SUPPLEMENTAL MATERIALS:

Speed is a Signal: When Faster Replies Increase Hiring Likelihood

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The data and analyses, and pre-registrations for the experimental studies can be found at an Online Repository (https://researchbox.org/2599&PEER_REVIEW_passcode=HYIBPN).

Below, we report the following supplemental materials, as referenced in the main text:

(1) Study 1: Supplemental analyses

(2) Pilot Study (for Study 2): Supplemental figures

(3) Study 2: Supplemental analyses

(4) Supplemental Studies S1-S5

(5) Supplemental study materials and measures

Study 1: Supplemental Analyses

Table SI.1. List of Service Sub-categories in the Marketplace Data (Study 1)

3D Product Animation	DJ Mixing	Photography Advice
Ad Copy	E-Commerce Development	Podcast Cover Art
AdCreative.ai	E-Commerce Management	Podcast Marketing
Aerial Photographers	E-Commerce Marketing	Podcast Production
Affiliate Marketing	E-Commerce Product Videos	Podcast Writing
AI Applications	eLearning Content Development	Podia
AI Artists	eLearning Video Production	Portrait Photographers
AI Coding & Development	Electronics Engineering	Portraits & Caricatures
AI Consulting	Elementor	Poster Design
AI Development	Email Copy	Predis.ai
AI Video Creation	Email Design	Presentation Design
Album Cover Design	Email Marketing	Presentations
Animated Explainers	Embroidery Digitizing	Press Releases
Animated GIFs	ERP Management	Produce a Video
Animation for Kids	Event Management	Producers & Composers
Animation for Streamers	Event Photographers	Product Descriptions
App & Website Previews	Fact Checking	Product Management
App Design	Family & Genealogy	Product Photographers
Architecture & Interior Design	Fashion Design	Project Management
Article to Video	Filmed Video Production	Proofreading & Editing
Articles & Blog Posts	Financial Consulting	Public Relations
Arts & Crafts	Fitness	Puzzle & Game Creation
Astrology & Psychics	Fitness Lessons	QA & Review
Audio Ads Production	Flyer Design	Real Estate Photographers
Audio Editing	Fonts & Typography	Real Estate Promos
Audio Logo & Sonic Branding	Food Photographers	Remixing & Mashups
Audiobook Production	Game Art	Research & Summaries
Beat Making	Game Coaching	Resume Design
Beta Reading	Game Concept Design	Resume Writing
Blockchain & Cryptocurrency	Game Development	Rigging
Book & eBook Marketing	Game Trailers	Sales
Book & eBook Writing	Gaming	Sales Copy
Book Design	Generative AI Lessons	Scenic Photographers
Book Editing	Google	Screencasting Videos
Book Trailers	Grant Writing	Scriptwriting
Brand Style Guides	Graphics for Streamers	Search Engine Marketing (SEM)
Brand Voice & Tone	Greeting Cards & Videos	Search Engine Optimization (SEO)
Brochure Design	Guest Posting	Session Musicians
Build a Website	HR Consulting	Signage Design

Builderall	Icon Design	Singers & Vocalists
Building Engineering	Illustration	Slideshow Videos
Building Information Modeling	Image Editing	Social Media Advertising
Business Cards & Stationery	Industrial & Product Design	Social Media Copy
Business Consulting	Influencer Marketing	Social Media Design
Business Names & Slogans	Infographic Design	Social Media Marketing
Business Plans	Instapage	Social Media Videos
Car Wraps	Intro & Outro Videos	SocialBee
Career Counseling	Invitation Design	Software Development
Cartoons & Comics	ironSource	Songwriters
Case Studies	Jewelry Design	Sound Design
Catalog Design	Jingles & Intros	Speechwriting
Character Animation	Job Descriptions	Spokespersons Videos
Character Modeling	Jotform	Storyboards
Chatbot Development	Landing Page Design	Stripe
Chatbots	Landscape Design	Styling & Beauty
Chatbots Development	Language Lessons	Subtitles & Captions
Children's Book Illustration	Leadpages	Supply Chain Management
Close	LearnWorlds	Support & IT
Collectibles	Legal Consulting	Synth Presets
Community Management	Life Coaching	Tattoo Design
Consultation	Lifestyle & Fashion Photographers	Technical Writing
Content Strategy	LinkedIn Profiles	Text Animation
Convert Files	Live Action Explainers	Text Message Marketing
Cooking Lessons	Local SEO	TikTok
Corporate Videos	Localization	Trade Booth Design
Cosmetics Formulation	Logo Animation	Trading Bots Development
Cover Letters	Logo Design	Transcription
Creative Writing	Logo Maker	Translation
CRM Management	Lottie & Web Animation	Traveling
Crowdfunding	Lucky Orange	Trend Forecasting
Crowdfunding Videos	luckyorange	T-Shirts & Merchandise
Custom Songs	Market Research	UGC Videos
Custom Writing Prompts	Marketing Advice	Unboxing Videos
Customer Care	Marketing Strategy	User Testing
Cybersecurity	Meditation Music	UX Design
Cybersecurity & Data Protection	Meditation Videos	UX Writing
Dance Lessons	Menu Design	Vector Tracing
Data Analysis & Reports	Mixing & Mastering	Video Ads & Commercials
Data Analytics	Mobile App Development	Video Advice
Data Annotation	Mobile App Maintenance	Video Art
Data Cleaning	Mobile App Marketing	Video Editing
Data Engineering	Mobile Apps	Video Marketing

Data Enrichment	Mobile Apps Development	Video Templates Editing
Data Entry	Modeling & Acting	Videographers
Data Formatting	monday.com	Virtual Assistant
Data Formatting & Cleaning	Morningscore	Visual Effects
Data Governance & Protection	Music & Audio Advice	Vocal Tuning
Data Labeling & Annotation	Music Promotion	Voice Over
Data Mining & Scraping	Music Transcription	Voice Synthesis & AI
Data Processing	Music Videos	Web Analytics
Data Science	NFT Animation	Web Banners
Data Science & AI	NFT Art	Web Programming
Data Science & ML	NFT Development	Web Traffic
Data Scraping	NSFW Art	Website Content
Data Visualization	Nutrition	Website Design
Databases	Online Coding Lessons	Website Development
Design Advice	Online Music Lessons	Website Development O2O
Desktop Applications	Online Tutoring	Website Maintenance
Develop a Brand Identity	Other	Wellness
Development for Streamers	Packaging & Label Design	White Papers
DevOps & Cloud	Paperform	WooCommerce
Digital Marketing Management	Pattern Design	Writing Advice
Display Advertising	Personal Stylists	
DJ Drops & Tags	Photo Preset Creation	

Table SI.2. Robustness logistic regressions for Table 2: Hiring decisions by reply speed as a discrete measure (in minutes) (Study 1, N = ~11.66M)

IV	**DV: Hiring Decision (Service Purchase)**		
	Model 1 B (SE)	Model 2 B (SE)	Model 3 B (SE)
1 - 5 mins	-0.167*** (0.017)	-0.147*** (0.017)	-0.140*** (0.018)
6 - 10 mins	-0.345*** (0.032)	-0.334*** (0.032)	-0.363*** (0.024)
11 - 30 mins	-0.486*** (0.038)	-0.476** (0.037)	-0.497*** (0.027)
31 - 60 mins	-0.612*** (0.042)	-0.597*** (0.041)	-0.650*** (0.035)
1 - 24 hours	-0.850*** (0.044)	-0.823*** (0.043)	-0.892*** (0.029)
Over 24 hours	-2.060*** (0.070)	-1.990*** (0.076)	-1.960*** (0.048)
Order amount		-0.000*** (0.000)	0.0002*** (2.62e-5)
1 - 5 mins x Order amount		-0.000*** (0.000)	
6 - 10 mins x Order amount		-0.000 (0.000)	
11 - 30 mins x Order amount		-0.000 (0.000)	
31 - 60 mins x Order amount		-0.000* (0.000)	
1 - 24 hours x Order amount		-0.000*** (0.000)	
Over 24 hours x Order amount		-0.001*** (0.000)	
Seller level			-0.299*** (0.007)
1 - 5 mins x Seller level			-0.043*** (0.007)
6 - 10 mins x Seller level			-0.024** (0.009)
11 - 30 mins x Seller level			-0.025* (0.011)
31 - 60 mins x Seller level			-0.014 (0.015)
1 - 24 hours x Seller level			-0.018 (0.014)
Over 24 hours x Seller level			-0.108*** (0.024)
Fixed effects and clustered SEs	Sub-category	Sub-category	Sub-category
Observations	11,666,298	11,666,298	6,717,599
Squared Cor.	0.6733	0.6736	0.7080
Pseudo R2	0.6645	0.6648	0.6913
BIC	4,616,641.2	4,612,490.8	2,522,797.3

Table SI.2 Cont. Robustness Regressions for Table 2: Hiring decisions by reply speed as a discrete measure (in minutes) (Study 1, N = ~11.66M)

IV	**DV: Hiring Decision (Service Purchase)**		
	Model 4 B (SE)	Model 5 B (SE)	Model 6 B (SE)
1 - 5 mins	0.638*	-0.233***	-0.157***
	(0.267)	(0.016)	(0.018)
6 - 10 mins	1.020**	-0.389***	-0.334***
	(0.388)	(0.032)	(0.032)
11 - 30 mins	0.182	-0.524***	-0.474***
	(0.355)	(0.036)	(0.039)
31 - 60 mins	-0.326	-0.642***	-0.603***
	(0.410)	(0.040)	(0.042)
1 - 24 hours	0.006	-0.901***	-0.834***
	(0.233)	(0.040)	(0.044)
Over 24 hours	-1.430*	-2.290***	-1.990***
	(0.640)	(0.069)	(0.072)
Platform: app	-1.310***		
	(0.161)		
Platform: mobile web	-0.995***		
	(0.162)		
Platform: web	-1.590***		
	(0.158)		
1 - 5 mins x Platform: app	-0.788**		
	(0.265)		
6 - 10 mins x Platform: app	-1.330***		
	(0.384)		
11 - 30 mins x Platform: app	-0.603		
	(0.353)		
31 - 60 mins x Platform: app	-0.210		
	(0.400)		
1 - 24 hours x Platform: app	-0.768***		
	(0.229)		
Over 24 hours x Platform: app	-0.633		
	(0.633)		
1 - 5 mins x Platform: mobile web	-0.622*		
	(0.267)		
6 - 10 mins x Platform: mobile web	-1.190**		
	(0.378)		
11 - 30 mins x Platform: mobile web	-0.497		
	(0.349)		
31 - 60 mins x Platform: mobile web	-0.141		
	(0.406)		
1 - 24 hours x Platform: mobile web	-0.667**		
	(0.227)		
Over 24 hours x Platform: mobile web	-0.018		
	(0.620)		
1 - 5 mins x Platform: web	-0.811**		
	(0.264)		
6 - 10 mins x Platform: web	-1.370***		
	(0.382)		
11 - 30 mins x Platform: web	-0.684*		
	(0.343)		
31 - 60 mins x Platform: web	-0.304		
	(0.394)		

1 - 24 hours x Platform: web	-0.885***		
	(0.221)		
Over 24 hours x Platform: web	-0.638		
	(0.614)		
First time buyer		0.951***	
		(0.013)	
1 - 5 mins x First time buyer		0.264***	
		(0.013)	
6 - 10 mins x First time buyer		0.232***	
		(0.016)	
11 - 30 mins x First time buyer		0.234***	
		(0.012)	
31 - 60 mins x First time buyer		0.221***	
		(0.017)	
1 - 24 hours x First time buyer		0.283***	
		(0.016)	
Over 24 hours x First time buyer		0.829***	
		(0.036)	
Same seller			-1.430***
			(0.058)
1 - 5 mins x Same seller			-0.453***
			(0.050)
6 - 10 mins x Same seller			-0.601***
			(0.066)
11 - 30 mins x Same seller			-0.480***
			(0.068)
31 - 60 mins x Same seller			-0.392***
			(0.082)
1 - 24 hours x Same seller			-0.665***
			(0.055)
Over 24 hours x Same seller			-2.330***
			(0.279)
Fixed effects and clustered SEs	Sub-category	Sub-category	Sub-category
Observations	11,666,298	11,666,298	11,666,298
Squared Cor.	0.6752	0.6902	0.6755
Pseudo R2	0.6664	0.6798	0.6663
BIC	4,590,526.9	4,405,802.7	4,592,329.7

Notes. The sample size is somewhat smaller for Model 3 (seller level) as not all sellers had this data available. *** p < .0001, ** p < .001, * p < .01

Pilot Study: Supplemental Analyses and Figures

We assessed participants' beliefs about both descriptive norms (i.e., beliefs about when most providers *would* reply) and prescriptive norms (i.e., beliefs about when most providers *should* reply) using similar analyses to those for the focal DV. As presented in Figure SI.1, we find that responders (providers) expect quicker replies than senders (employers) in terms of both descriptive norms (when *would* a response occur; $\chi^2(6) = 45.87$, $p < .001$; K-S $D = 0.223$, $p < .001$) and prescriptive norms (when *should* a response occur; $\chi^2(6) = 62.68$, $p < .001$; K-S $D = 0.230$, $p < .001$).

We also conducted analyses for each type of service (copyediting and photography) separately and show the same pattern and significance of results as for the analysis collapsing across service type (see Figure SI.2). For each service, responders consistently expected they would have quicker reply speed than senders expected (Copyediting: $\chi^2(5) = 110.37$, $p < .001$; Kolmogorov-Smirnov [K-S] $D = 0.558$, $p < .001$; Photography: $\chi^2(6) = 121.45$, $p < .001$; K-S $D = 0.568$, $p < .001$). These patterns were replicated for beliefs about both descriptive norms (Copyediting: $\chi^2(5) = 26.76$, $p < .001$; K-S $D = 0.176$, $p = .021$; Photography: $\chi^2(5) = 25.86$, $p < .001$; K-S $D = 0.277$, $p < .001$) and prescriptive norms (Copyediting: $\chi^2(5) = 28.23$, $p < .001$; K-S $D = 0.206$, $p = .004$; Photography: $\chi^2(5) = 35.35$, $p < .001$; K-S $D = 0.262$, $p < .001$).

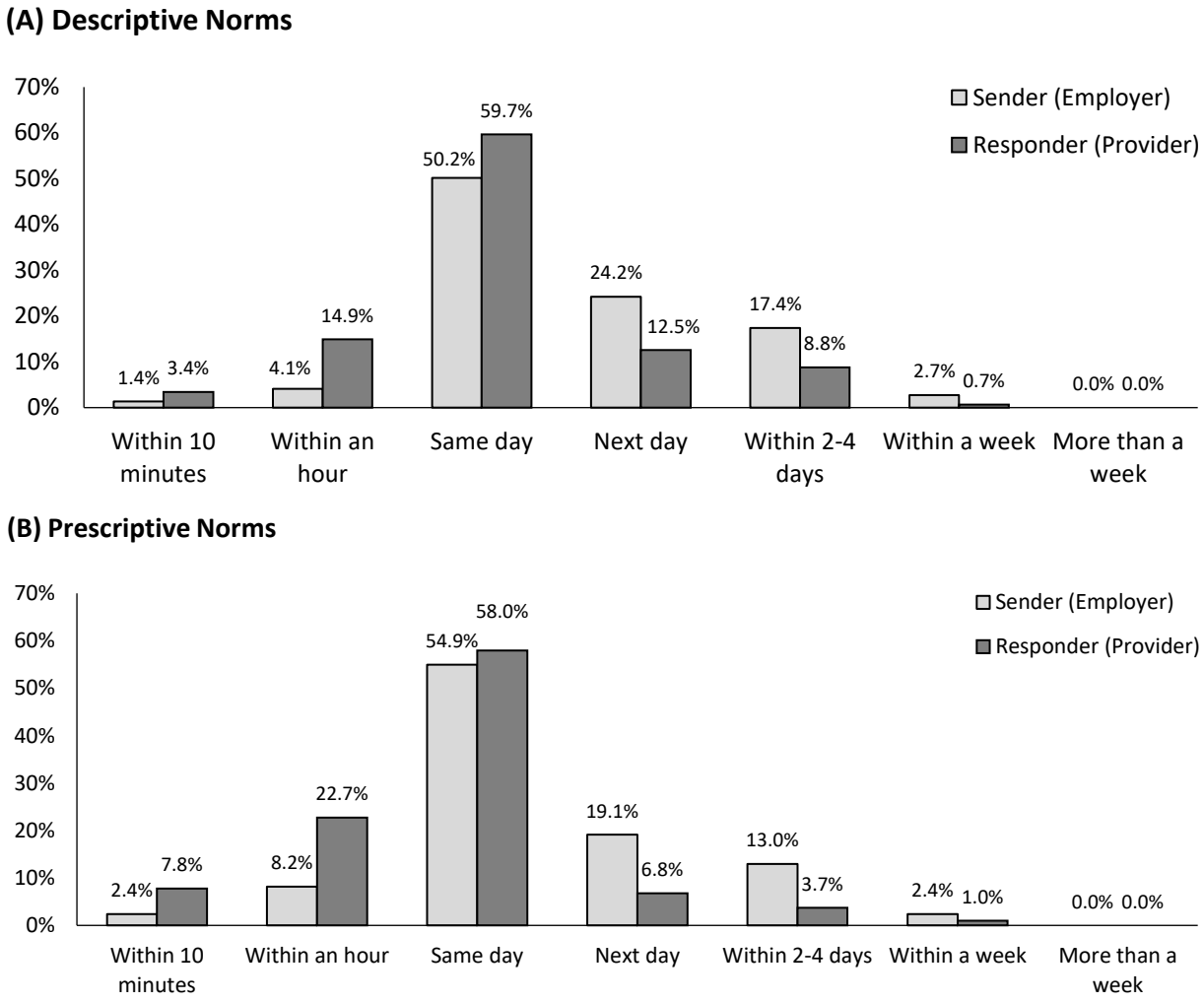

Figure SI.1. Norms about reply speed by both senders (employers) and responders (providers) (Pilot Study; N = 588): Panel A, Descriptive norms; Panel B, Prescriptive norms.
Note. Percentages denote proportion within each role condition (sender or responder).

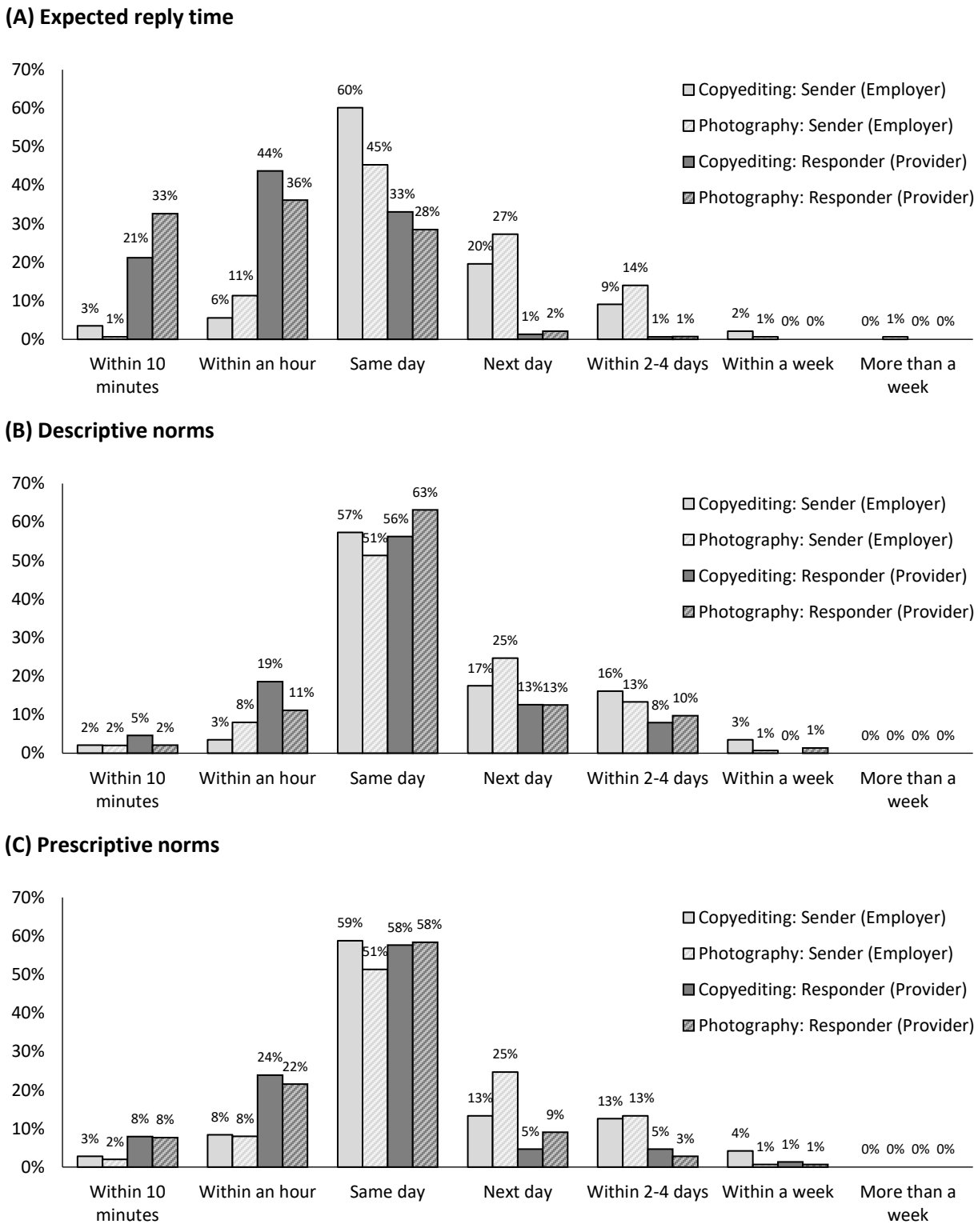

Figure SI.2. Expectations about reply speed by both senders (employers) and responders (providers) for each service (Pilot Study; N = 588): Panel A, Expected reply speed; Panel B, Descriptive norms; Panel C, Prescriptive norms.

Note. Percentages denote proportion within each role condition (sender or responder).

Study 2: Supplemental Analysis

Consistent with our pre-registration, in the main manuscript we collapsed across the two profession (caterer or doctor) conditions. Here, we report analysis including the profession and its interactions with our main conditions. We present descriptives by condition in Table SI.3.

As in the main analysis, providers were more likely to be hired when they replied within one hour than when they replied at the end of the day (B = 0.456, SE = 0.068; η^2 = .025; t(1771) = 6.75, p < .001). They were also more likely to be hired in the high-rating condition (B = 0.231, SE = 0.068; η^2 = .007; t(1771) = 3.42, p = .001) than when there was no star rating available. The low-rating condition did not have a significant effect relative to control (B = 0.100, SE = 0.068, η^2 = .001; t(1771) = 1.48, p = .138), and neither rating condition interacted with timing to affect hiring likelihood ($B_{One\text{-}hour*High\text{-}rate}$ = -0.004, SE = 0.068; η^2 < .001; t(1771) = -0.06, p = .950; $B_{One\text{-}hour*Low\text{-}rate}$ = -0.067, SE = 0.067; η^2 < .001; t(1771) = -0.99, p = .320).

In addition, doctors were more likely to be hired, on average, than caterers (B = 0.348, SE = 0.068; η^2 = .015; t(1771) = 5.15, p < .001). The beneficial effect of speed was smaller for doctors than for caterers, as reflected in a timing-by-profession interaction (B = -0.259, SE = 0.068; η^2 = .008; t(1771) = -3.84, p < .001). Moreover, the difference between the high-rating and control conditions was smaller for doctors than caterers (B = -0.193, SE = 0.068; η^2 = .005; t(1771) = -2.85, p = .004). The profession condition did not interact with the low-rating condition (B = -0.051, SE = 0.067; η^2 < .001; t(1771) = -0.75, p = .451), and the three-way interactions of profession, speed, and rating were also not significant ($B_{Doctor*One\text{-}hour*High\text{-}rate}$ = -0.020, SE = 0.068; η^2 < .001; t(1771) = -0.30, p = .763; $B_{Doctor*One\text{-}hour*Low\text{-}rate}$ = 0.010, SE = 0.067; η^2 < .001; t(1771) = 0.14, p = .885).

Table SI.3. Means (SDs) of hiring likelihood by (Study 2; N = 1,784)

		One hour	End of day
Caterer	Low-rating	5.28 (1.12) [a]	4.66 (1.19) [b]
	High-rating	5.65 (0.92) [a]	4.84 (1.23) [b]
	Control	5.21 (1.11) [a]	4.43 (1.26) [b]
Doctor	Low-rating	5.54 (1.11) [a]	5.38 (1.21) [a]
	High-rating	5.57 (1.21) [a]	5.34 (1.18) [a]
	Control	5.55 (1.19) [a]	5.27 (1.18) [b]

Note. Different superscripts represent differences with $p < .05$ within each row.

Overview of Supplemental Studies

First, in Study S1, we show the robustness of the beneficial effect of reply speed on hiring likelihood across 32 occupations, and replicate the serial mediation of the speed effect on hiring likelihood through future responsiveness, warmth, and competence. In Study S2, we compare replies received almost immediately (within 10 minutes), after a short delay (the next morning), or after a longer delay (four days). In addition to examining hiring likelihood, we also investigate how reply speed affects interpersonal impressions of the responder's warmth and competence, and their need, professionalism, and motivation for the work. In Study S3, each participant sees the same five providers' responses, in the same order, and evaluates all five providers. We further examine how reply speed affects hiring likelihood by manipulating its salience in two ways: The providers' replies are presented either sequentially or simultaneously, and messages are shown either with or without timestamps. We show that timestamps increase hiring likelihood for the first provider, but that presentation mode doesn't affect it.

Then, in Studies S4 and S5, we test the extent to which other cues of a worker's future responsiveness, along with reply speed, influence hiring likelihood. We demonstrate that fast replies do not yield benefits for the responder when they are perceived as not responsive: when the reply content suggests the responder's low future responsiveness (Study S4), or when replies are explicitly described as auto-responses (Study S5).

Supplemental Study S1

In this study, we explored the robustness of the reply speed effects on hiring likelihood across 32 occupations taken from O*Net (www.onetonline.org), an exhaustive database of occupations developed by the U.S. Department of Labor and described as "the nation's primary source of occupational information." This study extends our investigation in two ways. First, we examine how our findings generalize in a context in which participants jointly evaluate two providers, one of whom replies more quickly than the other, rather than evaluating only a single provider. Second, we examine the effect of reply speed on hiring likelihood and perceptions of workers across occupations, including and outside the

gig economy. We used the occupation list generated and used by Gunia and Levine (2019). The list includes two common occupations from each of 16 career clusters; see Figure SI.3.

Method

Participants. We posted the study for 400 U.S. participants through Prolific. Each participant answered questions about a random subset of occupations (out of 32). Due to a technical error, we collected data from 624 participants (50.92% female, 48.71% male, 0.37% preferred to self-identify; M_{age} = 39.51, SD = 13.28), with a total of 10,022 observations; on average, each participant rated 16 occupations.[1]

Procedure. For each occupation, participants were asked to imagine they contacted several providers (e.g., travel agents, mechanics, social workers), that two providers in that occupation replied, and that one provider replied sooner than the other. For robustness, there were two conditions pertaining to the description of the relative reply speed: Person A was described as replying sooner [later] than Person B. We collapsed across these conditions, analyzing the rating of the faster (vs. slower) responder.

Measures. We asked participants about the relative hiring likelihood, responsiveness, warmth, and competence of the two providers (each using a single comparative item, e.g., "If you were to hire one person, who would you prefer to hire?" rated on bipolar scales from "1: Definitely A" to "7: Definitely B"). We recoded the ratings such that higher scores reflect a preference for the faster (vs. slower) responder. The four questions were presented in random order. See items at the end of this document.

Participants also rated exploratory variables about what features pertain to the profession (e.g., expertise, competitiveness) and what skills are important to the profession (e.g., communication, time management). Finally, participants answered demographic questions.

[1] We planned and pre-registered for each participant to rate a subset of eight occupations. Conducting analyses on a smaller sample that randomly included only eight occupations for each participant and randomly selecting a smaller sample of 400 participants (to mimic our pre-registered plan to analyze eight occupations for 400 participants) did not affect the pattern or significance of any of our results. Because of the technical error, only 271 participants completed the demographic questions.

Results

As presented in Figure SI.3, for all 32 occupations tested, participants were more likely to hire the faster-to-respond (vs. slower) worker, reflected by ratings significantly higher than the scale midpoint of 4 (all p's < .001). In addition, for all occupations, the faster-to-respond worker was rated more favorably in terms of responsiveness (means between 5.31 and 5.69; compared to scale midpoint of 4, all p's < .001), warmth (means between 5.04 and 5.41; all p's < .001), and competence (means between 4.94 and 5.42; all p's < .001). See below for additional statistics.

We also conducted a mediation analysis, pre-registered as exploratory, using bootstrap with 5,000 repetitions and clustering the model variance by participant to account for repeated observations. The relationship between perceived responsiveness and hiring likelihood of the faster (vs. slower) worker was partially and jointly mediated by perceived warmth and perceived competence (Warmth indirect effect = 0.190, 95% CI = [0.147, 0.233]; Competence indirect effect = 0.221, 95% CI = [0.179, 0.262]). The remaining direct effect was also significant (B = 0.755, SD = 0.020; z = 37.03, p < .001).

Occupation features. As exploratory variables, participants rated what features pertain to the profession (8 items, e.g., expertise, competitiveness) and what skills are important to the profession (7 items, e.g., communication, time management). For each set of items, we conducted PCA (with a threshold of eigenvalue > 1) and created composites by averaging items. See full list and final factors at the end of this document. We created two factors pertaining to features: (1) how competitive and skilled professionals are in the occupation (6 items, $\alpha = 0.870$), and (2) how easy to find and desperate professionals are in the occupation (2 items, $\alpha = 0.532$). All skill items loaded onto one factor ($\alpha = 0.913$). We present the descriptive statistics by occupation in Table SI.4.

We next explored how these factors affected hiring preference for the fast (vs. slow) responder by including all three as predictors in a regression model, with its variance clustered by participant id to account for repeated observations. The overall skill level important to the profession was positively associated with the preference for the faster responder (B = 0.302, SE = 0.039; t(621) = 7.70, p < .001);

there was no significant effect of either of the features factors (competitiveness: B = 0.045, SE = 0.031; t(621) = 1.46, p = .144; desperation: B = 0.010, SE = 0.026; t(621) = 0.38, p = .708).

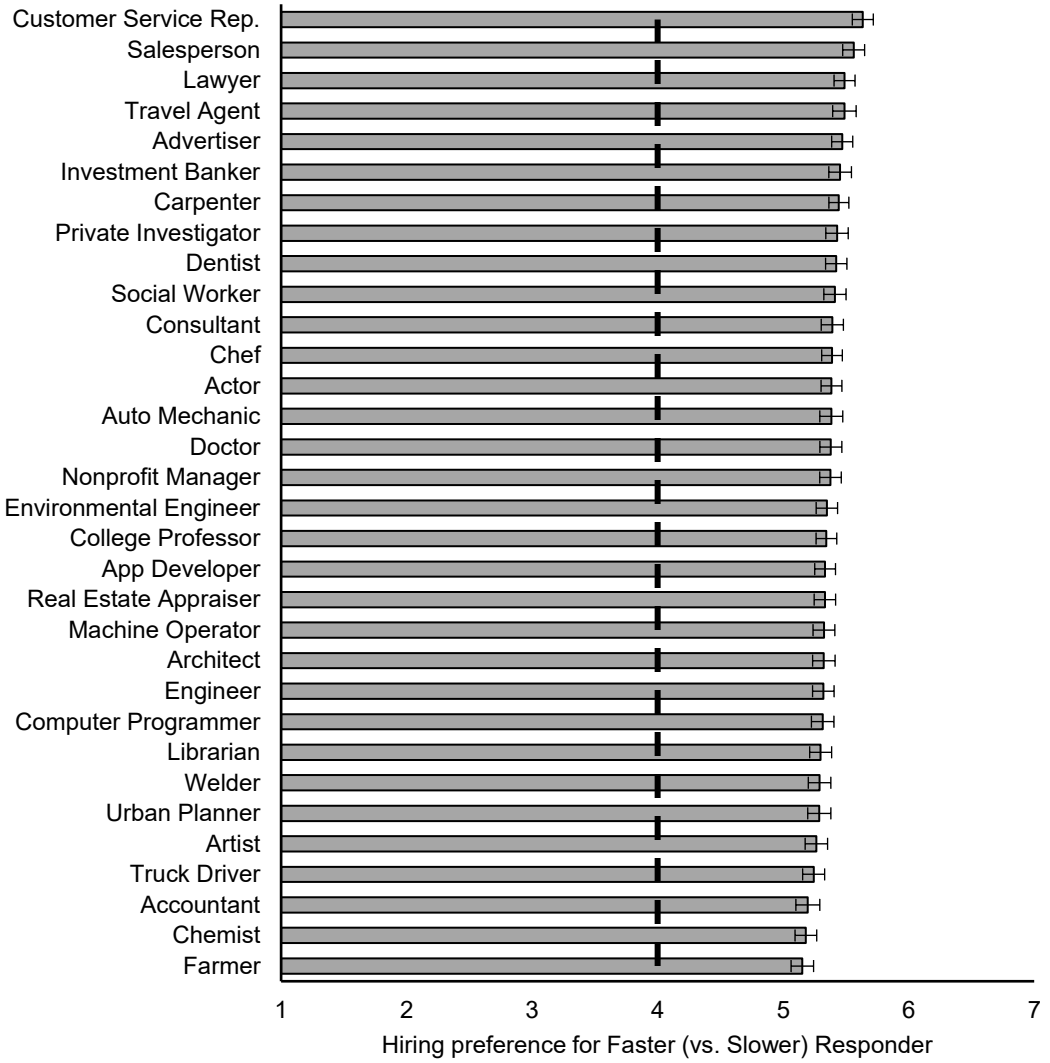

Figure SI.3. Preference for hiring the faster (vs. slower) responder for each occupation (Study S1; N = 624).
Notes. The preference was measured on a 1-7 scale, where scores above 4 indicated preference for the faster responder. All scores significantly differed from the midpoint of 4 (represented by the dashed vertical line above), all p's < .001. Error bars represent ± S.E.M.

Table SI.4. Means (SDs) of hiring preference and relative evaluations of the faster- versus slower-to-respond worker, and occupation features (Study S1; N = 624)

Occupation	Hiring	Future Responsiveness	Warmth	Competence	Occupation Competitive	Occupation Desparation	Skill Importance
Farmer	5.15 (1.58)	5.32 (1.63)	5.04 (1.57)	5.00 (1.53)	5.20 (1.11)	4.26 (1.33)	5.50 (1.14)
Chemist	5.18 (1.51)	5.37 (1.55)	5.16 (1.46)	5.09 (1.45)	5.77 (0.95)	4.10 (1.62)	5.86 (1.06)
Accountant	5.20 (1.68)	5.31 (1.64)	5.04 (1.58)	4.96 (1.60)	5.87 (0.95)	4.17 (1.55)	6.00 (0.98)
Truck Driver	5.24 (1.56)	5.39 (1.53)	5.17 (1.54)	4.94 (1.52)	5.22 (1.11)	4.31 (1.50)	5.39 (1.23)
Artist	5.26 (1.62)	5.50 (1.59)	5.21 (1.56)	5.02 (1.57)	5.09 (1.24)	4.68 (1.36)	5.26 (1.50)
Welder	5.29 (1.56)	5.47 (1.55)	5.09 (1.53)	5.02 (1.50)	5.51 (1.03)	4.20 (1.48)	5.44 (1.27)
Urban Planner	5.29 (1.60)	5.44 (1.59)	5.28 (1.52)	5.08 (1.57)	5.46 (1.07)	4.38 (1.45)	6.00 (1.03)
Librarian	5.30 (1.53)	5.44 (1.56)	5.22 (1.47)	5.15 (1.51)	4.36 (1.43)	4.51 (1.27)	5.58 (1.21)
Engineer	5.32 (1.53)	5.53 (1.50)	5.20 (1.43)	5.15 (1.45)	6.19 (0.76)	3.84 (1.73)	6.10 (0.88)
Machine Operator	5.32 (1.54)	5.43 (1.62)	5.22 (1.52)	4.99 (1.60)	5.44 (1.12)	4.33 (1.46)	5.53 (1.26)
Computer Programmer	5.32 (1.59)	5.51 (1.57)	5.20 (1.57)	5.06 (1.59)	6.04 (0.89)	4.11 (1.64)	5.85 (1.01)
Architect	5.32 (1.61)	5.44 (1.56)	5.32 (1.49)	5.12 (1.53)	6.04 (0.86)	4.03 (1.64)	6.19 (0.88)
App Developer	5.33 (1.51)	5.53 (1.51)	5.26 (1.48)	5.14 (1.53)	5.89 (1.01)	4.08 (1.52)	5.91 (1.01)
Real Estate Appraiser	5.33 (1.52)	5.52 (1.52)	5.24 (1.46)	5.16 (1.44)	5.39 (1.03)	4.48 (1.33)	5.84 (1.02)
College Professor	5.34 (1.49)	5.47 (1.58)	5.21 (1.45)	5.14 (1.48)	5.71 (1.00)	4.15 (1.58)	6.20 (0.89)
Environmental Engineer	5.35 (1.51)	5.47 (1.50)	5.30 (1.49)	5.17 (1.49)	5.66 (1.01)	4.30 (1.46)	5.94 (1.02)
Actor	5.38 (1.48)	5.52 (1.55)	5.32 (1.44)	5.18 (1.44)	5.20 (1.20)	4.72 (1.33)	5.66 (1.13)
Nonprofit Manager	5.38 (1.48)	5.52 (1.50)	5.19 (1.49)	5.16 (1.51)	4.88 (1.37)	4.25 (1.45)	6.00 (1.07)
Doctor	5.38 (1.60)	5.61 (1.57)	5.31 (1.57)	5.19 (1.56)	6.30 (0.69)	3.59 (1.87)	6.49 (0.69)
Auto Mechanic	5.38 (1.63)	5.47 (1.68)	5.18 (1.61)	5.09 (1.64)	5.90 (0.92)	4.08 (1.58)	5.84 (1.04)
Chef	5.39 (1.46)	5.47 (1.53)	5.19 (1.50)	5.12 (1.48)	5.74 (0.87)	4.18 (1.39)	6.06 (0.90)
Consultant	5.39 (1.55)	5.53 (1.56)	5.28 (1.57)	5.26 (1.53)	5.53 (1.20)	4.20 (1.46)	6.16 (1.02)
Social Worker	5.41 (1.58)	5.43 (1.61)	5.24 (1.60)	5.21 (1.55)	5.19 (1.10)	4.25 (1.50)	6.09 (0.92)
Dentist	5.42 (1.50)	5.54 (1.52)	5.34 (1.48)	5.08 (1.48)	6.03 (0.78)	3.88 (1.72)	6.15 (0.89)
Private Investigator	5.43 (1.57)	5.58 (1.52)	5.26 (1.54)	5.29 (1.50)	5.34 (1.12)	4.18 (1.40)	6.13 (0.86)
Carpenter	5.44 (1.45)	5.46 (1.61)	5.21 (1.51)	5.11 (1.50)	5.58 (0.97)	4.20 (1.46)	5.75 (1.06)
Investment Banker	5.45 (1.54)	5.55 (1.60)	5.32 (1.55)	5.25 (1.52)	5.96 (0.97)	4.22 (1.68)	6.21 (0.92)
Advertiser	5.47 (1.46)	5.55 (1.49)	5.28 (1.45)	5.30 (1.50)	5.31 (1.16)	4.67 (1.42)	5.99 (0.96)
Lawyer	5.49 (1.47)	5.62 (1.50)	5.22 (1.56)	5.16 (1.52)	6.35 (0.71)	4.08 (1.70)	6.50 (0.66)
Travel Agent	5.49 (1.59)	5.61 (1.57)	5.32 (1.52)	5.42 (1.55)	4.98 (1.39)	4.81 (1.22)	6.02 (1.00)
Salesperson	5.56 (1.53)	5.64 (1.53)	5.30 (1.54)	5.35 (1.55)	5.24 (1.23)	4.77 (1.32)	6.05 (0.90)
Customer Service	5.63 (1.52)	5.69 (1.56)	5.41 (1.49)	5.36 (1.53)	4.93 (1.44)	4.52 (1.46)	6.03 (0.97)
MEAN	**5.38 (1.57)**	**5.50 (1.56)**	**5.24 (1.52)**	**5.15 (1.53)**	**5.54 (1.16)**	**4.26 (1.53)**	**5.93 (1.06)**

Notes. Hiring preference, future responsiveness, warmth, and competence measures were on a 1-7 scale, where scores above 4 indicated preference for the faster responder. All scores significantly differed from the midpoint of 4, all p's < .001. Profession competitiveness, desperation, and importance of skills (composite variables) were on a 1-7 scale where higher scores indicate higher relevance.

Discussion

In a within-participant design, we show that people prefer to hire the faster (versus slower) responder. For all 32 occupations, in and outside the gig economy, participants preferred the faster responder, and evaluated them as more responsive, warmer, and more competent. We further find support for our prediction that the effect of reply speed on hiring likelihood is mediated by expectations of future responsiveness, and by perceptions of warmth and competence.

Supplemental Study S2

In this study, we compare replies received within 10 minutes to those received after one day or four days. We examine how a provider's reply speed affects hiring likelihood and perceptions of warmth and competence, as well as several more proximal evaluations of the provider's eagerness, professionalism, motivation, and power.

Method

Participants. We posted the study for 900 U.S. participants through Prolific and received 917 responses. Consistent with our pre-registration, we report results for 901 participants who correctly completed an attention check about the study (49.50% female, 49.06% male, 1.44% preferred to self-identify; M_{age} = 41.92, SD = 13.31).

Procedure. Participants read that they were looking for a photographer for their website and had emailed a specific provider they were interested in. We manipulated the speed of the provider's reply: within 10 minutes (almost immediately), the next morning (short delay), or after four days (long delay). See full text below.

A manipulation check ("What do you think about [provider's] reply speed?" rated from "1: Very slow" to "7: Very fast") confirmed that participants perceived the provider's reply as faster in the 10-minutes condition (M = 6.28, SD = 1.06) than in both the next-morning (M = 5.00, SD = 1.35; Cohen's d = 1.055; B = 1.280, SE = 0.104; $t(898) = 12.31$, $p < .001$) and the four-days conditions (M = 2.50, SD = 1.40; d = 3.044; B = 3.783, SE = 0.104; $t(898) = 36.22$, $p < .001$). Further, the reply was faster in the

next-morning than in the four-days condition (d = 1.818; B = 2.503, SE = 0.104; t(898) = 24.03, p < .001).

Measures. We used the same measures as in Study 3 to examine participants' likelihood of hiring the provider and perceptions of the provider's warmth (α = 0.95) and competence (α = 0.96). See items in Appendix B.

We also collected several exploratory variables: Participants' overall impression of the provider (one item, 7-point scale from "1: very negative" to "7: very positive"), the provider's perceived power (two items, 7-point scale from "1: Not at all" to "7: A great deal," r = 0.44, p < .001), the provider's need to be hired (one item, 7-point scale from "1: Not at all" to "7: A great deal"), the provider's intrinsic and extrinsic motivation (all items rated on a 7-point scale from "1: Not at all" to "7: A great deal"; *Intrinsic*: four items such as "How much does [target] find his work interesting?", α = 0.97; *Extrinsic*: three items, such as "How much does [target] enjoy the pay and benefits of being a professional photographer?", α = 0.85), and the provider's professionalism (two items, 7-point scale from "1: Not at all" to "7: A great deal," r = 0.74, p < .001). All items presented at the end of the document.

Results

We present descriptive statistics in Table SI.5. We regressed each dependent variable on the reply speed condition (using two dummy variables). We used ratings in the next-morning condition as the comparison baseline, guided by our Pilot Study results showing that most senders expect providers to respond within one day. Thus, such comparisons enable us to see how faster-than-expected (10-minutes) and slower-than-expected (four days) replies influence impressions and hiring likelihood.

Hiring likelihood. As presented in Figure SI.4, compared to the next-morning condition (M = 5.39, SD = 1.06), participants were less likely to hire the provider in the four-days condition (M = 4.10, SD = 1.68; B = -1.289, SE = 0.104; Cohen's d = 0.918; t(898) = -12.40, p < .001) and more likely to hire the provider in the 10-minutes condition (M = 5.79, SD = 0.98; B = 0.394, SE = 0.104; d = 0.392; t(898) = 3.80, p < .001). The difference between the 10-minutes and the four-days conditions was also significant (B = -1.683, SE = 0.104; d = 1.229; t(898) = -16.14, p < .001).

Table SI.5. Means and (SDs) by Reply Speed Condition (Study S2; N = 901)

	10 Minutes	Next Morning	Four Days
Hiring likelihood	5.79 (0.98)[a]	5.39 (1.06)[b]	4.10 (1.68)[c]
Warmth	5.73 (0.99)[a]	5.18 (1.10)[b]	4.25 (1.24)[c]
Competence	5.95 (0.87)[a]	5.70 (1.00)[b]	5.04 (1.27)[c]
Overall Impression	5.94 (0.90)[a]	5.42 (1.04)[b]	4.28 (1.55)[c]
Perceived Power	4.76 (1.08)[a]	4.96 (1.03)[a]	4.82 (1.22)[a]
Professionalism	5.87 (0.91)[a]	5.60 (0.96)[b]	4.67 (1.36)[c]
Perceived Need	4.34 (1.40)[a]	3.93 (1.38)[b]	3.17 (1.51)[c]
Intrinsic Motivation	5.73 (0.91)[a]	5.30 (0.97)[b]	4.75 (1.33)[c]
Extrinsic Motivation	5.84 (0.98)[a]	5.44 (1.10)[b]	4.62 (1.45)[c]

Note. Different superscripts represent differences with $p < .05$ between the means with a Bonferroni correction for multiple comparisons.

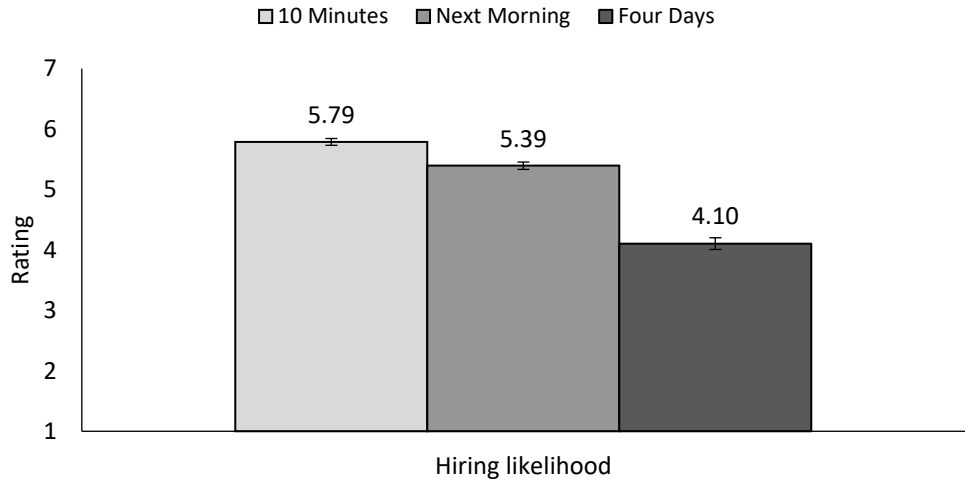

Figure SI.4. Hiring likelihood by reply speed (Study S2; N = 901)
Note. Providers who replied after a long delay were less likely to be hired than providers who replied immediately or after a short delay. Error bars represent ± S.E.M.

Warmth. Compared to the next-morning condition (M = 5.18, SD = 1.10), participants perceived the provider as less warm in the four-days condition (M = 4.25, SD = 1.45; B = -0.929, SE = 0.097; d = 0.723; t(898) = -9.55, p < .001) and as warmer in the 10-minutes condition (M = 5.73, SD = 0.98; B = 0.548, SE = 0.097; d = 0.528; t(898) = 5.65, p < .001). The difference between the 10-minutes and the four-days conditions was also significant (B = -1.478, SE = 0.097; d = 1.196; t(898) = -15.16, p < .001).

Competence. Compared to the next-morning condition (M = 5.70, SD = 0.97), participants perceived the provider as less competent in the four-days condition (M = 5.04, SD = 1.33; B = -0.660, SE = 0.088; d = 0.567; t(898) = -7.47, p < .001) and as more competent in the 10-minutes condition (M =

5.95, SD = 0.91; B = 0.255, SE = 0.088; d = 0.266; t(898) = 2.89, p = .004). The difference between the 10-minutes and the four-days conditions was also significant (B = -0.916, SE = 0.088; d = 0.799; t(898) = -10.34, p < .001).

Mediation tests. We conducted an exploratory mediation and bootstrap analysis with 5,000 resamples (Preacher & Hayes, 2008) to test whether warmth and competence mediate the effects of the 10-minutes and four-days conditions, compared to the next-morning condition, on hiring likelihood. For the difference between the next-morning and 10-minutes conditions, we found significant indirect effects of both warmth (B = -0.206, 95% CI = [-0.290, -0.121]) and competence (B = -0.060, 95% CI = [-0.106, -0.014]; remaining direct effect of the 10-minutes condition = 0.128, z = 1.81, p = .071).

For the difference between the next-morning and four-days conditions, we also found significant indirect effects of both warmth (B = 0.526, 95% CI = [0.373, 0.679]) and competence (B = 0.128, 95% CI = [0.042, 0.214]); however, the remaining direct effect of the four-days condition was still significant (B = -0.634, z = -6.92, p < .001).

Overall impression. As compared to the next-morning condition (M = 5.42, SD = 1.04), participants perceived the provider less positively overall in the four-days condition (M = 4.28, SD = 1.55; B = -1.144, SE = 0.097; d = 0.864; t(898) = -11.75, p < .001) and more positively in the 10-minutes condition (M = 5.94, SD = 0.90; B = 0.521, SE = 0.097; d = 0.535; t(898) = 5.36, p < .001). The difference between the 10-minutes and the four-days conditions was also significant (B = -1.665, SE = 0.098; d = 1.310; t(898) = -17.06, p < .001).

Perceived power. The provider was perceived as more powerful in the next-morning condition (M = 4.96, SD = 1.03) than in the 10-minutes condition (M = 4.76, SD = 1.08; B = 0.200, SE = 0.091; d = 0.190; t(898) = 2.21, p = .027), but neither condition differed significantly from the four-days condition (M = 4.82, SD = 1.22; four-days vs. 10-minutes: B = -0.054, SE = 0.091; d = 0.052; t(898) = -0.59, p = .555; four-days vs. next-morning: B = 0.147, SE = 0.091; d = 0.124; t(898) = 1.61, p = .107).

Professionalism. As compared to the next-morning condition (M = 5.60, SD = 0.96), the provider was less professional in the four-days condition (M = 4.67, SD = 1.36; B = -0.929, SE = 0.089; d = 0.790;

t(898) = -10.38, p < .001) and more professional in the 10-minutes condition (M = 5.87, SD = 0.91; B = 0.271, SE = 0.089; d = 0.289; t(898) = 3.05, p = .002). Again, the difference between the 10-minutes and four-days conditions was significant (B = -1.196, SE = 0.089; d = 1.037; t(898) = -13.39, p < .001).

Perceived need. Compared to the next-morning condition (M = 3.93, SD = 1.38), providers appeared to need the job less in the four-days condition (M = 3.17, SD = 1.51; B = -0.766, SE = 0.117; d = 0.525; t(898) = -6.56, p < .001) and more in the 10-minutes condition (M = 4.34, SD = 1.40; B = 0.406, SE = 0.117; d = 0.295; t(898) = 3.48, p = .001). The difference between the 10-minutes and the four-days conditions was also significant (B = -1.172, SE = 0.117; d = 0.804; t(898) = -10.01, p < .001).

Intrinsic motivation. As compared to the next-morning condition (M = 5.30, SD = 1.10), participants perceived the provider as less intrinsically motivated in the four-days condition (M = 4.75, SD = 1.24; B = -0.929, SE = 0.091; d = 0.469; t(898) = -6.08, p < .001) and more intrinsically motivated in the 10-minutes condition (M = 5.73, SD = 0.99; B = 0.429, SE = 0.091; d = 0.411; t(898) = 4.73, p < .001). The difference between the 10-minutes and four-days conditions was significant as well (B = -0.980, SE = 0.091; d = 0.873; t(898) = -10.78, p < .001).

Extrinsic motivation. As compared to the next-morning condition (M = 5.44, SD = 1.00), participants perceived the provider as less extrinsically motivated in the four-days condition (4.62, SD = 1.27; B = -0.929, SE = 0.086; d = 0.717; t(898) = -9.50, p < .001) and more extrinsically motivated in the 10-minutes condition (M = 5.84, SD = 0.87; B = 0.405, SE = 0.086; d = 0.427; t(898) = 4.71, p < .001). The difference between the 10-minutes and four-days conditions was again significant (B = -1.225, SE = 0.086; d = 1.121; t(898) = -14.17, p < .001).

Discussion

This study shows the robustness of our effects across additional timepoints (from 10 minutes to four days). We found that reply speed influenced impression formation, via perceived warmth and competence, and affected more proximal evaluations of the provider's need, professionalism, and motivation. Although slower responders were perceived as busier (a perception associated with higher

status and competence in past research), we consistently found that faster responders were judged to be more competent and were more likely to be hired.

Supplemental Study S3

In this study, we examine how the salience of providers' reply speed to an employer's inquiry influences the providers' likelihood of being hired. Each participant sees the same five providers' responses, in the same order, and evaluates all five providers. We compare four conditions varying the salience of reply timing of the different providers: The providers' replies are presented either sequentially or simultaneously, and messages are shown either with or without timestamps. Thus, we have a 2-(Presentation mode: sequential vs. simultaneous) X 2-(Timestamps: present vs. absent) design.

This study extends our investigation in two ways. First, we examine how our findings generalize in a context in which participants jointly evaluate five providers, rather than evaluating only a single provider. Second, we explore how different degrees of timing salience influence hiring likelihood, from most salient (when replies are presented sequentially and with timestamps) to least salient (when replies are presented simultaneously and without timestamps).

We predicted a positive main effect of timestamp condition (presence vs. absence) for the hiring likelihood of the first provider to respond, and a negative main effect of timestamps for the hiring likelihood of the last provider to respond. We also explore how presentation mode affects hiring likelihood and test for an interaction between timestamps and presentation mode on hiring likelihood for both first and last providers.

Method

Participants. We posted the study for 1,200 U.S. participants through Connect. Consistent with our pre-registration, we report results for 1,168 participants who correctly completed an attention check about the study (49.06% female, 49.40% male, 1.54% preferred to self-identify; M_{age} = 39.88, SD = 13.13).

Procedure. As in Study 2, participants read that they were looking to hire a caterer and had sent messages to several providers. All participants then read the same five providers' responses, in the same order, and rated their likelihood of hiring each of the five providers.

Importantly, we varied how the providers' messages were presented. In the sequential condition, participants read they are checking their email throughout the day, and were guided to click a button to read each message received in sequential order; messages were added to the screen one at a time. By contrast, in the simultaneous condition, participants read they checked their email only the next day, and saw all messages presented at once on the screen. We crossed these conditions with two conditions pertaining to the presence vs. absence of timestamps: When timestamps were present, the participants' initial message was sent around 10am, the first provider responded around 11 am, the last provider responded around 5 pm, with the other 3 providers responding around 12 pm, 1 pm, and 2:30 pm. When timestamps were not present, there was no information about the specific timing of either the initial message or any of the replies.

Notably, we designed the providers' message content such that the last provider's message was more responsive than the first provider's message (similar to Study 4). Indeed, participants rated the last provider's message as more responsive than the first provider's message ($M = 6.30$, $SD = 1.01$ vs. $M = 3.96$, $SD = 1.48$; $t(1167) = 42.65$, $p < .001$). This study thus offers a conservative test of our effect, examining whether timing information (via timestamps or presentation order) still affects hiring likelihood when the faster reply is associated with a less responsive message.

Measures. We used the same measure for hiring likelihood (1 item, rated on a 7-point scale) for each provider. Participants also rated their perception of the first and last provider's responsiveness (1 item for each provider, rated on a 7-point scale).

Results

We present descriptive statistics in Table SI.6.

Consistent with our pre-registered plan, we regressed hiring likelihood of the first provider (the first one seen on the page) on presentation condition, timestamp condition, and the interaction term. The presence (vs. absence) of timestamps increased hiring likelihood ($B = 0.208$, $SE = 0.087$, $\eta^2 = .005$; $t(1164) = 2.40$, $p = .016$). The presentation type (sequential vs. simultaneous) did not significantly affect

hiring likelihood (B = -0.109, SE = 0.087, η^2 = .001; t(1164) = -1.25, p = .210) and did not interact with timestamps (B = -0.005, SE = 0.087, η^2 < .001; t(1164) = -0.05, p = .958).

Table SI.6. Means (SDs) of hiring likelihood for each provider (first to last presented) by condition (Study S3; N = 1,168).

	No Timestamp		**Timestamp**	
	Simultaneous	**Sequential**	**Simultaneous**	**Sequential**
Provider #1 (first)	3.92 (1.45) [a,b]	3.82 (1.57) [a]	4.14 (1.45) [b]	4.02 (1.46) [a,b]
Provider #2	5.21 (1.33) [a]	5.20 (1.29) [a]	5.20 (1.28) [a]	5.10 (1.33) [a]
Provider #3	3.41 (1.57) [a]	3.28 (1.58) [a]	3.39 (1.58) [a]	3.30 (1.54) [a]
Provider #4	4.09 (1.45) [a]	4.10 (1.50) [a]	4.10 (1.48) [a]	4.09 (1.45) [a]
Provider #5 (last)	5.94 (1.25) [a]	5.89 (1.40) [a]	5.95 (1.34) [a]	5.94 (1.35) [a]

Note. Hiring likelihood for each provider was rated on a 1-7 scale. Within each row, different superscripts within row indicate significant differences at p < .005.

Examining the hiring likelihood of the last provider (the last one participants saw on the page) showed no significant effects (Timestamps: B = 0.032, SE = 0.078, η^2 < .001; t(1164) = 0.41, p = .685; Sequential presentation: B = -0.032, SE = 0.078, η^2 < .001; t(1164) = -0.41, p = .681; Interaction term: B = 0.020, SE = 0.078, η^2 < .001; t(1164) = 0.26, p = .794).

Finally, following our pre-registered plan, we compared hiring likelihoods of the first and last providers in a repeated-measures regression, by provider number (as a within-participant variable), presentation condition, timestamp condition, and the interaction terms. We clustered the model variance by participant to account for the repeated observations. We found that timestamps increased hiring likelihood across both providers (B = 0.120, SE = 0.055, η^2 = .002; t(1161) = 2.17, p = .030), and that the presentation type did not significantly affect hiring likelihood (B = -0.071, SE = 0.055, η^2 = .001; t(1161) = -1.27, p = .204) and did not interact with timestamps (B = 0.008, SE = 0.061, η^2 < .001; t(1161) = 0.14, p = .886). In addition, participants were more likely to hire the last (vs. first) provider (B = 1.951, SE = 0.061, η^2 = .324; t(1161) = 31.81, p < .001), an effect which did not depend on interactions with either the timestamp (B = -0.088, SE = 0.061, η^2 = .001; t(1161) = -1.44, p = .150) or presentation conditions (B = 0.038, SE = 0.061, η^2 < .001; t(1161) = 0.63, p = .532).

As noted above, the last provider's message was intentionally more responsive than the first provider's message. Interestingly, the difference between the last and first providers' hiring likelihood remained the same when we included controls for responsiveness ratings of both providers in the model described above.

Discussion

Whereas previous studies were focused on whether a reply was faster or slower, this study examines the importance of timing salience in evaluating those faster and slower responders. We find that the presentation format, either seeing each message one at a time in a sequential order or seeing all five messages simultaneously, did not affect hiring likelihood for any of the five responders. By contrast, timestamps did have an effect for the first provider to respond: he was more likely to be hired when timing was made salient and explicit. We did not observe this same effect or an inverse penalty associated with salient timestamps for the last provider to respond.

One limitation of this study is that although the simultaneous and sequential conditions tested presentation format, the sequential condition did not fully mimic the real-world analog by which a sender might receive a first reply minutes or hours before a second reply. Rather, participants could simply click to see the next provider's reply and evaluate them after a much shorter delay. It is possible a sequential evaluation mode would have a larger impact if participants were forced to experience a longer delay before continuing to the next.

Supplemental Study S4

In this study, we test our theoretical mediating mechanism of expectations of future responsiveness by manipulating what the written content of the provider's reply suggests about their responsiveness orthogonally to the time in which the reply is provided. We propose that while faster (versus slower) replies will lead to greater hiring likelihood and more positive evaluations, reply speed will interact with what reply content signals about responsiveness to affect evaluations of the provider and their hiring likelihood.

Method

Participants. We posted the study for 1,200 U.S. participants through Prolific. Consistent with our pre-registration, we report results for 1,175 participants who correctly completed an attention check about the study (49.87% female, 49.28% male, 0.85% preferred to self-identify; M_{age} = 40.0, SD = 13.45).

Procedure. We used a similar paradigm to that used in Study 1a, in which the provider replies after either one hour or two days. In this study, we also manipulated content cues of responsiveness. In the low-responsiveness condition, we adapted statements from the responsiveness scale used in Study 1 to describe the reply as suggesting "it is likely [provider] won't listen to what is important to you" and that "[provider] is not very interested in what you truly need." In the control condition, we used the same description as in Study 1a. See the full text in Appendix A. We thus compare four between-participant conditions in a 2 (reply time: one hour vs. two days) X 2 (content responsiveness: low vs. control) design.

As a manipulation check, at the end of the survey, participants indicated how responsive the provider was (one item, rated on a 7-point scale). We regressed this on reply speed condition, responsiveness condition, and their interaction term. As expected, overall, the provider was perceived as less responsive in the low-responsiveness condition (M = 3.94, SD = 1.58) than in the control condition (M = 5.04, SD = 1.56; B = -1.086, SE = 0.082; η^2 = .129; t(1171) = -13.18, p < .001), and as more responsive in the one-hour condition (M = 5.18, SD = 1.51) than in the two-days condition (M = 3.80, SD = 1.52, B = 1.371, SE = 0.082; η^2 = .191; t(1171) = 16.64, p < .001); the interaction effect was not statistically significant (B = -0.155, SE = 0.082; η^2 = .003; t(1171) = -1.88, p = .060).

Measures. We used the same items from Study 1a to examine participants' likelihood of hiring the provider and their perceived warmth (α = .941) and competence (α = .933).

Results

We regressed hiring likelihood, warmth, and competence on the reply speed condition, responsiveness condition, and the interaction term (to test for the predicted moderation effect).

Hiring likelihood. As in Study 1, providers were, on average, more likely to be hired in the one-hour (vs. two-days) condition (B = 0.369, SE = 0.084; η^2 = .016; t(1171) = 4.40, p < .001), and less likely to be

hired in the low-responsiveness than in the control condition (B = -2.479, SE = 0.084; η^2 = .428; t(1171) = -29.49, p < .001). Notably, there was a significant interaction effect (B = -0.202, SE = 0.084; η^2 = .005; t(1171) = -2.42, p = .016), such that the difference in hiring likelihood between the one-hour and two-days conditions was significantly smaller in the low-responsiveness condition; see Figure SI.5.

Warmth. Providers were seen as warmer, on average, in the one-hour than in the two-days condition (B = 0.315, SE = 0.066; η^2 = .019; t(1171) = 4.75, p < .001) and as less warm in the low-responsiveness than in the neutral condition (B = -1.884, SE = 0.066; η^2 = .408; t(1171) = -28.39, p < .001). There was also a significant interaction effect, such that the benefit of speed was diminished in the low-responsiveness condition (B = -0.195, SE = 0.066; η^2 = .007; t(1171) = -2.94, p = .003).

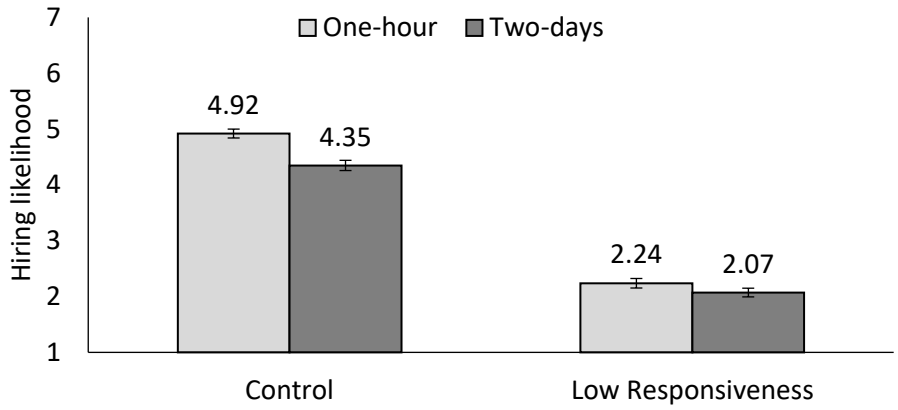

Figure SI.5. Hiring likelihood by reply speed for the control and low-responsiveness conditions (Study S4; N = 1,175).
Notes. Compared to providers who replied within one hour, providers who replied after a two-day delay were less likely to be hired overall, but this effect was smaller in the low-responsiveness condition (vs. control). Error bars represent ± S.E.M.

Competence. Providers were seen as more competent, on average, in the one-hour than in the two-days condition (B = 0.210, SE = 0.066; η^2 = .009; t(1171) = 3.17, p = .002) and as less competent in the low-responsiveness than in the control condition (B = -1.054, SE = 0.066; η^2 = .178; t(1171) = -15.94, p < .001). There was again a significant interaction effect: the benefit of speed was diminished in the low-responsiveness condition (B = -0.182, SE = 0.066; η^2 = .006; t(1171) = -2.75, p = .006).

Mediation test. We tested a moderated-mediation model (again with 5,000 resamples) for the effect of reply speed on hiring likelihood. We defined perceived warmth and competence as mediators, and

responsiveness condition as a moderator of the effects of reply speed on the mediators (PROCESS Model 7). We found a significant indirect effect through warmth (B = 0.287, 95% CI = [0.169, 0.405]) and a significant indirect effect through competence (B = 0.042, 95% CI = [0.011, 0.073]). As noted above and shown in Figure SI.6, the effect of speed on both warmth and competence was moderated by the content responsiveness condition. The remaining direct effect of speed in the model was nonsignificant (B = 0.043, SD = 0.065; z = 0.67, p = .502).

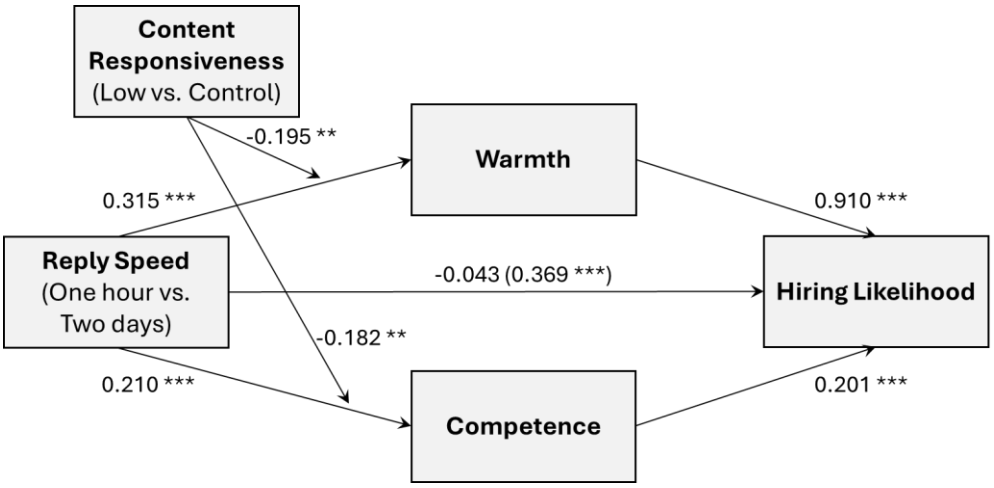

Figure SI.6. Study S4 (N = 1,175): Moderated mediation model of reply speed on hiring likelihood through perceptions of the worker's (a) warmth and (b) competence, with content responsiveness condition as a moderator of the mediation paths.
Notes. Numbers reflect standardized regression coefficients. Numbers in parentheses reflect the direct effects. *** p < .001, ** p < .01, * p < .05

Table SI.7. Means and (SDs) for Impression Variables by Condition (Study S4; N = 1,175)

	Control		Low-Responsiveness	
	One hour	**Two days**	**One hour**	**Two days**
Warmth	5.10 (0.98)[a]	4.59 (1.19)[b]	3.02 (1.26)[c]	2.90 (1.10)[c]
Competence	5.22 (0.99)[a]	4.83 (1.09)[b]	3.99 (1.26)[c]	3.96 (1.18)[c]
Responsiveness	5.79 (1.14)[a]	4.27 (1.57)[b]	4.55 (1.58)[b]	3.33 (1.32)[c]

Note. Different superscripts represent differences with $p < .05$ between the means with a Bonferroni correction for multiple comparisons.

Discussion

In this study, we find that the reply content (signaling future responsiveness) interacted with reply speed to affect hiring likelihood. Overall, faster replies yielded benefits for hiring likelihood and

interpersonal perceptions of warmth and competence; however, replicating our previous findings, these effects were attenuated when the reply content suggested that the responder will not be responsive in the future. That is, unresponsive content moderated the benefits of reply speed. Through moderation, the findings provide support for future responsiveness as a mediating mechanism.

Supplemental Study S5

In this study, we examine automaticity as a boundary for the effect of reply speed on hiring likelihood, assuming that an automatic reply provides a negative signal about the provider's future responsiveness: We expect that when a reply is explicitly described as an "auto-response," a fast reply will not enhance hiring likelihood as the speed no longer signals the provider's responsiveness.

Method

Participants. We posted the study for 1,200 U.S. participants through Prolific. Consistent with our pre-registration, we report results for 1,171 participants who correctly completed an attention check about the study (48.16% female, 49.87% male, 1.96% preferred to self-identify; M_{age} = 39.67, SD = 13.12).

Procedure. We used a similar paradigm to our main studies to manipulate the reply speed (either after one hour or after two days). Importantly, we manipulated whether the reply is described simply as an email response (as in our previous studies) or as an auto-response. We compare four between-participant conditions in a 2 (Reply speed: one hour vs. two days) X 2 (Response type: regular vs. auto-response) design. We include the full text at the end of the document.

As manipulation checks, participants indicated to what extent they believe the provider's response was automatically generated (on a 7-point scale) and how fast vs. slow the provider's response was (on a 7-point scale). As we expected, the response was perceived as more automatic in the auto-response condition (M = 5.98, SD = 1.44) than in the regular response condition (M = 3.01, SD = 1.36; d = 2.121; B = 2.966, SE = 0.082; t(1169) = 36.29, $p < .001$). In addition, responses were perceived as faster in the one-hour condition (M = 5.57, SD = 1.30) than in the two-days condition (M = 3.46, SD = 1.48; d = 1.516; B = 2.114, SE = 0.081; t(1169) = 25.94, $p < .001$).

Measures. We used the same items from Studies 2 and 3 to examine participants' likelihood of hiring the provider (single item) and perceptions of the provider's responsiveness (single item).

Results

As presented in Table SI.9, overall, providers were less likely to be hired in the auto-response condition than in the regular condition (B = -0.801, SE = 0.064; η^2 = .118; t(1167) = -12.49, p < .001). Similar to our previous studies, across both regular and auto-responses, providers who responded later were significantly less likely to be hired (B = -0.354, SE = 0.025; η^2 = .030; t(1167) = -5.52, p < .001). There was also a significant interaction effect (B = -0.147, SE = 0.005; η^2 = .030; t(1167) = -5.05, p < .001), wherein there was an even larger negative effect of a delay in the auto-response condition than in the regular condition.

Responsiveness. Providers in the two-days condition were perceived as less responsive than in the one-hour condition (B = -1.509, SE = 0.077; η^2 = .249; t(1167) = -19.66, p < .001). In addition, providers were perceived as less responsive on average in the auto-response condition (B = -1.303, SE = 0.077; η^2 = .198; t(1167) = -16.98, p < .001). There was no significant interaction effect (B = 0.047, SE = 0.077; η^2 < .001; t(1167) = 0.62, p = .538).

Mediation test. We conducted an exploratory mediation test (again using bootstrap analyses with 5,000 resamples) to test whether responsiveness mediated the effect of reply speed on hiring likelihood. We found a significant indirect effect of responsiveness (B = -0.640, 95% CI = [-0.738, -0.543]); the remaining direct effect of the delay was still significant (B = 0.286, z = 4.42, p < .001).

Table SI.7. Means and (SDs) for Impression Variables by Condition (Study S5; N = 1,161)

	Regular Response		Auto-response	
	One Hour	**Two Days**	**One Hour**	**Two Days**
Hiring likelihood	5.21 (0.86)[a]	5.00 (0.91)[a]	4.55 (1.15)[b]	4.05 (1.40)[c]
Responsiveness	6.52 (0.79)[a]	4.97 (1.31)[b]	5.17 (1.49)[b]	3.71 (1.53)[c]
Automaticity	3.29 (1.29)[a]	2.73 (1.37)[b]	6.01 (1.43)[c]	5.95 (1.45)[c]

Note. Different superscripts represent differences with $p < .05$ between the means with a Bonferroni correction for multiple comparisons.

Discussion

Supplemental Study S5 tests the idea that hiring likelihood depends not only on reply speed but also on whether the reply is original and personalized by comparing regular email responses to those identified as "auto-responses." Extending our prior findings, we show that for both regular and auto-responses, slower providers were significantly less likely to be hired than faster ones. Notably, the effect of speed on hiring likelihood was magnified for auto-responses, suggesting that a slow auto-response is the worst strategy a provider could pick: Not only is it unresponsive, but it does not confer the main benefit of automaticity—speed. Interestingly, a fast auto-responder was less likely to be hired than a relatively slow regular responder, suggesting that speed alone does not determine hiring likelihood.

Study Manipulation Texts

Study S1

Imagine that you contacted several [PROFFESSIONALS].
[PROFESSIONAL] A replied to your message ***[sooner // later]*** than [PROFESSIONAL] B.

Professions (presented in random order):

Accountant	Computer Programmer	Librarian
Actor	Consultant	Machine Operator
Advertiser	Customer Service	Nonprofit Manager
App Developer	Representative	Private Investigator
Architect	Dentist	Real Estate Appraiser
Artist	Doctor	Salesperson
Auto Mechanic	Engineer	Social Worker
Carpenter	Environmental Engineer	Travel Agent
Chef	Farmer	Truck Driver
Chemist	Investment Banker	Urban Planner
College Professor	Lawyer	Welder

Study S2

Imagine that you are starting a new business. You know that before you launch your business, you need professional photos (headshots and promotional materials). You want to hire a photographer for this photoshoot for your new business, to make sure it looks professional.
You look up several photographers. You are particularly interested in one photographer, Jay Smith. Jay Smith has a nice website and some positive reviews about their work. Jay Smith's website notes that the best way to contact them is by email.

You send an email to Jay Smith, in which you describe your new business and a few things you would like in a photoshoot, and ask about their availability.
[Within 10 minutes // The next morning // After four days], Jay Smith replies to your email. They explain how they work and that they can take your photos in the next couple of weeks.

Study S3

Imagine that you are starting a new business, and you need to hire a caterer for several parties that you are planning. Specifically, you would like to find someone who can cater an event in January (that is, a couple months from now).
You look up caterers on an online platform, and you sent the following message to each of several local caterers you are considering.

[Timestamp by condition: On Thu, Oct 23, 2025 at 9:53 am // none] You wrote:
Hi! Are you available to cater a 50-person professional event on Jan 17 around 4pm?
I was thinking of some appetizers and finger foods, both savory and sweet.
Let me know, thanks.

Sequential Condition	Simultaneous Condition
Throughout the day, you check your inbox for messages from caterers. You received a new email from a caterer. ***[Participants click to add each of five messages to the page.]***	The next day, you check your inbox for messages from caterers. You received emails from several caterers. ***[Participants click to see all five messages on the page.]***

- Each of the five messages is displayed as follows:

{TIMESTAMP} {NAME} wrote:
{MESSAGE CONTENT}
Best,
{NAME}

Provider	Timestamp	Name	Message Content
#1 (first)	10:51 am	James V.	I can definitely work with you on this event.
#2	11:48 am	Ollie R.	Pleased to meet you, and thank you for reaching out. I do have room in my schedule and would enjoy working with you
#3	1:04 pm	Joe M.	I'm glad you're interested in my services. We can move forward with a contract.
#4	3:23 pm	Payton P.	Let's do it, I will gladly put your event on my schedule.
#5 (last)	4:50 pm	Luke K.	Based on the details you provided and my existing commitments, I can certainly make it work. As we move forward, I would like to talk with you to better understand your vision and desires for this event.

Study S4

Imagine that you are starting a new business. You know that before you launch your business, you need professional photos (headshots and promotional materials). You want to hire a photographer for this photoshoot for your new business, to make sure it looks professional.
You look up several photographers. You notice one photographer, Jay Smith. Jay Smith has a nice website and some positive reviews about their work. Jay Smith's website notes that the best way to contact them is by email.

You send an email to Jay Smith, in which you describe your new business and a few things you would like in a photoshoot, and ask about their availability.

[After 1 hour // After 2 days], Jay Smith replies to your email.

Low Responsiveness	Neutral
The content of Jay's email makes you think that it is likely he won't listen to what is important to you in this photoshoot. You feel that Jay is not very interested in what you truly need or how you're thinking about the project. Jay seems focused on how he likes to work.	Jay's email explains how he works and says he can take your photos in the next couple of weeks.

Study S5

Imagine that you are starting a new business. You know that before you launch your business, you need a professional website to explain what you do and include promotional materials.
You want to hire a web designer to create this website for your new business, to make sure it looks professional.

You look up several web designers. You send inquiry emails to three designers who you are interested in. They each have a nice website and some positive reviews about their work.

In your email to the web designers, you describe your new business and a few things you would like in a website, and ask about their availability.
[In less than one hour // After two days], you receive an email ***[response / auto-response]*** from Jay Smith.

This ***[response / auto-response]*** from Jay Smith explains a bit more about how they typically work, provides some samples of previously designed websites, and asks you to answer a few scheduling questions to move forward with the job.

Supplemental Study Measures

Participants rated providers on the following items. Items were rated on 7-point scales from 1: "not at all" to 7: "very much" except otherwise noted. We created composite scores for each variable by averaging the items.

Comparative Measures (Study S1):
Participants rated the items using 7-point scales from 1: "Definitely A" to 7: "Definitely B".

- Hiring likelihood: If you were to hire one person, who would you prefer to hire?
- Warmth: Which person do you think is more friendly and warm?
- Competence: Which person do you think is more competent at their job?
- Future responsiveness: For any future messages you send, which person do you think will be more responsive?

Occupation features (Study S1)
Items were rated on a 7-point agreement scale from 1: "completely disagree" to 7: "completely agree."

- *[Factor 1]* [Professionals] are typically very busy
- *[Factor 1]* This is a highly skilled job
- *[Factor 1]* [Professionals] are in high demand
- *[Factor 1]* This is a competitive profession
- *[Factor 1]* This job requires specific expertise or knowledge
- *[Factor 1]* [Professionals] have a lot of negotiating power
- *[Factor 2]* It is easy to find a good [professional]
- *[Factor 2]* [Professionals] are often desperate for work

Important skills in occupation (Study S1)

- Critical thinking
- Active listening
- Coordinating with other people
- Decision making
- Communication skills
- Service orientation
- Time management

Professionalism (Study S2):

- How professional is [target] as a photographer?
- How good is [target] at his job?

Need (Study S2):

- How much is [target] in high demand by other clients?
- How much does [target] need you to hire him?
- How much power does [target] have in this situation? (Only Study S1a)

Intrinsic interest (Study S2):

- How much does [target] find his work interesting?
- How much does [target] find his work enjoyable?
- How much does [target] find his work fun?
- How much does [target] find his work engaging?

Extrinsic interest (Study S2):

- How much does [target] enjoy the pay and benefits of being a professional photographer?
- How much is [target] interested in the pay and benefits of being a professional photographer?
- How much does [target] want to be hired for your photoshoot?