Supplemental Materials

Appendix A: Stimuli Characteristics

The following groups denote equivalent conditions across studies:

Group 1: Supplemental Study 1a Low complexity / Weak functional preference; Supplemental Study 1b Weak functional preference

Group 2: Supplemental Study 1a Low complexity / Strong functional preference; Supplemental Study 1b Strong functional preference

Group 3: Supplemental Study 1a High complexity / Weak functional preference; Supplemental Study 1c Weak functional preference

Group 4: Supplemental Study 1a High complexity / Strong functional preference; Supplemental Study 1c Strong functional preference

Group 5: Supplemental Study 2a Low complexity / Low quantity; Supplemental Study 2b Low quantity; Supplemental Study 3 Low quantity / No Flobe; Supplemental Study 4 Low complexity / Low quantity / Liking Task

Group 6: Supplemental Study 2a Low complexity / High quantity; Supplemental Study 3 High quantity / No Flobe; Supplemental Study 2b High quantity; Supplemental Study 4 Low complexity / High quantity / Liking Task

Group 7: Supplemental Study 2a High complexity / Low quantity; Supplemental Study 2c Low quantity; Supplemental Study 3 Low quantity / Equal Flobe; Supplemental Study 4 High complexity / Low quantity / Liking Task

Group 8: Supplemental Study 2a High complexity / High quantity; Supplemental Study 3 High quantity / Equal Flobe; Supplemental Study 2c High quantity; Supplemental Study 4 High complexity / High quantity / Liking Task

Study 1 and Supplemental Study 1a:
Complexity x Functional Preference Strength

Condition	Slide Number	Person Name	Outcome SS1a / S1	Amount of Melb	Amount of Flobe
Low complexity /	1	O	D / -10	3	--
Weak functional preference	2	P	D / -10	4	--
	3	Q	D / -10	5	--
	4	A	D / -10	5	--
	5	R	D / -10	6	--
	6	B	D / -10	6	--
	7	K	D / -10	6	--
	8	L	D / -10	6	--
	9	S	D / -10	7	--
	10	C	D / -10	7	--
	11	M	D / -10	8	--
	12	Y	D / -10	9	--
	13	D	L / +10	4	--
	14	E	L / +10	5	--
	15	F	L / +10	6	--
	16	T	L / +10	6	--
	17	G	L / +10	7	--
	18	U	L / +10	7	--
	19	V	L / +10	7	--
	20	W	L / +10	7	--
	21	H	L / +10	8	--
	22	X	L / +10	8	--
	23	I	L / +10	9	--
	24	J	L / +10	10	--
Low complexity /	1	M	D / -10	1	--
Strong functional preference	2	N	D / -10	2	--
	3	O	D / -10	3	--
	4	A	D / -10	3	--
	5	P	D / -10	4	--
	6	B	D / -10	4	--
	7	C	D / -10	4	--
	8	K	D / -10	4	--
	9	Q	D / -10	5	--
	10	L	D / -10	5	--
	11	R	D / -10	6	--
	12	S	D / -10	7	--
	13	F	L / +10	6	--
	14	G	L / +10	7	--
	15	H	L / +10	8	--
	16	X	L / +10	8	--

	17	I	L / +10	9	--
	18	T	L / +10	9	--
	19	Z	L / +10	9	--
	20	V	L / +10	9	--
	21	J	L / +10	10	--
	22	W	L / +10	10	--
	23	D	L / +10	11	--
	24	E	L / +10	12	--
High complexity / Weak functional preference	1	A	D / -10	3	5
	2	B	D / -10	4	6
	3	C	D / -10	5	4
	4	D	D / -10	5	2
	5	E	D / -10	6	8
	6	F	D / -10	6	5
	7	G	D / -10	6	5
	8	H	D / -10	6	7
	9	I	D / -10	7	3
	10	J	D / -10	7	4
	11	K	D / -10	8	6
	12	L	D / -10	9	5
	13	X	L / +10	4	8
	14	W	L / +10	5	9
	15	V	L / +10	6	7
	16	U	L / +10	6	5
	17	T	L / +10	7	11
	18	S	L / +10	7	8
	19	R	L / +10	7	8
	20	Q	L / +10	7	10
	21	P	L / +10	8	6
	22	O	L / +10	8	7
	23	N	L / +10	9	9
	24	M	L / +10	10	8
High complexity / Strong functional preference	1	A	D / -10	1	5
	2	B	D / -10	2	6
	3	C	D / -10	3	4
	4	D	D / -10	3	2
	5	E	D / -10	4	8
	6	F	D / -10	4	5
	7	G	D / -10	4	5
	8	H	D / -10	4	7
	9	I	D / -10	5	3
	10	J	D / -10	5	4
	11	K	D / -10	6	6
	12	L	D / -10	7	5

13	X	L / +10	6	8
14	W	L / +10	7	9
15	V	L / +10	8	7
16	U	L / +10	8	5
17	T	L / +10	9	11
18	S	L / +10	9	8
19	R	L / +10	9	8
20	Q	L / +10	9	10
21	P	L / +10	10	6
22	O	L / +10	10	7
23	N	L / +10	11	9
24	M	L / +10	12	8

Note: D = Disliked, L = Liked, -10 = lose 10 pts, +10 = gain 10 pts

Study 2 and Supplemental Study 2a:
Complexity x Attribute Quantity

Condition	Slide Number	Person Name	Outcome SS2a / S2	Amount of Melb	Amount of Flobe
Low complexity / Low attribute quantity	1	M	D / -10	1	--
	2	N	D / -10	2	--
	3	O	D / -10	3	--
	4	A	D / -10	3	--
	5	P	D / -10	4	--
	6	B	D / -10	4	--
	7	C	D / -10	4	--
	8	K	D / -10	4	--
	9	Q	D / -10	5	--
	10	L	D / -10	5	--
	11	R	D / -10	6	--
	12	S	D / -10	7	--
	13	D	L / +10	4	--
	14	E	L / +10	5	--
	15	F	L / +10	6	--
	16	T	L / +10	6	--
	17	G	L / +10	7	--
	18	U	L / +10	7	--
	19	V	L / +10	7	--
	20	W	L / +10	7	--
	21	H	L / +10	8	--
	22	X	L / +10	8	--
	23	I	L / +10	9	--
	24	J	L / +10	10	--
Low complexity / High attribute quantity	1	O	D / -10	3	--
	2	P	D / -10	4	--
	3	Q	D / -10	5	--
	4	A	D / -10	5	--

	5	R	D / -10	6	--
	6	B	D / -10	6	--
	7	K	D / -10	6	--
	8	L	D / -10	6	--
	9	S	D / -10	7	--
	10	C	D / -10	7	--
	11	M	D / -10	8	--
	12	Y	D / -10	9	--
	13	F	L / +10	6	--
	14	G	L / +10	7	--
	15	H	L / +10	8	--
	16	X	L / +10	8	--
	17	I	L / +10	9	--
	18	T	L / +10	9	--
	19	Z	L / +10	9	--
	20	V	L / +10	9	--
	21	J	L / +10	10	--
	22	W	L / +10	10	--
	23	D	L / +10	11	--
	24	E	L / +10	12	--
High complexity /	1	A	D / -10	1	5
Low attribute quantity	2	B	D / -10	2	6
	3	C	D / -10	3	4
	4	D	D / -10	3	2
	5	E	D / -10	4	8
	6	F	D / -10	4	5
	7	G	D / -10	4	5
	8	H	D / -10	4	7
	9	I	D / -10	5	3
	10	J	D / -10	5	4
	11	K	D / -10	6	6
	12	L	D / -10	7	5
	13	X	L / +10	4	8
	14	W	L / +10	5	9
	15	V	L / +10	6	7
	16	U	L / +10	6	5
	17	T	L / +10	7	11
	18	S	L / +10	7	8
	19	R	L / +10	7	8
	20	Q	L / +10	7	10
	21	P	L / +10	8	6
	22	O	L / +10	8	7
	23	N	L / +10	9	9
	24	M	L / +10	10	8
High complexity /	1	A	D / -10	3	5

High attribute quantity	2	B	D / -10	4	6
	3	C	D / -10	5	4
	4	D	D / -10	5	2
	5	E	D / -10	6	8
	6	F	D / -10	6	5
	7	G	D / -10	6	5
	8	H	D / -10	6	7
	9	I	D / -10	7	3
	10	J	D / -10	7	4
	11	K	D / -10	8	6
	12	L	D / -10	9	5
	13	X	L / +10	6	8
	14	W	L / +10	7	9
	15	V	L / +10	8	7
	16	U	L / +10	8	5
	17	T	L / +10	9	11
	18	S	L / +10	9	8
	19	R	L / +10	9	8
	20	Q	L / +10	9	10
	21	P	L / +10	10	6
	22	O	L / +10	10	7
	23	N	L / +10	11	9
	24	M	L / +10	12	8

Note: D = Disliked, L = Liked, -10 = lose 10 pts, +10 = gain 10 pts

Study 3 and Supplemental Study 3:
Reference Standard x Attribute Quantity

Condition	Slide Number	Person Name	Outcome SS3 / S3	Amount of Melb	Amount of Flobe
Low attribute quantity / No Flobe	1	M	D / -10	1	--
	2	N	D / -10	2	--
	3	O	D / -10	3	--
	4	A	D / -10	3	--
	5	P	D / -10	4	--
	6	B	D / -10	4	--
	7	C	D / -10	4	--
	8	K	D / -10	4	--
	9	Q	D / -10	5	--
	10	L	D / -10	5	--
	11	R	D / -10	6	--
	12	S	D / -10	7	--
	13	D	L / +10	4	--
	14	E	L / +10	5	--
	15	F	L / +10	6	--
	16	T	L / +10	6	--

	17	G	L / +10	7	--
	18	U	L / +10	7	--
	19	V	L / +10	7	--
	20	W	L / +10	7	--
	21	H	L / +10	8	--
	22	X	L / +10	8	--
	23	I	L / +10	9	--
	24	J	L / +10	10	--
High attribute quantity / No Flobe	1	M	D / -10	3	--
	2	N	D / -10	4	--
	3	O	D / -10	5	--
	4	A	D / -10	5	--
	5	P	D / -10	6	--
	6	B	D / -10	6	--
	7	C	D / -10	6	--
	8	K	D / -10	6	--
	9	Q	D / -10	7	--
	10	L	D / -10	7	--
	11	R	D / -10	8	--
	12	S	D / -10	9	--
	13	D	L / +10	6	--
	14	E	L / +10	7	--
	15	F	L / +10	8	--
	16	T	L / +10	8	--
	17	G	L / +10	9	--
	18	U	L / +10	9	--
	19	V	L / +10	9	--
	20	W	L / +10	9	--
	21	H	L / +10	10	--
	22	X	L / +10	10	--
	23	I	L / +10	11	--
	24	J	L / +10	12	--
Low attribute quantity / Unequal Flobe	1	M	D / -10	1	5
	2	N	D / -10	2	6
	3	O	D / -10	3	4
	4	A	D / -10	3	2
	5	P	D / -10	4	8
	6	B	D / -10	4	5
	7	C	D / -10	4	5
	8	K	D / -10	4	7
	9	Q	D / -10	5	3
	10	L	D / -10	5	4
	11	R	D / -10	6	6
	12	S	D / -10	7	5
	13	D	L / +10	4	8

	14	E	L / +10	5	9
	15	F	L / +10	6	7
	16	T	L / +10	6	5
	17	G	L / +10	7	11
	18	U	L / +10	7	8
	19	V	L / +10	7	8
	20	W	L / +10	7	10
	21	H	L / +10	8	6
	22	X	L / +10	8	7
	23	I	L / +10	9	9
	24	J	L / +10	10	8
High attribute quantity / Unequal Flobe	1	M	D / -10	3	5
	2	N	D / -10	4	6
	3	O	D / -10	5	4
	4	A	D / -10	5	2
	5	P	D / -10	6	8
	6	B	D / -10	6	5
	7	C	D / -10	6	5
	8	K	D / -10	6	7
	9	Q	D / -10	7	3
	10	L	D / -10	7	4
	11	R	D / -10	8	6
	12	S	D / -10	9	5
	13	D	L / +10	6	8
	14	E	L / +10	7	9
	15	F	L / +10	8	7
	16	T	L / +10	8	5
	17	G	L / +10	9	11
	18	U	L / +10	9	8
	19	V	L / +10	9	8
	20	W	L / +10	9	10
	21	H	L / +10	10	6
	22	X	L / +10	10	7
	23	I	L / +10	11	9
	24	J	L / +10	12	8
Low attribute quantity / Equal Flobe	1	M	D / -10	1	4
	2	N	D / -10	2	5
	3	O	D / -10	3	3
	4	A	D / -10	3	1
	5	P	D / -10	4	7
	6	B	D / -10	4	4
	7	C	D / -10	4	4
	8	K	D / -10	4	6
	9	Q	D / -10	5	2
	10	L	D / -10	5	3

	11	R	D / -10	6	5
	12	S	D / -10	7	4
	13	D	L / +10	4	7
	14	E	L / +10	5	8
	15	F	L / +10	6	6
	16	T	L / +10	6	4
	17	G	L / +10	7	10
	18	U	L / +10	7	7
	19	V	L / +10	7	7
	20	W	L / +10	7	9
	21	H	L / +10	8	5
	22	X	L / +10	8	6
	23	I	L / +10	9	8
	24	J	L / +10	10	7
High attribute quantity / Equal Flobe	1	M	D / -10	3	6
	2	N	D / -10	4	7
	3	O	D / -10	5	5
	4	A	D / -10	5	3
	5	P	D / -10	6	9
	6	B	D / -10	6	6
	7	C	D / -10	6	6
	8	K	D / -10	6	8
	9	Q	D / -10	7	4
	10	L	D / -10	7	5
	11	R	D / -10	8	7
	12	S	D / -10	9	6
	13	D	L / +10	6	9
	14	E	L / +10	7	10
	15	F	L / +10	8	8
	16	T	L / +10	8	6
	17	G	L / +10	9	12
	18	U	L / +10	9	9
	19	V	L / +10	9	9
	20	W	L / +10	9	11
	21	H	L / +10	10	7
	22	X	L / +10	10	8
	23	I	L / +10	11	10
	24	J	L / +10	12	9

Note: D = Disliked, L = Liked, -10 = lose 10 pts, +10 = gain 10 pts

Supplemental Study 1b: Melb

Condition	Slide Number	Person Name	Liked or Disliked	Amount of Melb	Amount of Flobe
Weak functional preference	1	O	Disliked	3	--

	2	P	Disliked	4	--
	3	Q	Disliked	5	--
	4	A	Disliked	5	--
	5	R	Disliked	6	--
	6	B	Disliked	6	--
	7	K	Disliked	6	--
	8	L	Disliked	6	--
	9	S	Disliked	7	--
	10	C	Disliked	7	--
	11	M	Disliked	8	--
	12	Y	Disliked	9	--
	13	D	Liked	4	--
	14	E	Liked	5	--
	15	F	Liked	6	--
	16	T	Liked	6	--
	17	G	Liked	7	--
	18	U	Liked	7	--
	19	V	Liked	7	--
	20	W	Liked	7	--
	21	H	Liked	8	--
	22	X	Liked	8	--
	23	I	Liked	9	--
	24	J	Liked	10	--
Strong functional preference	1	M	Disliked	1	--
	2	N	Disliked	2	--
	3	O	Disliked	3	--
	4	A	Disliked	3	--
	5	P	Disliked	4	--
	6	B	Disliked	4	--
	7	C	Disliked	4	--
	8	K	Disliked	4	--
	9	Q	Disliked	5	--
	10	L	Disliked	5	--
	11	R	Disliked	6	--
	12	S	Disliked	7	--
	13	F	Liked	6	--
	14	G	Liked	7	--
	15	H	Liked	8	--
	16	X	Liked	8	--
	17	I	Liked	9	--
	18	T	Liked	9	--
	19	Z	Liked	9	--
	20	V	Liked	9	--
	21	J	Liked	10	--
	22	W	Liked	10	--
	23	D	Liked	11	--

	24	E	Liked	12	--

Supplemental Study 1c: Melb & Flobe

Condition	Slide Number	Person Name	Liked or Disliked	Amount of Melb	Amount of Flobe
Weak functional preference	1	A	Disliked	3	5
	2	B	Disliked	4	6
	3	C	Disliked	5	4
	4	D	Disliked	5	2
	5	E	Disliked	6	8
	6	F	Disliked	6	5
	7	G	Disliked	6	5
	8	H	Disliked	6	7
	9	I	Disliked	7	3
	10	J	Disliked	7	4
	11	K	Disliked	8	6
	12	L	Disliked	9	5
	13	X	Liked	4	8
	14	W	Liked	5	9
	15	V	Liked	6	7
	16	U	Liked	6	5
	17	T	Liked	7	11
	18	S	Liked	7	8
	19	R	Liked	7	8
	20	Q	Liked	7	10
	21	P	Liked	8	6
	22	O	Liked	8	7
	23	N	Liked	9	9
	24	M	Liked	10	8
Strong functional preference	1	A	Disliked	1	5
	2	B	Disliked	2	6
	3	C	Disliked	3	4
	4	D	Disliked	3	2
	5	E	Disliked	4	8
	6	F	Disliked	4	5
	7	G	Disliked	4	5
	8	H	Disliked	4	7
	9	I	Disliked	5	3
	10	J	Disliked	5	4
	11	K	Disliked	6	6
	12	L	Disliked	7	5
	13	X	Liked	6	8
	14	W	Liked	7	9
	15	V	Liked	8	7

	16	U	Liked	8	5
	17	T	Liked	9	11
	18	S	Liked	9	8
	19	R	Liked	9	8
	20	Q	Liked	9	10
	21	P	Liked	10	6
	22	O	Liked	10	7
	23	N	Liked	11	9
	24	M	Liked	12	8

Supplemental Study 2b: Melb

Condition	Slide Number	Person Name	Liked or Disliked	Amount of Melb	Amount of Flobe
Low attribute quantity	1	M	Disliked	1	--
	2	N	Disliked	2	--
	3	O	Disliked	3	--
	4	A	Disliked	3	--
	5	P	Disliked	4	--
	6	B	Disliked	4	--
	7	C	Disliked	4	--
	8	K	Disliked	4	--
	9	Q	Disliked	5	--
	10	L	Disliked	5	--
	11	R	Disliked	6	--
	12	S	Disliked	7	--
	13	D	Liked	4	--
	14	E	Liked	5	--
	15	F	Liked	6	--
	16	T	Liked	6	--
	17	G	Liked	7	--
	18	U	Liked	7	--
	19	V	Liked	7	--
	20	W	Liked	7	--
	21	H	Liked	8	--
	22	X	Liked	8	--
	23	I	Liked	9	--
	24	J	Liked	10	--
High attribute quantity	1	O	Disliked	3	--
	2	P	Disliked	4	--
	3	Q	Disliked	5	--
	4	A	Disliked	5	--
	5	R	Disliked	6	--
	6	B	Disliked	6	--

	7	K	Disliked	6	--
	8	L	Disliked	6	--
	9	S	Disliked	7	--
	10	C	Disliked	7	--
	11	M	Disliked	8	--
	12	Y	Disliked	9	--
	13	F	Liked	6	--
	14	G	Liked	7	--
	15	H	Liked	8	--
	16	X	Liked	8	--
	17	I	Liked	9	--
	18	T	Liked	9	--
	19	Z	Liked	9	--
	20	V	Liked	9	--
	21	J	Liked	10	--
	22	W	Liked	10	--
	23	D	Liked	11	--
	24	E	Liked	12	--

Supplemental Study 2c: Melb & Flobe

Condition	Slide Number	Person Name	Liked or Disliked	Amount of Melb	Amount of Flobe
Low attribute quantity	1	A	Disliked	1	5
	2	B	Disliked	2	6
	3	C	Disliked	3	4
	4	D	Disliked	3	2
	5	E	Disliked	4	8
	6	F	Disliked	4	5
	7	G	Disliked	4	5
	8	H	Disliked	4	7
	9	I	Disliked	5	3
	10	J	Disliked	5	4
	11	K	Disliked	6	6
	12	L	Disliked	7	5
	13	X	Liked	4	8
	14	W	Liked	5	9
	15	V	Liked	6	7
	16	U	Liked	6	5
	17	T	Liked	7	11
	18	S	Liked	7	8
	19	R	Liked	7	8
	20	Q	Liked	7	10
	21	P	Liked	8	6
	22	O	Liked	8	7
	23	N	Liked	9	9

	24	M	Liked	10	8
High attribute quantity	1	A	Disliked	3	5
	2	B	Disliked	4	6
	3	C	Disliked	5	4
	4	D	Disliked	5	2
	5	E	Disliked	6	8
	6	F	Disliked	6	5
	7	G	Disliked	6	5
	8	H	Disliked	6	7
	9	I	Disliked	7	3
	10	J	Disliked	7	4
	11	K	Disliked	8	6
	12	L	Disliked	9	5
	13	X	Liked	6	8
	14	W	Liked	7	9
	15	V	Liked	8	7
	16	U	Liked	8	5
	17	T	Liked	9	11
	18	S	Liked	9	8
	19	R	Liked	9	8
	20	Q	Liked	9	10
	21	P	Liked	10	6
	22	O	Liked	10	7
	23	N	Liked	11	9
	24	M	Liked	12	8

Supplemental Study 4: Complexity x Quantity x Task Version of Functional Preference

Condition	Slide Number	Person Name	Liked or Disliked	Amount of Melb	Amount of Flobe
Low complexity /	1	M	Disliked	1	--
Low attribute quantity /	2	N	Disliked	2	--
Liking task	3	O	Disliked	3	--
	4	A	Disliked	3	--
	5	P	Disliked	4	--
	6	B	Disliked	4	--
	7	C	Disliked	4	--
	8	K	Disliked	4	--
	9	Q	Disliked	5	--
	10	L	Disliked	5	--
	11	R	Disliked	6	--
	12	S	Disliked	7	--
	13	D	Liked	4	--

	14	E	Liked	5	--
	15	F	Liked	6	--
	16	T	Liked	6	--
	17	G	Liked	7	--
	18	U	Liked	7	--
	19	V	Liked	7	--
	20	W	Liked	7	--
	21	H	Liked	8	--
	22	X	Liked	8	--
	23	I	Liked	9	--
	24	J	Liked	10	--
Low complexity / High attribute quantity / Liking task	1	O	Disliked	3	--
	2	P	Disliked	4	--
	3	Q	Disliked	5	--
	4	A	Disliked	5	--
	5	R	Disliked	6	--
	6	B	Disliked	6	--
	7	K	Disliked	6	--
	8	L	Disliked	6	--
	9	S	Disliked	7	--
	10	C	Disliked	7	--
	11	M	Disliked	8	--
	12	Y	Disliked	9	--
	13	F	Liked	6	--
	14	G	Liked	7	--
	15	H	Liked	8	--
	16	X	Liked	8	--
	17	I	Liked	9	--
	18	T	Liked	9	--
	19	Z	Liked	9	--
	20	V	Liked	9	--
	21	J	Liked	10	--
	22	W	Liked	10	--
	23	D	Liked	11	--
	24	E	Liked	12	--
High complexity / Low attribute quantity / Liking task	1	A	Disliked	1	5
	2	B	Disliked	2	6
	3	C	Disliked	3	4
	4	D	Disliked	3	2
	5	E	Disliked	4	8
	6	F	Disliked	4	5
	7	G	Disliked	4	5
	8	H	Disliked	4	7
	9	I	Disliked	5	3
	10	J	Disliked	5	4

	11	K	Disliked	6	6
	12	L	Disliked	7	5
	13	X	Liked	4	8
	14	W	Liked	5	9
	15	V	Liked	6	7
	16	U	Liked	6	5
	17	T	Liked	7	11
	18	S	Liked	7	8
	19	R	Liked	7	8
	20	Q	Liked	7	10
	21	P	Liked	8	6
	22	O	Liked	8	7
	23	N	Liked	9	9
	24	M	Liked	10	8
High complexity / High attribute quantity / Liking task	1	A	Disliked	3	5
	2	B	Disliked	4	6
	3	C	Disliked	5	4
	4	D	Disliked	5	2
	5	E	Disliked	6	8
	6	F	Disliked	6	5
	7	G	Disliked	6	5
	8	H	Disliked	6	7
	9	I	Disliked	7	3
	10	J	Disliked	7	4
	11	K	Disliked	8	6
	12	L	Disliked	9	5
	13	X	Liked	6	8
	14	W	Liked	7	9
	15	V	Liked	8	7
	16	U	Liked	8	5
	17	T	Liked	9	11
	18	S	Liked	9	8
	19	R	Liked	9	8
	20	Q	Liked	9	10
	21	P	Liked	10	6
	22	O	Liked	10	7
	23	N	Liked	11	9
	24	M	Liked	12	8

	Slide Number	Person Name	Team Assignment	Amount of Melb	Amount of Flobe
Low complexity / Low attribute quantity / Teams task	1	M	John’s	1	--
	2	N	John’s	2	--
	3	O	John’s	3	--
	4	A	John’s	3	--
	5	P	John’s	4	--

	6	B	John's	4	--
	7	C	John's	4	--
	8	K	John's	4	--
	9	Q	John's	5	--
	10	L	John's	5	--
	11	R	John's	6	--
	12	S	John's	7	--
	13	D	Robert's	4	--
	14	E	Robert's	5	--
	15	F	Robert's	6	--
	16	T	Robert's	6	--
	17	G	Robert's	7	--
	18	U	Robert's	7	--
	19	V	Robert's	7	--
	20	W	Robert's	7	--
	21	H	Robert's	8	--
	22	X	Robert's	8	--
	23	I	Robert's	9	--
	24	J	Robert's	10	--
Low complexity /	1	O	John's	3	--
High attribute quantity /	2	P	John's	4	--
Teams task	3	Q	John's	5	--
	4	A	John's	5	--
	5	R	John's	6	--
	6	B	John's	6	--
	7	K	John's	6	--
	8	L	John's	6	--
	9	S	John's	7	--
	10	C	John's	7	--
	11	M	John's	8	--
	12	Y	John's	9	--
	13	F	Robert's	6	--
	14	G	Robert's	7	--
	15	H	Robert's	8	--
	16	X	Robert's	8	--
	17	I	Robert's	9	--
	18	T	Robert's	9	--
	19	Z	Robert's	9	--
	20	V	Robert's	9	--
	21	J	Robert's	10	--
	22	W	Robert's	10	--
	23	D	Robert's	11	--
	24	E	Robert's	12	--
High complexity /	1	A	John's	1	5
Low attribute quantity /	2	B	John's	2	6

Teams task	3	C	John's	3	4
	4	D	John's	3	2
	5	E	John's	4	8
	6	F	John's	4	5
	7	G	John's	4	5
	8	H	John's	4	7
	9	I	John's	5	3
	10	J	John's	5	4
	11	K	John's	6	6
	12	L	John's	7	5
	13	X	Robert's	4	8
	14	W	Robert's	5	9
	15	V	Robert's	6	7
	16	U	Robert's	6	5
	17	T	Robert's	7	11
	18	S	Robert's	7	8
	19	R	Robert's	7	8
	20	Q	Robert's	7	10
	21	P	Robert's	8	6
	22	O	Robert's	8	7
	23	N	Robert's	9	9
	24	M	Robert's	10	8
High complexity /	1	A	John's	3	5
High attribute quantity /	2	B	John's	4	6
Teams task	3	C	John's	5	4
	4	D	John's	5	2
	5	E	John's	6	8
	6	F	John's	6	5
	7	G	John's	6	5
	8	H	John's	6	7
	9	I	John's	7	3
	10	J	John's	7	4
	11	K	John's	8	6
	12	L	John's	9	5
	13	X	Robert's	6	8
	14	W	Robert's	7	9
	15	V	Robert's	8	7
	16	U	Robert's	8	5
	17	T	Robert's	9	11
	18	S	Robert's	9	8
	19	R	Robert's	9	8
	20	Q	Robert's	9	10
	21	P	Robert's	10	6
	22	O	Robert's	10	7
	23	N	Robert's	11	9
	24	M	Robert's	12	8

Appendix B: Additional Demographic Information

Our samples were approximately as diverse as the average college student sample with respect to sexuality, and more diverse with respect to age and race/ethnicity. We anticipate that our findings would generalize to populations who are comfortable using a computer to answer questions about dating decisions and preferences. Additionally, recent reports indicate that samples obtained from Mechanical Turk offer a range of benefits compared to typical subject pools (Gosling & Johnson, 2010), including being more diverse than samples sourced from other internet platforms (Kraut, 2004; Buhrmester, Kwang, & Gosling, 2011), and more representative than traditional college samples from the Unites States (Buhrmester et al., 2011).

Study 1: The racial profile of the sample was 73.1% European-American, Anglo, Caucasian; 8.2% Asian-American, Asian, Pacific Islander; 8.0% African-American, Black, African, Caribbean; 5.5% Hispanic-American, Latino(a), Chicano(a); 4.1% Bi-racial, Multi-racial; 0.5% Native-American, American Indian; and 0.5% "Other." Seventy-three percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 118.5 (SD = 115.7) months. The majority of participants (80.8%) indicated an "8" or "9" the statement "I am exclusively attracted to members of the opposite sex" (on a 9-point *very strongly disagree* to *very strongly agree* scale), whereas a minority (6.3%) indicated a "1" or a "2".

Study 2: The racial profile of the sample was 74.0% European-American, Anglo, Caucasian; 7.8% African-American, Black, African, Caribbean; 6.1% Asian-American, Asian, Pacific Islander; 5.3% Hispanic-American, Latino(a), Chicano(a); 5.0% Bi-racial, Multi-racial; 0.6% Native-American, American Indian; and 1.2% "Other" or unreported. Sixty-eight percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 136.7 (*SD* = 135.8) months. The majority of participants (82.0%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (5.4%) indicated a “1” or a “2”.

Study 3: The racial profile of the sample was 74.9% European-American, Anglo, Caucasian; 7.6% African-American, Black, African, Caribbean; 6.0% Asian-American, Asian, Pacific Islander; 5.3% Hispanic-American, Latino(a), Chicano(a); 4.0% Bi-racial, Multi-racial; 1.0% Native-American, American Indian; and 1.2% “Other”. Seventy percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 115.4 (*SD* = 118.7) months. The majority of participants (77.4%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (8.0%) indicated a “1” or a “2”.

Supplemental Study 1a: The racial profile of the sample was 73.6% European-American, Anglo, Caucasian; 7.8% Asian-American, Asian, Pacific Islander; 4.7% Hispanic-American, Latino(a), Chicano(a); 7.3% African-American, Black, African, Caribbean; 0.3% Native-American, American Indian; 3.9% Bi-racial, Multi-racial; and 2.1% “Other.” Sixty-eight percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 96.7 (*SD* = 107.1) months. The majority of participants (78.2%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (8.5%) indicated a “1” or a “2”.

Supplemental Study 2a: The racial profile of the sample was 67.7% European-American, Anglo, Caucasian; 6.4% Asian-American, Asian, Pacific Islander; 5.9% Hispanic-American, Latino(a), Chicano(a); 9.4% African-American, Black, African, Caribbean; 0.2% Native-American, American Indian; 4.9% Bi-racial, Multi-racial; and 0.7% “Other.” Sixty-four percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 86.0 (*SD* = 98.0) months. The majority of participants (80.2%) indicated an "8" or "9" the statement "I am exclusively attracted to members of the opposite sex," whereas a minority (4.9%) indicated a "1" or a "2".

Supplemental Study 3: The racial profile of the sample was 71.1% European-American, Anglo, Caucasian; 6.1% Asian-American, Asian, Pacific Islander; 5.6% Hispanic-American, Latino(a), Chicano(a); 9.2% African-American, Black, African, Caribbean; 1.0% Native-American, American Indian; 4.4% Bi-racial, Multi-racial; and 1.9% "Other." Seventy-one percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 98.0 (*SD* = 108.7) months. The majority of participants (76.7%) indicated an "8" or "9" the statement "I am exclusively attracted to members of the opposite sex," whereas a minority (8.0%) indicated a "1" or a "2".

Supplemental Study 1b: The racial profile of the sample was 75.3% European-American, Anglo, Caucasian; 12.4% Asian-American, Asian, Pacific Islander; 6.2% Hispanic-American, Latino(a), Chicano(a); 3.1% African-American, Black, African, Caribbean; 0% Native-American, American Indian; 3.1% Bi-racial, Multi-racial; and 0% "Other." Fifty-six percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 65.2 (*SD* = 80.0) months. The majority of participants (76.3%) indicated an "8" or "9" the statement "I am exclusively attracted to members of the opposite sex," whereas a minority (6.2%) indicated a "1" or a "2".

Supplemental Study 1c: The racial profile of the sample was 74.0% European-American, Anglo, Caucasian; 2.0% Asian-American, Asian, Pacific Islander; 8.0% Hispanic-American, Latino(a), Chicano(a); 9.0% African-American, Black, African, Caribbean; 2.0%

Native-American, American Indian; 5.0% Bi-racial, Multi-racial; and 0% “Other.” Seventy-seven percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 110.5 (*SD* = 125.4) months. The majority of participants (89.0%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (5.0%) indicated a “1” or a “2”.

Supplemental Study 2b: The racial profile of the sample was 65.6% European-American, Anglo, Caucasian; 10.4% Asian-American, Asian, Pacific Islander; 9.4% Hispanic-American, Latino(a), Chicano(a); 7.3% African-American, Black, African, Caribbean; 2.1% Native-American, American Indian; 5.2% Bi-racial, Multi-racial; and 0% “Other.” Fifty-six percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 72.2 (*SD* = 95.9) months. The majority of participants (85.4%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (5.2%) indicated a “1” or a “2”.

Supplemental Study 2c: The racial profile of the sample was 77.7% European-American, Anglo, Caucasian; 4.3% Asian-American, Asian, Pacific Islander; 5.3% Hispanic-American, Latino(a), Chicano(a); 8.5% African-American, Black, African, Caribbean; 2.1% Native-American, American Indian; 1.1% Bi-racial, Multi-racial; and 1.1% “Other.” Sixty-nine percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 150.7 (*SD* = 158.8) months. The majority of participants (78.7%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (5.0%) indicated a “1” or a “2”.

Supplemental Study 4: The racial profile of the sample was 73.1% European-American, Anglo, Caucasian; 5.4% Asian-American, Asian, Pacific Islander; 6.1% Hispanic-American, Latino(a), Chicano(a); 9.3% African-American, Black, African, Caribbean; 1.0% Native-American, American Indian; 3.0% Bi-racial, Multi-racial; and 1.6% “Other.” Sixty-six percent of participants indicated that they were in a committed, romantic relationship at the time of taking the survey and the average relationship length was 112.5 (*SD* = 119.8) months. The majority of participants (83.2%) indicated an “8” or “9” the statement “I am exclusively attracted to members of the opposite sex,” whereas a minority (6.2%) indicated a “1” or a “2”.

Appendix C: Supplemental Studies 1a, 2a, and 3

The structure of Supplemental Studies 1a, 2a, and 3 is identical to Studies 1, 2, and 3 as reported in the main manuscript. The primary difference is that these three studies examined people’s ability to infer another person’s summarized preference. Specifically, these studies used a scenario in which participants encountered an imaginary character with the gender-neutral name, Casey, who met 24 potential mates at a party on another planet. Participants subsequently saw information about the covariation between two variables: (a) the amount of “*Melb*” (an imaginary attribute) each of the potential mates possessed and (b) whether Casey liked or disliked each of the potential mates. The covariation between these two variables across the 24 potential mates constituted Casey’s *functional preference* for *Melb*. After reviewing this functional preference information, participants reported Casey’s *summarized preference* for *Melb* (e.g., “How important is *Melb* to Casey in a romantic partner?”) as the dependent measure. Participants in these studies (but not the studies reported in the main manuscript) in the high complexity condition also reported Casey’s summarized preference for *Flobe* (e.g., “How important is *Flobe* to Casey in a romantic partner?) as an exploratory measure.

Supplemental Study 1a

This study employed a 2 (functional preference strength: weak vs. strong) x 2 (stimuli complexity: low vs. high) experimental design to examine whether participants' inferences about another person's summarized preference for a trait in a mate reflected that person's functional preferences for the trait in a mate, and whether this relationship was moderated by stimuli complexity.

Method

Participants. Participants were 407 workers recruited from MTurk. Twenty-one participants who completed the survey were excluded from any subsequent analyses because they selected the incorrect response to the attention check item, making our final sample size 386 participants (47.9% male, 51.8% female and 0.26% Other; aged 18-74, $M_{age} = 34.9$, $SD = 12.2$).

Procedure. Participants watched a 2-minute, illustrated video containing the background and instructions for the study. They were told about an individual named "Casey" who lived on another planet where people had many different powers.

Manipulation of stimuli complexity. Participants in the low complexity condition learned that Casey lived on a planet where people had the ability to move objects with their minds. This ability was called *Melb* and people had varying levels of it. *Melb* was depicted as a glowing, red orb centered on a person's head. The more *Melb* a person had, the larger their red orb was. Participants in the high complexity condition learned that Casey lived on a planet where people had varying levels of *Melb* and varying levels of an additional trait called *Flobe*—the ability to float in the air. *Flobe* was depicted as a glowing, golden disk floating underneath an individual's feet. The more *Flobe* a person had, the larger the golden disk.

Covariation detection task. Participants then learned that Casey went to a party and met a bunch of different people. Specifically, participants saw a slideshow of 24 people Casey met at this party, each represented by a stick figure with a trivial name (e.g., Person A, Person B, Person C.) The 24 slides were presented in a random order. Each slide contained the following information: (a) the amount of *Melb* (low complexity condition) or *Melb* and *Flobe* (high complexity condition) each person had, and (b) whether Casey liked or disliked the person (12 people were liked and 12 people were disliked), see Figure 1 of the main manuscript. Each slide appeared for 8 seconds before automatically advancing to the next slide. Participants were told that while viewing the slideshow that they should "try to get an idea of Casey's likes and dislikes, as well as how much *Melb* (or *Melb* and *Flobe*), each person had." Stimuli properties for all studies are presented in the Supplemental Materials, Appendix A.

Manipulating Casey's functional preference strength. We manipulated Casey's functional preference for *Melb* by varying the strength of the covariation between the amount of *Melb* each of the 24 potential mates had and Casey's evaluations of those potential mates. In the *weak functional preference* condition, the people Casey liked and disliked had very similar values of *Melb* on average—meaning that the amount of *Melb* a person had only weakly predicted whether Casey liked or disliked them (the average *Melb* of the people Casey liked was 7 and the average *Melb* of the people Casey disliked was 6; Figure 3 of the main manuscript, top). In the *strong functional preference* condition, the people Casey liked had a much higher average value of *Melb* than the people Casey disliked—meaning that the amount of *Melb* a person had strongly predicted whether Casey liked or disliked them (the average *Melb* of the people Casey liked was 9 and the average *Melb* of the people Casey disliked was 4; Figure 3 of the main manuscript, bottom). The average *Melb* of all 24 potential mates was held constant across the weak functional preference and strong functional preference conditions (i.e., the average *Melb* was always 6.5).

We did not manipulate the functional preference strength of *Flobe*. As stated above, *Flobe* was simply included as a manipulation of stimuli complexity. To ensure that *Flobe* was equally likeable across both the weak and strong *Melb* functional preference conditions, the people Casey liked always had an average *Flobe* of 8 and the people Casey disliked always had an average *Flobe* of 5. To keep the information presented about Casey's functional preference for each trait orthogonal, *Melb* and *Flobe* levels were chosen so that the two traits did not correlate with one another (r = .03) across targets.

Casey's summarized preference for Melb. The dependent measure was participants' judgment of Casey's summarized preference for *Melb*, assessed with four items: "How important is *Melb* to Casey in a romantic partner?", "How much does Casey value *Melb* in a romantic partner?," "How desirable is *Melb* to Casey in a romantic partner?," and "To what extent does *Melb* characterize Casey's ideal romantic partner?" on scales from 1 (*not at all*) to 9 (*extremely*). These four items were highly reliable (α = .98) and were thus averaged to form a scale reflecting participants' judgments of Casey's summarized preference for *Melb*.

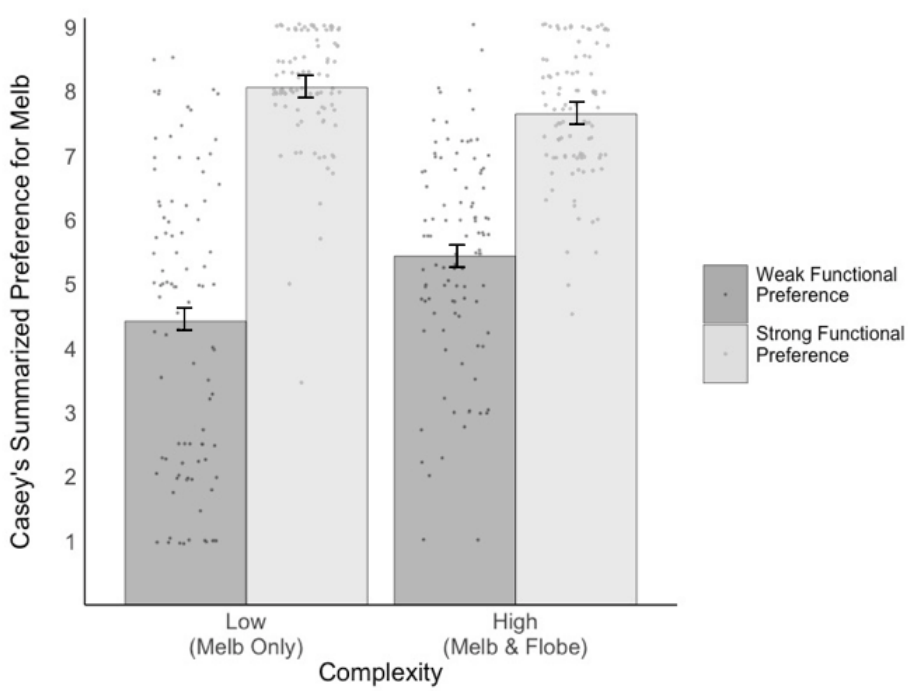
Results and Discussion

A 2 (functional preference strength: weak vs. strong) x 2 (stimuli complexity: low vs. high) between-subjects ANOVA revealed a significant main effect of functional preference strength, $F(1, 382) = 344.56$, $p < .001$, $\eta_p^2 = 0.47$, and a marginally significant main effect for stimuli complexity, $F(1, 382) = 3.58$, $p = .059$, $\eta_p^2 = 0.01$. More importantly, the interaction between functional preference strength and the complexity of the stimuli was significant, F(1,

382) = 20.41, $p < .001$, $\eta_p^2 = 0.05$, indicating that complexity attenuated the effect of functional preference strength on summarized preference judgments (see Figure 1s).

We conducted tests of simple main effects to further unpack this interaction. When complexity was low (*Melb* only), participants inferred that Casey's summarized preference for *Melb* was substantially lower in the weak ($M = 4.42$, $SD = 2.28$) than in the strong ($M = 8.05$, $SD = 0.91$) functional preference condition, $F(1, 382) = 259.63$, $p < .001$, $d = 2.05$. When complexity was high (both *Melb* and *Flobe*), this effect was still significant but smaller: Participants indicated that Casey's summarized preference for *Melb* was lower in the weak ($M = 5.43$, $SD = 1.63$) than the strong ($M = 7.64$, $SD = 0.99$) functional preference condition $F(1, 382) = 101.24$, $p < .001$, $d = 1.74$.

Figure 1s: Supplemental Study 1a Results



In the high complexity condition, participants also reported Casey's summarized preference for *Flobe* using the same four items ($\alpha = .96$) that they used to report Casey's summarized preference for *Melb*. This preference did not differ significantly between the strong ($M = 6.09$, $SD = 1.61$) and weak ($M = 6.49$, $SD = 1.78$) conditions, $t(196) = 1.64$, $p = .103$, $d = .23$. This small effect likely reflects the fact that the functional preference for *Flobe* was identical across the two conditions, although it is perhaps notable that participants seemed to be contrasting their *Flobe* preference judgments away from their *Melb* preference judgments (i.e., summarized preferences for *Flobe* were higher when summarized preferences for *Melb* were lower, and vice versa).

This study demonstrates that participants can successfully infer a summarized attribute preference from a corresponding functional attribute preference, but also shows that this ability is attenuated when evaluating more complex stimuli. Participants in the weak functional preference condition indicated that *Melb* was significantly less important to Casey than participants in the strong functional preference condition, but the diminished effect size in the high complexity conditions suggest that increased complexity (via the addition of *Flobe*) may have interfered with the process of translating a functional into a summarized attribute preference. In other words, it may be more difficult for people to accurately infer summarized from functional attribute preferences when demands on working memory are comparatively high because they have to keep track of a variety of different traits (as in the real world).

Supplemental Study 2a

We employed a 2 (attribute quantity: low vs. high) x 2 (stimuli complexity: low vs. high) experimental design to examine whether participants' judgments of another person's summarized preference for an attribute varied as a function of the quantity of that attribute in the population of interest, and whether this effect was moderated by stimuli complexity. Given the pattern of results we observed in Supplemental Study 1a when we increased the complexity of the stimuli, we expected that a biasing effect of attribute quantity might be more likely to emerge under conditions of high complexity (i.e., when adding the attribute *Flobe*, just as in Supplemental Study 1a). In other words, adding an extraneous variable for participants to monitor might cause judgments of summarized preferences to be unduly influenced by incidental situational factors that do not actually reflect underlying functional preferences.

Method

Participants. Participants were 407 workers recruited from MTurk. Nineteen participants who completed the survey were excluded from any subsequent analyses because they selected the incorrect response to the attention check item, making our final sample size 388 Mechanical Turk workers (48.5% male, 51.3% female and 0.26% Other; aged 18-76, $M_{age} = 35.7$, $SD = 12.1$).

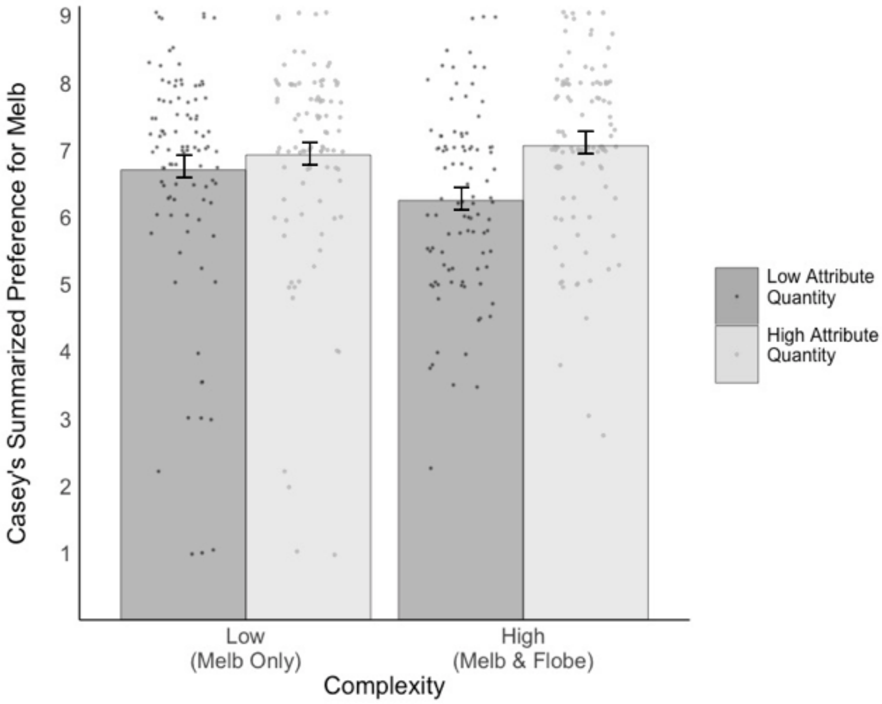
Procedure. The procedure was identical to Supplemental Study 1a (participants learned about an imaginary character named Casey), except for the following major change: The slideshow depicted 24 potential mates who, on average, had either relatively *low quantities* of *Melb* (average *Melb* = 5.5) or *high quantities* of *Melb* (average *Melb* = 7.5; see Figure 5 of the main manuscript) Casey's functional preference for *Melb* was held constant across these two attribute quantity conditions, and was designed to be of moderate strength (i.e., the average *Melb* of the people Casey liked was always 3 units higher than the average *Melb* of the people Casey disliked.) This means that regardless of whether the average quantity of *Melb* in the population of potential mates was low or high, *Melb* levels predicted Casey's evaluations of potential mates to the same extent. The dependent measure was the same four-item summarized preference measure from Supplemental Study 1 ($\alpha = .96$).

Results and Discussion

A 2 (attribute quantity: low vs. high) x 2 (stimuli complexity: low vs. high) between-subjects ANOVA revealed a main effect of attribute quantity, $F(1, 384) = 11.82$, $p = .001$, $\eta_p^2 = 0.03$; there was no significant main effect of stimuli complexity, $F(1, 384) = 1.12$, $p = .291$, $\eta_p^2 = 0.00$. Importantly, the analysis also revealed the predicted interaction between the quantity of *Melb* in the population and the complexity of the stimuli, $F(1, 384) = 3.87$, $p = .050$, $\eta_p^2 = 0.01$, indicating that complexity exacerbated the effect of attribute quantity on summarized preference judgments (Figure 2s).

Simple main effects tests indicated that when stimuli complexity was low, participants' judgments of Casey's summarized preference for *Melb* did not differ significantly between the low ($M = 6.70$, $SD = 1.70$) and high ($M = 6.92$, $SD = 1.56$) attribute quantity conditions, $F(1, 384) = 1.06$, $p = .303$, $d = 0.14$. However, when stimuli complexity was high, participants' judgments of Casey's summarized preference for *Melb* was lower in the low ($M = 6.24$, $SD = 1.35$) than the high ($M = 7.06$, $SD = 1.29$) attribute quantity condition, $F(1, 384) = 14.83$, $p < .001$, $d = 0.62$. These findings suggest that stimuli complexity moderates the extent to which the quantity of an attribute in the population influences people's judgments of a summarized preference for that attribute.

Figure 2s: Supplemental Study 2a Results



In the high complexity condition, participants again reported Casey's summarized preference for *Flobe* (α = .96). This preference showed a marginally significant pattern that was the opposite of the *Melb* pattern: The *Flobe* preference was higher in the low (M = 6.63, SD = 1.46) than the high (M = 6.27, SD = 1.55) *Melb* quantity conditions, $t(195) = 1.69$, $p = .092$, d = .24. Again, participants seemed to be contrasting their *Flobe* preference judgments away from their *Melb* preference judgments, although this effect was small relative to the effect of *Melb* quantity in the same two conditions (i.e., d = .62 vs. .24).

Supplemental Study 3

The factor design of this study was identical to that described in Study 3 in the main manuscript (attribute quantity x reference standard). However, Supplemental Study 3 assessed participants' judgments of another person's (Casey's) summarized preferences instead of their own.

Method

Participants. Participants were 1224 workers recruited from MTurk. Seventy-two participants who completed the survey were excluded for failing the attention check, making our final sample size 1152 (71.0% male; aged 17-79, M_{age} = 35.2, *SD* = 11.9).

Procedure. This study involved a 2 (attribute quantity: low vs. high) x 3 (reference standard: *no Flobe* vs. unequal *Flobe* vs. equal *Flobe*) between-subjects design. The attribute quantity factor was manipulated just as in Study 2 and Supplemental Study 2a, so that the average amount of *Melb* in the pool of potential mates was either low or high.

Manipulating Flobe as a reference standard. The reference standard factor manipulated the extent to which participants were able to use the amount of *Flobe* in the population as a reference standard against which to judge the relative value of *Melb*. Just as in Study 3, this factor had three conditions: (a) the *no Flobe* condition, (b) the *unequal Flobe* condition, and (c) the *equal Flobe* condition.

The *no Flobe* condition was identical to the low complexity conditions in Study 2 and Supplemental Study 2a wherein potential mates had, on average, relatively low average amounts of *Melb* (average = 5.5) or relatively high average amounts of *Melb* (average = 7.5). Just as in previous studies, no information regarding *Flobe* was provided in this condition.

The *unequal Flobe* condition was identical to the high complexity conditions in Study 2 and Supplemental Study 2a. The average *Melb* of potential mates was either less than their average amount of *Flobe* (low attribute quantity condition: *Melb* is 5.5 and *Flobe* is 6.5) or greater than their average amount of *Flobe* (high attribute quantity condition: *Melb* is 7.5 and *Flobe* is 6.5; see Figure 7, Unequal Flobe Condition).

In the *equal Flobe* condition, we adjusted the average amount of *Flobe* to be equal to the average amount of *Melb*. In the low attribute quantity condition, the average *Melb* of potential mates was 5.5, so the average amount of *Flobe* was adjusted to be 5.5 as well (we accomplished this by subtracting 1 unit of *Flobe* from each of the 24 potential mates that appeared in the relative differences condition). In the high attribute quantity condition, the average *Melb* of potential mates was 7.5, so the average amount of *Flobe* was adjusted to be 7.5 as well (we accomplished this by adding 1 unit of *Flobe* to each of the 24 potential mates; see Figure 7 of the main manuscript, Equal Flobe Condition).

Casey's summarized preference for Melb. Participants responded to the same four-item scale described in Supplemental Studies 1a and 2a ($\alpha = .95$).

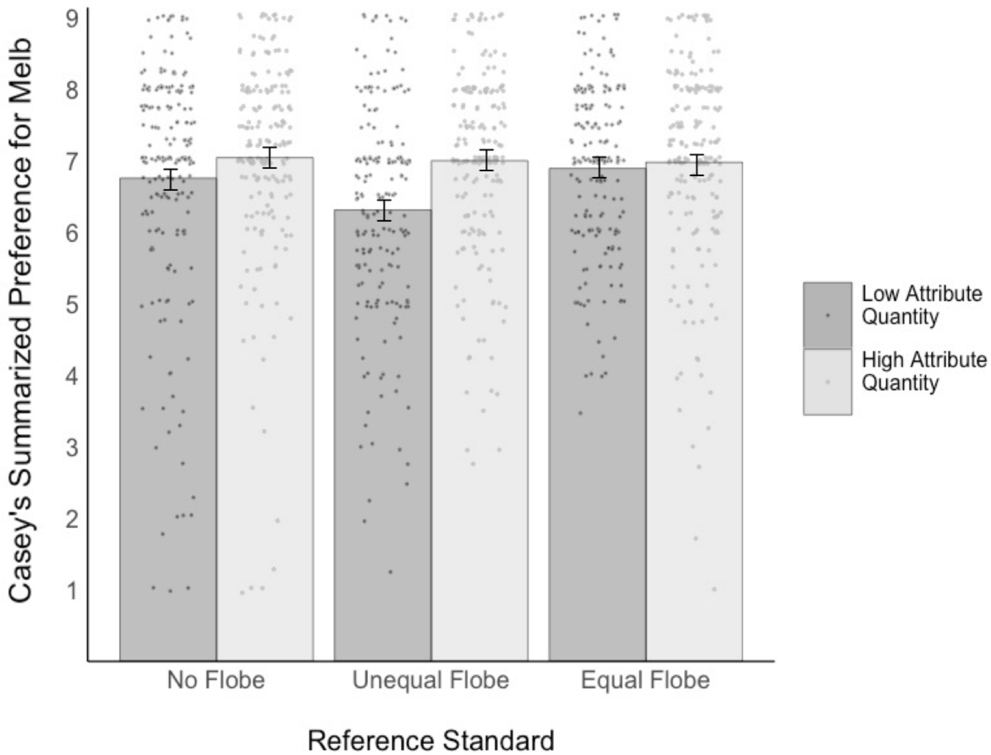
Results and Discussion

Recall that a standard-of-comparison account would predict the emergence of a two-way interaction between quantity and reference standard. That is, the previously obtained main effect of quantity should be stronger in the unequal *Flobe* than in the no *Flobe* and equal *Flobe* conditions. A 2 (attribute quantity: low vs high *Melb*) x 3 (reference standard: *no Flobe* vs. unequal *Flobe* vs. equal *Flobe*) factorial ANOVA revealed significant main effects of both attribute quantity, $F(1, 1146) = 17.42$, $p < .001$, $\eta_p^2 = 0.02$, and reference standard, $F(2, 1146) = 4.27$, $p = .014$, $\eta_p^2 = 0.01$. More importantly, the analysis also revealed the predicted interaction between attribute quantity and reference standard, $F(2, 1146) = 4.38$, $p = .013$, $\eta_p^2 = 0.01$, suggesting that the effect of attribute quantity on summarized preference judgments depended on whether participants were able to use *Flobe* as a referent or not (Figure 3s).

Simple main effects tests indicated that as expected, the *no Flobe* condition replicated the findings from Supplemental Study 2a: Participants' judgments of Casey's summarized preferences were very similar in the low (*M* = 6.75, *SD* = 1.69) and high (*M* = 7.04, *SD* = 1.45) attribute quantity conditions, $F(1, 1146) = 3.87$, $p = .050$, $d = 0.18$. Meanwhile, as expected, the *unequal Flobe* condition replicated Supplemental Study 2a as well: When the average amount of *Melb* was less than the average amount of *Flobe* (the low attribute quantity condition), participants indicated that Casey's summarized preference for *Melb* was lower (*M* = 6.31, *SD*=1.53) than the high attribute quantity condition (*M* = 6.99, *SD* = 1.29) where the average amount of *Melb* was greater than the average amount of *Flobe*, $F(1, 1146) = 21.72$, $p < .001$, $d = 0.48$.

Of special importance to the present study, in the *equal Flobe* condition, the effect of attribute quantity on summarized preference judgments disappeared. That is, when the average amount of *Melb* and *Flobe* in the environment were equal, participants' judgments of Casey's summarized preferences were similar across the low (*M* = 6.89, *SD* = 1.18) and high (*M* = 6.97, *SD* = 1.41) attribute quantity conditions, $F(1, 1146) = 0.33$, $p = .565$, $d = 0.06$. That is, in the absence of a *relative* difference between *Melb* as compared to *Flobe*, participants were not biased by the absolute quantity of *Melb* when making summarized preference judgments.

Figure 3s: Supplemental Study 3 Results



In the unequal *Flobe* and equal *Flobe* conditions, participants again reported Casey's summarized preference for *Flobe* (α = .97). A 2 (attribute quantity: low vs high *Melb*) x 2 (reference standard: unequal *Flobe* vs. equal *Flobe*) factorial ANOVA revealed a nonsignificant main effect of both attribute quantity, $F(1, 758) = 0.04$, $p = .837$, $\eta_p^2 = 0.00$, and reference standard, $F(1, 758) = 1.16$, $p = .282$, $\eta_p^2 = 0.00$, and a significant interaction between attribute quantity and reference standard, $F(1, 758) = 8.55$, $p = .004$, $\eta_p^2 = 0.01$.

Simple main effects tests indicated that participants' judgments of Casey's summarized preferences for *Flobe* in the unequal *Flobe* condition replicated the trend in Supplemental Study 2a: When the average amount of *Flobe* was greater than the average amount of *Melb* (the low attribute quantity condition), participants indicated that Casey's summarized preference for

Flobe was higher (M = 6.88, SD=1.45) than the high attribute quantity condition (M = 6.53, SD = 1.47) where the average amount of *Flobe* was lower than the average amount of *Melb*, $F(1, 758) = 4.85$, p =.028, d = 0.24. However, this effect was again smaller than the parallel effect for *Melb* (d = .48 vs. .24). In the *equal Flobe* condition, simple main effects tests revealed a marginally significant difference between the low (M = 6.43, SD = 1.62) and high (M = 6.74, SD = 1.65) attribute quantity conditions, $F(1, 758) = 3.73$, p =.054, d = -0.19. Overall, this study again provides some suggestive evidence that participants were contrasting their *Flobe* judgments away from their *Melb* judgments—they always provided the *Melb* judgments first—but the effects on *Flobe* tended to be smaller than the contrasting effect on *Melb*.

Appendix D: Supplemental Studies 1b and 1c

Supplemental Study 1b

Method

Participants. Participants were 100 workers recruited from MTurk. Three participants who completed the survey were excluded from any subsequent analyses because they selected the incorrect response to the attention check item, making our final sample size 97 participants (60.8% male; ages between 18 and 62 years old, $M_{age} = 29.3$, $SD = 9.4$).

Procedure. The procedure and materials were identical to the low complexity condition of Supplemental Study 1a with one exception: participants' summarized preference judgements were measured with a single item: “How important is *Melb* to Casey in a romantic partner?” on a scale ranging from 1 (*not at all*) to 9 (*extremely*).

Results and Discussion

We conducted an independent samples t-test to determine whether participants’ ratings of how important *Melb* was to Casey in a romantic partner (Casey’s summarized preference for *Melb*) varied as a function of Casey’s functional preference for *Melb*. As hypothesized, participants in the weak functional preference condition indicated that *Melb* was significantly less important to Casey ($M = 3.67$, $SD = 2.24$) than participants in the strong functional preference condition ($M = 7.69$, $SD = 1.27$), $t(76) = 10.88$, $p < .001$, $d = 2.21$. Thus, in a direct replication of the low complexity condition of Supplemental Study 1a, participants’ judgments of Casey’s summarized preferences for *Melb* reflected Casey’s functional preference for *Melb,* suggesting that participants were able to translate Casey’s functional preference into a corresponding summarized preference.

Supplemental Study 1c

Method

Participants. Participants were 104 workers recruited from MTurk. Four participants who completed the survey were excluded from any subsequent analyses because they selected the incorrect response to the attention check item, making our final sample size 100 Mechanical Turk workers (56.0% male; ages between 18 and 73 years old, M_{age} = 35.3, *SD* = 11.3).

Procedure. The procedure and materials were identical to the high complexity condition of Supplemental Study 1a, except once again participants summarized preference judgements were measured with the single item “How important is *Melb* to Casey in a romantic partner?” on a scale ranging from 1 (*not at all*) to 9 (*extremely*). The *Flobe* preference was also measured with a single item “How important is *Flobe* to Casey in a romantic partner?”

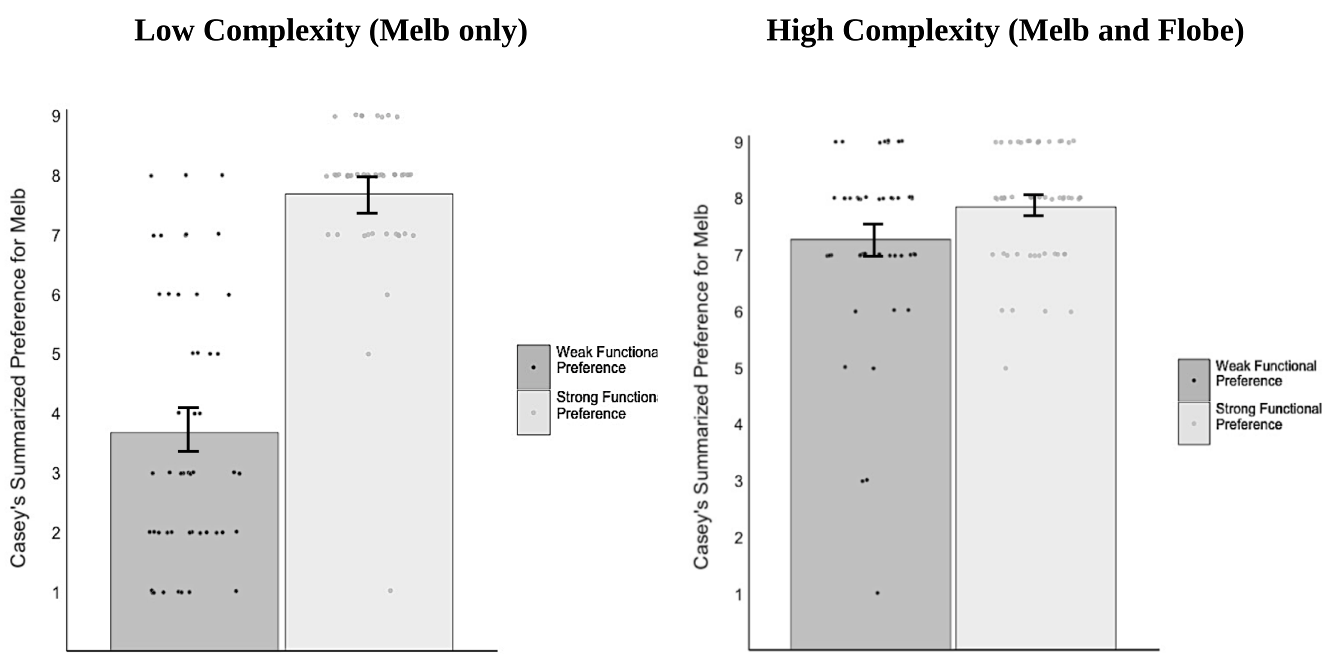
Results and Discussion

Participants in the weak functional preference condition reported that *Melb* was significantly less important to Casey (*M* = 7.27, *SD* = 1.65) than participants in the strong functional preference condition (*M* = 7.85, *SD* = 0.99), $t(98) = 2.13$, $p = .036$, but this effect (d = 0.43) was considerably weaker compared to the low complexity scenario reported in Supplemental Study 1b (d = 2.21). Also, participants reported that Casey had a stronger preference for *Flobe* in the weak condition (*M* = 7.42, *SD* = 1.65) than the strong (*M* = 6.33, *SD* = 1.20) condition, $t(98) = 3.80$, $p < .001$, $d = .76$.

Taken together, these results parallel those reported in Supplemental Study 1a: Supplemental Study 1b is a direct replication of the Supplemental Study 1a's low complexity condition, and Supplemental Study 1c is a direct replication of Supplemental Study 1a's high complexity condition (Figure 4s). Also, results for the *Flobe* preference in Supplemental Study

1c suggests that the functional preference manipulation for _Melb_ pushed participants to adjust their estimates of Casey's summarized preference for *Flobe* away from their summarized preferences for *Melb*.

Figure 4s. Supplemental Study 1b and 1c Results



Appendix E: Supplemental Studies 2b and 2c

Supplemental Study 2b

Method

Participants. Participants were 101 MTurk workers. Five participants who completed the survey were excluded from any subsequent analyses because they selected the incorrect response to the attention check item, making our final sample size 96 (52.1% male; ages between 18 to 69 years old, M_{age} = 31.8, *SD* = 11.5).

Procedure. The procedure and materials were identical to the low complexity condition of Supplemental Study 2a, except participants' summarized preference judgements were measured with the same single item reported in Supplemental Studies 1b and 1c.

Results and Discussion

Directly replicating the results in the low complexity condition of Supplemental Study 2a, participants' judgments of Casey's summarized preferences were similar across the low (*M* = 6.71, *SD* = 1.49) and the high (*M* = 6.87, *SD* = 1.17) attribute quantity conditions, $t(94) = 0.58$, $p = .565$, $d = 0.12$. Thus, when evaluating simple stimuli, participants were able to accurately translate Casey's functional preference into a summarized preference, regardless of the average amount of *Melb* in the population of potential partners.

Supplemental Study 2c

Method

Participants. Participants were 98 MTurk workers. Four participants were excluded because they selected an incorrect response to the attention check item, resulting in a final sample size of 94 (50.0% male; ages between 19 and 73 year old, M_{age} = 38.5, *SD* = 14.7).

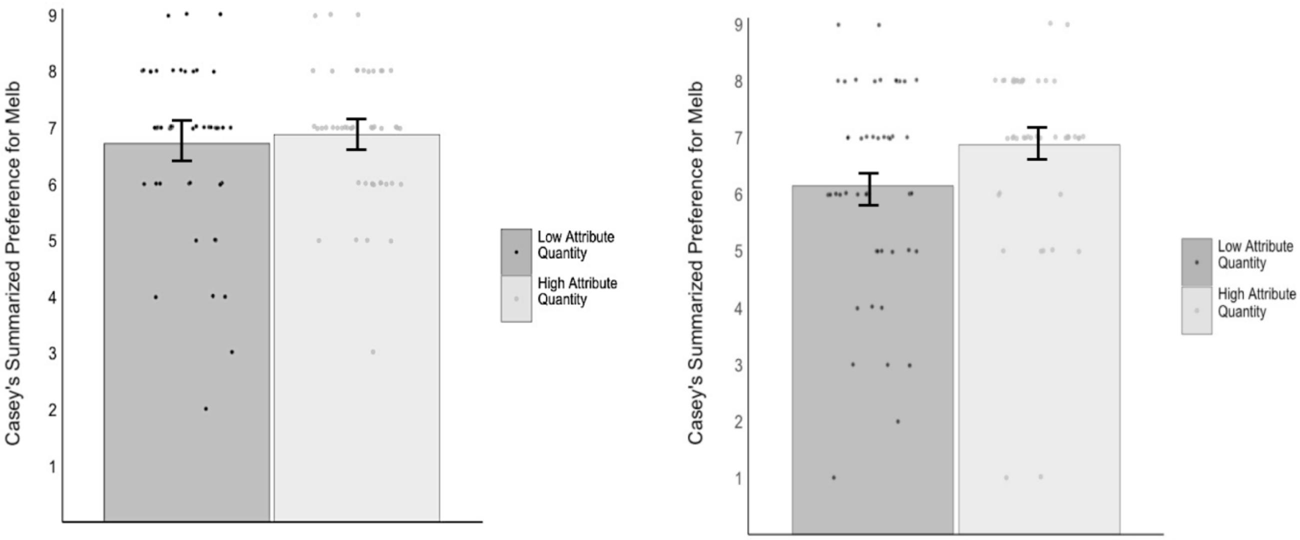
Procedure. The procedure and materials were identical to the high complexity condition of Supplemental Study 2a, except participants' summarized preference judgements were measured with a single item as reported above.

Results and Discussion

Directly replicating the results in the high complexity condition of Supplemental Study 2a, participants assigned to the low attribute quantity condition reported that Casey valued *Melb* significantly less (M = 6.15, SD = 1.81) than participants assigned to the high attribute quantity condition (M = 6.87, SD = 1.61), $t(92)$ = 2.04, p = .044, d = 0.42 (Figure 5s). Thus, participants' judgments of Casey's summarized preferences for *Melb* were influenced by the average quantity of *Melb* in the population when evaluating high complexity stimuli. Also, participants reported that Casey valued *Flobe* more in the low (M = 6.98, SD = 1.39) than the high (M = 6.30, SD = 1.60) *Melb* quantity conditions, $t(92)$ = 2.18, p = .032, d = .45. Again, participants seemed to be contrasting their *Flobe* preference judgments away from their *Melb* preference judgments. Jointly, the results of Supplemental Studies 2b and 2c replicated Supplemental Study 2a.

Figure 5s. Supplemental Study 2b and 2c Results

Low Complexity (Melb only) **High Complexity (Melb and Flobe)**



Appendix F: Supplemental Study 4

Supplemental Study 4 was an initial attempt to identify an explanation for why the average level of *Melb* in a population biases participants' summarized preference judgments under conditions of high complexity. One plausible account for this pattern of results centers on the *feature-positive effect,* which refers to the tendency for individuals to preferentially attend to information where a relevant feature of interest is paired with the occurrence of an event (feature-positive cases) rather than the *non*-occurrence of an event (feature-negative cases; Jenkins & Sainsbury, 1970). For example, Sainsbury and Jenkins (1967) demonstrated that subjects performed better on a covariation detection task when the task contained feature-positive trials (trials where a relevant feature—in this case a black dot—was paired with the presence of food reinforcement) rather than feature-negative trials (the black dot was paired with the absence of food reinforcement). Similarly, participants who judged the covariation between cloud seeding and rainfall preferentially attended to cases where events did (versus did not) occur (i.e., they attended primarily to cases when cloud seeding and rainfall co-occurred compared to all other cases; Ward & Jenkins, 1965).

In our studies, one could apply this reasoning to define feature-positive trials as trials in which the relevant feature *Melb* was paired with the occurrence of an event (Casey liking a potential mate), rather than the non-occurrence of an event (Casey *not* liking a potential mate). Building on the feature positivity literature, we might then expect that participants' judgments of Casey's summarized preference for *Melb* would be disproportionately influenced by feature-positive information. That is, in order to correctly identify Casey's functional preference for *Melb,* participants must attend to the *Melb* levels of both the liked and disliked potential mates equally, as it is the difference between the average *Melb* levels of these two groups that constitutes Casey's functional preference for *Melb*. However, if participants are disproportionately weighting the importance of the potential mates Casey likes (i.e., feature-positive cases), then participants in the low quantity condition may conclude that Casey values *Melb* less than those in the high quantity condition, because the average *Melb* of the potential mates Casey likes in the low quantity condition is indeed less than the average *Melb* of the potential mates Casey likes in the high quantity condition.

Meanwhile, considerable research has demonstrated that increasing the complexity of a task increases demands on working memory, which can trigger or enhance a range of biases and heuristics (e.g., Allred, Crawford, Duffy, & Smith, 2016; De Dreu, 2003; Klayman & Ha, 1987; see also Chaiken & Ledgerwood, 2012). Thus, we might expect that any bias produced by a feature-positivity effect would be especially likely to emerge when complexity is high (versus low).

In Supplemental Study 4, to directly test the possibility that feature positivity might explain the biasing effect of attribute level in the high complexity condition, we added a condition wherein the covariation detection task included *only* feature-positive cases (for an example of this strategy, see Tweney et al, 1980). In this condition, rather than pairing *Melb* with either the occurrence of an event (liking a potential mate) or the non-occurrence of an event (not liking a potential mate), we paired *Melb* with the occurrence of one of two possible events (being assigned to one of two teams). If complexity causes participants to focus on feature-positive cases, then under conditions of high complexity, participants completing the original version of the task (where potential mates are liked/disliked) should be affected by the quantity of *Melb* in the environment more strongly than participants completing the version of the task where potential mates are assigned to teams.

Method

Participants. Participants were 809 workers recruited from MTurk. Thirty-nine participants who completed the survey were excluded for failing the attention check item, making our final sample size 770 (45.6% male, 54.3% female and 0.13% “Other”; ages between 18 and 75 years old, $M_{\text{age}} = 39.6$, $SD = 13.2$).

Procedure. This study involved a 2 (attribute quantity: low vs. high) x 2 (stimuli complexity: low vs. high) x 2 (task version: liking vs. teams) between-subjects design. The first two factors were manipulated just as in Supplemental Study 2a, and the procedure was identical to that study except for the following changes.

***Manipulating task version to test a feature-positivity account*.** In all of the previous studies, the covariation detection task involved both feature-positive and feature-negative cases. In the feature-positive cases, the *Melb*-level of potential mates was accompanied by the information that Casey liked them (the occurrence of an event); in the feature-negative cases, the *Melb*-level of potential mates was accompanied by the information that Casey disliked them (the non-occurrence of an event). This condition—which we call the *liking* task condition in the present study—was identical to the covariation detection tasks used in previous studies.

In the *teams* task condition, the covariation detection task only involved feature-positive cases. Specifically, the amount of *Melb* a potential mate had was paired with the occurrence of one of two potential events: Casey assigned each potential mate to Robert’s team or to John’s team, as described below. To further ensure that these two events were comparable, we selected the team names based on a review from Kasof (1993) which reported that the names “Robert” and “John” were rated as equally attractive and competent when measured repeatedly across three decades.

Participants in the *teams* task condition watched an instructional video that was similar to those described in previous studies, except that instead of meeting 24 potential mates at a party, Casey organized a game for everyone to play at the party and met 24 potential teammates. This version of the instructional video explained that Casey put some people on Robert's team and put other people on John's team. Participants then viewed a slideshow of the 24 people that played the game with Casey—12 people were placed on Robert's team and 12 people were placed on John's team. Each slide contained how much *Melb* (or how much *Melb* and *Flobe*) each player had, as well as information about whether Casey assigned the person to Robert's team or John's team. Participants were told that while viewing the slideshow they should "try to get an idea of which team Casey put each person on, as well as how much *Melb* [or *Melb* and *Flobe*] each person [had]."

Casey's summarized preference for Melb. Immediately after viewing the slideshow, participants in the *liking* task condition answered the question "How much did the amount of *Melb* a person had influence whether Casey liked them?" Participants in the *teams* task condition answered the question: "How much did the amount of *Melb* a person had influence which team Casey put them on?" Both items used a response scale that ranged from 1 (*not at all*) to 9 (*extremely*). Thus, in both conditions, the dependent measure assessed participants' perceptions of the extent to which *Melb* influenced Casey's responses to people at the party (note that we slightly modified the wording of the dependent measure for this study so that it would be analogous across task conditions). The *Flobe* preference item in the high complexity condition was worded similarly.

Results

Recall that a feature-positivity account would predict the emergence of a three-way interaction between quantity, complexity, and task version such that the previously obtained quantity x complexity interaction should emerge more strongly for the liking task than the teams task. A 2 (attribute quantity: low vs. high) x 2 (stimuli complexity: low vs. high) x 2 (task version: liking vs. teams) factorial ANOVA indicated a significant main effect of attribute quantity, $F(1, 762) = 5.66$, $p = .018$, $\eta_p^2 = 0.01$, and no significant main effect of stimuli complexity, $F(1, 762) = 0.42$, $p = .517$, $\eta_p^2 = 0.00$ or task version, $F(1, 762) = 0.20$, $p = .653$, $\eta_p^2 < 0.00$.

The factorial ANOVA also revealed non-significant effects for the task version x attribute quantity, $F(1, 762) = 1.36$, $p = .244$, $\eta_p^2 = 0.00$, and task version x stimuli complexity, $F(1, 762) = 0.77$, $p = .411$, $\eta_p^2 = 0.00$, 2-way interactions. There was a marginally significant 2-way interaction between attribute quantity and stimuli complexity, $F(1, 762) = 3.01$, $p = .083$, $\eta_p^2 = 0.004$, which approximately replicates the results from Supplemental Study 2a.[1]

Importantly, however, there was no evidence for the three-way interaction predicted by a feature-positivity account, $F(1, 762) = 0.02$, $p = .884$, $\eta_p^2 < 0.001$. In other words, task version did not moderate the two-way interaction between attribute quantity and stimuli complexity.

We can explore the data further by unpacking the marginally significant two-way interaction between attribute quantity and stimuli complexity into simple main effects (collapsing across task version). Replicating the results from Supplemental Study 2a, when viewing simple stimuli (*Melb* only) participants inferred that Casey's summarized preference for *Melb* was similar across the low ($M = 6.43$, $SD = 1.85$) and high ($M = 6.52$, $SD = 2.01$) attribute

[1] Although this two-way interaction was marginally significant when these participants were excluded (as per our data analysis plan), including participants who provided an incorrect answer to the attention check revealed a nonsignificant interaction.

quantity conditions, $F(1, 383) = 0.21$, $p = .650$, $d = 0.05$. But when viewing more complex stimuli (*Melb* and *Flobe*), participants inferred that Casey's summarized preference for *Melb* was lower in the low ($M = 6.12$, $SD = 1.79$) than high ($M = 6.66$, $SD = 1.72$) attribute quantity conditions, $F(1, 383) = 8.44$, $p = .004$, $d = 0.31$.

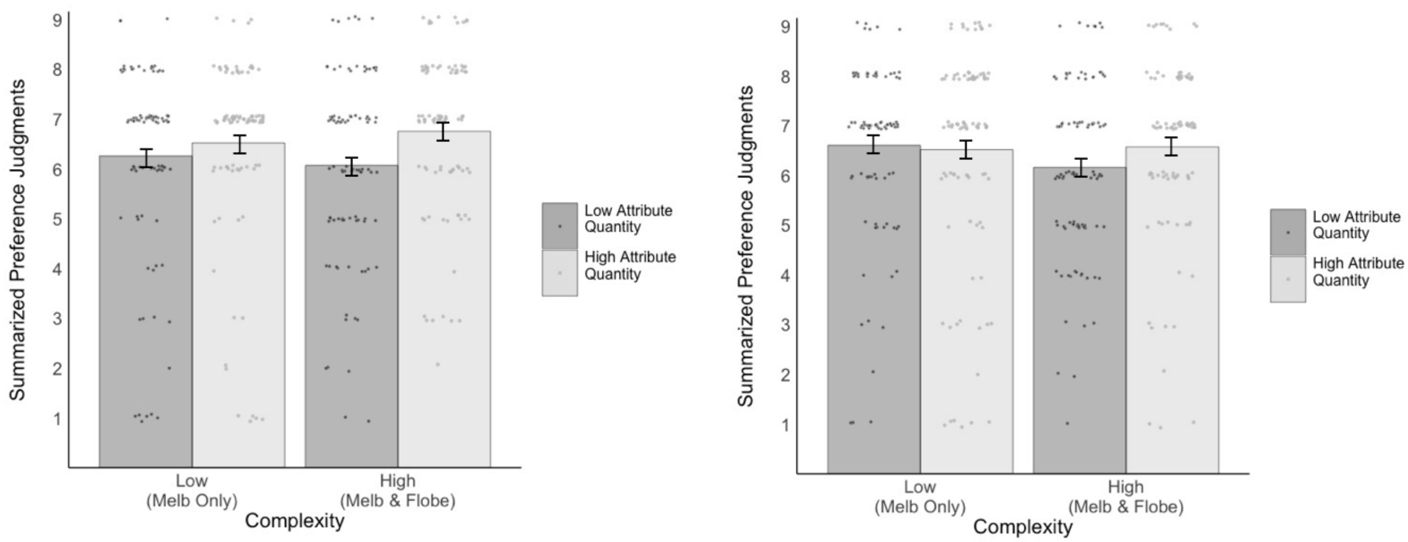
Participants in the high complexity condition also reported Casey's summarized preference for *Flobe*, but there were no main effects of attribute quantity, $F(1, 380) = 0.34$, $p = .559$, $\eta_p^2 = 0.00$, or task version, $F(1, 380) = 0.47$, $p = .492$, $\eta_p^2 < 0.00$. Also, there was no attribute quantity x task version interaction, $F(1, 380) = 1.48$, $p = .225$, $\eta_p^2 < 0.00$.

Discussion

Supplemental Study 4 provided no evidence for a feature-positivity account of the bias observed in Study 2 and Supplemental Studies 2a, 2b, and 2c (i.e., the tendency for participants to incorporate attribute quantity information when making summarized preference judgments under conditions of complexity). Whereas a feature-positivity account would predict that this bias would disappear in a version of the task that contained all feature-positive events (i.e., the *teams* task), we found no evidence for moderation by task type (*teams* vs. *liking*). Furthermore, in both versions of the task, results largely replicated the previous findings such that the quantity of *Melb* in the population biased participants' judgments when the stimuli were complex. In summary, the tendency for people to disproportionally weight feature-positive events when working memory is taxed (Klayman & Ha, 1987) was not a promising mechanism for explaining the effects documented in Study 2 and Supplemental Studies 2a, 2b, and 2c.

Figure 6s. Supplemental Study 4 Results

Liking Task **Teams Task**



Appendix G: Participants Performance on the DateFest Game

Although participants' performance on the DateFest game was not directly relevant to our hypotheses, we provide the performance data below in all three studies for the interested reader. The first set of columns refers to the percentage of "good dates" (i.e., the dates that earned 10 points) to which participants said "yes," the second set of columns refers to the percentage of "bad dates" (i.e., the dates that subtracted 10 points) to which participants said "yes," and the third set of columns refers to the average final score earned by participants after making all 24 choices. (The final score essentially reflects the difference between the "good dates" and "bad dates" percentages.)

Study 1		Yes % for good dates		Yes % for bad dates		Final Score	
		Functional preference		Functional preference		Functional preference	
		Weak	Strong	Weak	Strong	Weak	Strong
Complexity	Low	60.9%	83.4%	57.7%	21.4%	53.9	124.3
	High	62.9%	83.8%	43.7%	21.1%	73.0	126.5
Complexity		F(1,360) = 0.74		F(1,360) = 16.41***		F(1,360) = 11.83***	
Functional Preference		F(1,360) = 157.57***		F(1,360) = 268.24***		F(1,360) = 397.81***	
Interaction		F(1,360) = 0.59		F(1,360) = 13.61***		F(1,360) = 7.44***	

Study 2		Yes % for good dates		Yes % for bad dates		Final Score	
		Melb Attribute Quantity		*Melb* Attribute Quantity		*Melb* Attribute Quantity	
		Low	High	Low	High	Low	High
Complexity	Low	71.3%	67.7%	31.3%	37.9%	98.0	84.8
	High	72.3%	72.9%	35.2%	34.4%	94.4	99.0
Complexity		F(1,352) = 3.07		F(1,352) = 0.01		F(1,352) = 1.88	
Melb Quantity		F(1,352) = 0.71		F(1,352) = 2.35		F(1,352) = 2.90	
Interaction		F(1,352) = 1.49		F(1,352) = 3.82		F(1,352) = 8.15**	

Study 3		Yes % for good dates		Yes % for bad dates		Final Score	
		Melb Attribute Quantity		*Melb* Attribute Quantity		*Melb* Attribute Quantity	
		Low	High	Low	High	Low	High
Reference	No Flobe	69.9%	71.8%	34.6%	42.6%	92.3	84.8
	Unequal Flobe	80.6%	73.1%	35.6%	33.0%	94.6	98.1
	Equal Flobe	73.2%	74.8%	31.4%	37.3%	100.0	95.1
Reference		F(2,1095) = 13.77***		F(2,1095) = 6.29**		F(2,1095) = 10.11***	
Melb Quantity		F(1,1095) = 1.88		F(1,1095) = 10.87**		F(1,1095) = 2.70	
Interaction		F(2,1095) = 10.71***		F(2,1095) = 8.19***		F(2,1095) = 3.62*	