here.

INTRODUCTION

The author introduces the research and theories central to their topic/approach. They may also cite other work that has been done on the topic; these sources could be useful for your own research.

How to Approach Research Articles (continued)

Questions for Reading Critically & Understanding

- What are the author's main research questions and findings?

- Does the article support/build on what other research has found?

- What evidence does the author provide? Is the argument well supported?

- Does the evidence support the conclusion? How confident is the conclusion?

- Can you summarize the meaning of this text in your own words?

- Can you connect the core ideas to other research and theories that you understand?

- What is clear to you and what do you need to look up or re-read?

Indirect Benefits Outweigh Direct Costs

Here, we measured both direct and indirect fitness components of female house crickets, *Acheta domesticus*, mated to either attractive or unattractive males for the term of their adult life span. We present a female's total fitness as both a rate-sensitive (the intrinsic rate of increase) and a rate-insensitive estimate of fitness (the total number of grand-children) in interpreting our findings.

Results

Our treatment did not affect the number of grandchildren produced via daughters, via sons, or in total (Table 1). Thus there was no difference in the rate-insensitive estimate of [females] mated to males of differing attractiveness. [Females ma]ted with attractive males did, however, [have higher] relative intrinsic rates of increase (r_{est}) [than those mated] with unattractive males (Table 2).

[The differe]nce between the treatments on r_{est} was [not due to a sin]gle fitness component (Table 2). When [examining the] components individually, the strongest [was a direct] cost experienced by females mated to [attractive males (Fig]ure 1), and an indirect benefit because [sons of these] males were more than twice as likely to [mature than sons of] unattractive males (see Table 1). However, [no single com]ponents alone can explain the significant [difference bet]ween females mated to attractive or un-[attractive males (]see Table 2). Treatment differences in [other fitness compo]nents, although individually not signifi-[cant, also influence]d our estimates of the overall fitness [benefit from ma]ting with attractive males. In particular [a combination] of sons' attractiveness and daughters' [ ] significant effect on our model (see Table 2).

[When we combine]d a female's egg number, egg width, and [egg length (during th]e first week of egg laying) into a single [measure of reproduc]tive effort, we found that females mated to

attractive males exerted greater reproductive effort in the first week of the experiment than those mated to unattractive males (principal component 1: attractive = 0.239 ± 0.116, unattractive = -0.233 ± 0.199, randomisation test $p = 0.043$). Of the constituent measures of week 1 reproductive effort, only egg width differed significantly between treatments (egg number: attractive = 129.07 ± 15.08, unattractive = 108.17 ± 18.84, $p = 0.382$; egg width: attractive = 0.618 ± 0.008, unattractive = 0.568 ± 0.014, $p = 0.005$; egg length: attractive = 2.71 ± 0.017, unattractive = 2.68 ± 0.025, $p = 0.373$).

Discussion

To provide an inclusive estimate of [the fitness] consequences of mating with an attrac[tive or unattractive] male, we quantified both the direct cost[s to females and the] indirect benefits to their offspring. [We report several] findings. First, the mating-associated co[sts to females] are greater when mating to attractive m[ales...]

Table 2. The Sensitivity of r_{est} to Variation [in Individual and] Combined Fitness Components

Models	$\bar{r}_a$	$\bar{r}_u$	Test ($\bar{r}_a$ V[...])	
			p	
Full	1.190	0.801	0.013	
Excluding fitness components via sons				
Generation time (a)	1.184	0.816	0.015	
Number maturing (b)	1.105	0.895	0.004	
Attractiveness (c)	1.154	0.846	0.044	
Survival (d)	1.189	0.811	0.015	
Excluding fitness components via daughters				
Generation time (e)	1.182	0.818	0.019	
Number maturing (f)	1.094	0.906	0.005	
Fecundity (g)	1.189	0.811	0.013	
Combined fitness components				
a and b	1.125	0.875	0.006	
a and c	1.148	0.852	0.050	
a and d	1.183	0.817	0.017	
a and e	1.175	0.825	0.021	
a and f	1.088	0.912	0.007	
a and g	1.183	0.817	0.015	
b and c	1.096	0.904	0.031	
b and d	1.105	0.895	0.003	
b and e	1.122	0.878	0.007	
b and f	1.038	0.962	0.002	
b and g	1.104	0.896	0.004	
c and d	1.153	0.847	0.040	0.071
c and e	1.146	0.854	0.049	0.053
c and f	1.076	0.924	0.025	0.124
c and g	1.142	0.858	0.052	0.047
d and e	1.181	0.819	0.020	0.204
d and f	1.093	0.907	0.006	0.447
d and g	1.188	0.812	0.014	0.254
e and f	1.088	0.912	0.008	0.407
e and g	1.180	0.819	0.017	0.197
f and g	1.096	0.904	0.007	0.499

In each reduced model individual females' scores for the component(s) listed were replaced with experiment-wide [...]

Table 1. The Effects of Mating with Either Attractive or Unattractive Males on a Number of Fitness Components

Category	Fitness Component	Attractive, Mean (SE)	Unattractive, Mean (SE)	*p*
Relative number of grandchildren				
	Via sons	1.183 (0.286)	0.817 (0.259)	0.374
	Via daughters	0.878 (0.173)	1.122 (0.339)	0.537
	Total	1.030 (0.215)	0.969 (0.290)	0.871
Direct fitness components				
	Survival (days)	6.58 (0.63)	10.43 (0.98)	0.001
	Lifetime fecundity (eggs)	160.70 (20.24)	209.70 (40.41)	0.290
Indirect fitness components via sons				
	Generation time (days)	68.91 (1.59)	72.61 (2.46)	0.209
	Number maturing	19.75 (3.42)	27.58 (7.99)	0.373
	Attractiveness (%/female)	0.62 (0.03)	0.29 (0.03)	0.000
	Weight at maturity (mg)	312.54 (3.04)	317.58 (4.73)	0.548
	Survival (days)	22.29 (0.79)	22.08 (0.89)	0.909
Indirect fitness components via daughters				
	Generation time (days)	66.40 (1.54)	72.24 (3.41)	0.099
	Number maturing	20.22 (3.76)	25.59 (7.43)	0.539
	Fecundity (eggs)	349.43 (13.48)	315.56 (19.02)	0.338
	Weight at maturity (mg)	338.24 (5.78)	341.12 (8.01)	0.844
	Survival (days)			

RESULTS

This section presents the data from the study. It often includes charts, tables, and graphs as visual representation of the data, which may be difficult to follow; don't feel that you have to read and understand this entire section.

DISCUSSION

Pay close attention here, even if you assume the conclusion might be repetitive. The author may rephrase a key point in a way that makes it clearer to you. This may also be the only place in the paper where the author discusses remaining questions, limitations of the study, and areas for future research. This section can help fuel a written reflection.

REFERENCES

Use the references to find other sources about the same or similar topics.