The harms of secrecy: Integrating data-driven dimension identification with experimental intervention to improve coping with secrecy

Supplemental Study: Content Ratings of Personal Secrets

Study 1 (across seven participant samples) found that people naturally see secrets as existing along three dimensions: how immoral they are, how relational they are, and how profession/goal-oriented they are. In so doing, we obtained coordinates for where each of the common categories of secrets were seen to consensually fall in the data-driven space spanned by the three dimensions.

Studies 2a-2c and 3 then validated the model, examining how people experience their real-world personal secrets. That is, from the secrets' coordinates on the three dimensions, we could predict how people who have such secrets experience those secrets, predicting: 1) reports of shame from the secret, uniquely from where secrets fall along the immoral dimension of the model; 2) reports of insight into the secret, uniquely from where those secrets fall along the profession/goal-oriented dimension; 3) how much participants feel their secrets connect them to others, uniquely from where those secrets fall along the relational dimension.

We posited that the relationship between the three data-driven dimensions (immoral, profession/goal-oriented, relational) and these three experiences (shame, insight, and social connection) are based in the content of the secrets. A Supplemental Study examined this hypothesis.

Method

Participants (89 men, 111 women; M_{age} = 35.10 years, SD = 12.23) recruited on MTurk were provided with the list of the common categories of secrets and per each current secret they had, participants completed a series of measures.

Novel to this Supplemental Study, participants rated the content of each of their current personal secrets. We created multi-item scales, predicting each to correspond to a dimension from the three-dimensional model of secrecy.

Specifically, the more our model predicts a particular secret to be *immoral*, the more we predict that participants who have that secret will say their secret involves a behavior that is *wrong or has caused some harm*.

The more our model predicts a particular secret to be *profession/goal-oriented*, the more we predict that participants who have that secret will say their secret involves *agency* (i.e., goal-directed action to get ahead).

Finally, the more our model predicts a particular secret to be *relational*, the more we predict that participants who have that secret will say their secret involves a behavior that is *social* in nature. Participants thus rated the extent to which each of their personal secrets involved a behavior that was harmful / wrong, based in agency, and based in sociality (Table S1).

Table S1. Rating content of *personal secrets (i.e., what participants indicate their secrets are about).*
Harmful / wrong (factor 1, α = .82)
Agency (factor 2, α = .86)
Sociality (factor 3, α = .72)

Item order	Rating the content of one's personal secret	Study 7 Factor 1 Harmful / Wrong	Study 7 Factor 2 Agency	Study 7 Factor 3 Sociality
2	This secret is about some harm I have caused	**.74**	-.17	.29
5	This secret is about something that others would frown upon	**.79**	.16	.04
8	This secret involves something that is wrong	**.84**	.08	.03
3	This secret is about competence and assertiveness	.24	**.80**	.06
6	This secret is about getting ahead in terms of social rank	.05	**.87**	.07
9	This secret involves the brain more than the heart	-.14	**.78**	.01
1	This secret involves someone else.	.16	.12	**.75**
4	This secret is about social activities.	.02	< .01	**.86**
7	This secret is about how I feel about others	.11	.02	**.90**

Note: from 1-not at all to 7-very much.

Next, we predicted that the more participants judged their secret to be harmful / wrong, the more shame they would experience from the secret. Additionally, we predicted that the more participants judged their secret to be based in agency, the more they would feel they understand the secret and have insight into it. Finally, we predicted that the more participants judged their secret to be based in sociality, the more they would indicate that the secret offers social connection to others.

For each secret the participants currently had, participants completed measures of how ashamed they were of the secret, how much insight they felt they had into it, and how much social connection it brought them (as in the main-text studies).

At the end of each study, we included an honesty check (asking whether participants fabricated answers about their secrets, and honesty was encouraged to help the researchers; compensation promised no matter their answer). Participants (n = 5) who admitted to fabricating answers were thus excluded from analysis.

Results

Given multiple secrets per participant, we analyzed our data via the same multilevel modeling strategy from the earlier studies.

Participants had on average 13.28 secrets of the 36 categories (*SD*=6.84, 95% CI = [12.32, 14.25], with 193 participants having at least one of the secrets. Participants in total had 2,590 secrets.

Table S2. Predicting participants' personal content ratings of their 2,590 secrets' from data-driven model coordinates (as determined by Study 1).

Predicting rating secrets at harmful/wrong: *M* = 3.20, *SD* = 1.86, 95% CI = [3.13, 3.27]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	**0.76**	**0.52, 0.99**	**0.12**	**31.29**	**6.19**	**<.0001**
relational	0.08	-0.17, 0.33	0.13	31.81	0.64	.53
profession/goal	-0.001	-0.25, 0.25	0.13	32.79	-0.01	.99
sociality	0.22	0.18, 0.25	0.02	2551.99	11.25	<.0001
agency	0.05	0.01, 0.09	0.02	2440.43	2.55	.01

Predicting rating secrets as based in agency: *M* = 2.80, *SD* = 1.74, 95% CI = [2.73, 2.86]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	-0.24	-0.42, -0.06	0.09	30.68	-2.63	.01
relational	-0.12	-0.30, 0.07	0.09	30.23	-1.25	.22
profession/goal	**0.53**	**0.34, 0.71**	**0.10**	**30.80**	**5.50**	**<.0001**
harmful/wrong	0.03	-0.01, 0.07	0.02	2523.18	1.57	.12
sociality	0.07	0.03, 0.11	0.02	2533.84	3.74	.0002

Predicting rating secrets as based in sociality: *M* = 3.50, *SD* = 1.91, 95% CI = [3.43, 3.57]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	-0.19	-0.45, 0.07	0.13	33.32	-1.45	.16
relational	**0.62**	**0.35, 0.89**	**0.14**	**32.51**	**4.56**	**<.0001**
profession/goal	-0.19	-0.46, 0.08	0.14	33.87	-1.37	.18
harmful/wrong	0.21	0.17, 0.25	0.02	575.39	10.99	<.0001
agency	0.10	0.06, 0.14	0.02	469.43	5.00	<.0001

Note: Predicted relationships in bold. In predicting each content rating, to isolate unique relationships we controlled for the other two content ratings (in italics).

Predicting from empirical model coordinates of secrets, participants' ratings of the content of their personal secrets.

Immoral coordinates and judging one's secret as harmful and wrong. As shown in Table S2, we found that the more a participant's personal secret fell higher on the immoral dimension (as determined by another group of participants), the more that participant felt their personal secret was harmful and wrong. In contrast, how relational and profession/goal-oriented it was according to the model, did not predict how much participants thought their secret was harmful and wrong.

Profession/goal-oriented coordinates and judging one's secret as based in agency. As shown in Table S2 above, the more a participant's personal secret fell higher on the profession/goal-oriented dimension (as determined by another group of participants), the more that participant felt their behavior was one based in agency and goal directed-action. In contrast, how relational the secret was according to the model, did not predict how much participants thought their behavior was based in agency.

Interestingly, the moral immoral the secret was according to the model, the more participants reported their secret was not based in agency. People generally think they are good people (De Freitas, Cikara, Grossmann, & Schlegel, 2017; Strohminger, Knobe, & Newman, 2017). Hence, it makes sense that the more immoral someone's secret is according to the model's coordinates, the more one would perceive diminished agency in the behavior kept secret (otherwise one has to live with the notion of having purposefully engaged in something harmful and wrong).

Relational coordinates and judging one's secrets based in sociality. As shown in Table S2 above, the more a participant's personal secret fell higher on the relational dimension (as determined by another group of participants), the more that participant felt their behavior was one based in sociality. In contrast, how immoral and profession/goal-oriented it was according to the model, did not predict how much the participant perceived sociality in their behavior.

Predicting from empirical model coordinates of secrets, participants' personal experience with their secrets. The above analyses found that from the secrecy space model's coordinates alone we could predict how much a participant believed the content of their personal secret to be harmful and wrong (immoral coordinates), based in agency (profession/goal-oriented coordinates), and based in sociality (relational coordinates).

We next examined (Table S3) whether from the model's coordinates we could also predict reports of shame, insight, and connectedness from those secrets.

Table S3. Predicting participants' feelings of shame, insight, and connectedness from their 2,590 secrets' data-driven model coordinates (as determined by Study 1).

Predicting shame: $M = 2.73$, $SD = 1.71$, 95% CI = [2.67, 2.80]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	**0.37**	**0.24, 0.50**	**0.07**	**29.28**	**5.64**	**<.0001**
relational	0.003	-0.13, 0.14	0.07	29.37	0.04	.97
profession/goal	-0.01	-0.15, 0.12	0.07	31.34	-0.21	.84
insight	-0.30	-0.34, -0.27	0.02	2460.47	-15.53	<.0001
connectedness	0.19	0.16, 0.23	0.02	2520.68	10.89	<.0001

Predicting insight: $M = 4.91$, $SD = 1.72$, 95% CI = [4.85, 4.98]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	-0.02	-0.09, 0.06	0.04	35.59	-0.40	.69
relational	0.01	-0.06, 0.09	0.04	33.06	0.35	.73
profession/goal	**0.11**	**0.03, 0.19**	**0.04**	**35.35**	**2.64**	**.01**
shame	-0.28	-0.32, -0.25	0.02	2422.37	-15.98	<.0001
connectedness	0.10	0.06, 0.13	0.02	1979.27	5.85	<.0001

Predicting connectedness: $M = 2.76$, $SD = 1.76$, 95% CI = [2.69, 2.82]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
immoral	-0.07	-0.28, 0.14	0.10	32.53	-0.67	.51
relational	**0.30**	**0.09, 0.52**	**0.11**	**32.06**	**2.80**	**.01**
profession/goal	-0.22	-0.43, -0.003	0.11	33.55	-1.98	.06
shame	0.24	0.20, 0.28	0.02	2483.80	11.42	<.0001
insight	0.13	0.09, 0.17	0.02	2147.30	5.95	<.0001

Note: Predicted relationships in bold. In predicting each experience, to isolate unique relationships we controlled for the other two experiences (in italics).

Immoral coordinates and feeling shame. As shown in Table S3 above, we found that the more a participant's personal secret fell higher on the immoral dimension (as determined by another group of participants), the more that participant was ashamed of their secret. In contrast, how relational and profession/goal-oriented it was according to the model, did not predict participants' feelings of shame from their personal secret.

Profession/goal-oriented coordinates and having insight. As shown in Table S3 above, the more a participant's personal secret fell higher on the profession/goal-oriented dimension (as determined by another group of participants), the more that participant felt they had insight into their secret. In contrast, how relational and profession/goal-oriented the secret was according to the model, did not predict how much participants thought they had insight into the secret.

Relational coordinates feeling connected. As shown in Table S3 above, the more a participant's personal secret fell higher on the relational dimension (as determined by another group of participants), the more that participant felt their secret offered a sense of social connection. In contrast, how immoral and profession/goal-oriented it was according to the model, did not predict how much the participants felt connected to others.

Participants' ratings of the content of personal secrets predict downstream experiences with those secrets. We next examined the relationships between how participants rated the content of their personal secret, and the experiences they reported those secrets engendered. Isolating each unique path, we included the coordinates of each secret space dimension, and the alternate experiences with secrets.

As can be seen in Table S4 below, 1) judgments of how wrong and harmful the secret was most strongly predicted feelings of shame from the secret; 2) judgments of how much the behavior was based in agency most strongly predicted feelings of insight into the secret; and 3) judgments of how much the behavior was based in sociality most strongly predicted feelings of connectedness from the secret. That is, when another dimension showed a relationship with a content rating, it was the hypothesized relationship that was strongest (as indicating by non-overlapping 95% CIs).

Table S4. Predicting participants' feelings of shame, insight, and connectedness from their 2,590 secrets' data-driven model coordinates (as determined by Study 1).

Predicting shame: *M* = 2.73, *SD* = 1.71, 95% CI = [2.67, 2.80]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
harm/wrong	**0.40**	**0.37, 0.43**	**0.02**	**2439.74**	**24.26**	**<.0001**
sociality	0.002	-0.03, 0.04	0.02	2389.85	0.14	.89
agency	0.10	0.07, 0.14	0.02	2531.78	6.00	<.0001
immoral	0.12	0.01, 0.22	0.06	35.06	2.07	.05
relational	-0.05	-0.17, 0.06	0.06	33.58	-0.92	.36
profession/goal	-0.10	-0.21, 0.02	0.06	36.17	-1.68	.10
insight	-0.26	-0.29, -0.22	0.02	2286.19	-14.72	<.0001
connectedness	0.10	0.06, 0.13	0.02	2551.66	5.61	<.0001

Predicting insight: *M* = 4.91, *SD* = 1.72, 95% CI = [4.85, 4.98]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
harm/wrong	0.003	-0.03, 0.04	0.02	1910.76	0.19	.85
sociality	0.01	-0.03, 0.04	0.02	1528.03	0.41	.68
agency	**0.11**	**0.07, 0.14**	**0.02**	**2274.95**	**6.12**	**<.0001**
immoral	0.01	-0.06, 0.09	0.04	41.94	0.34	.73
relational	0.02	-0.06, 0.09	0.04	37.22	0.43	.67
profession/goal	0.04	-0.04, 0.13	0.04	40.93	1.10	.28
shame	-0.29	-0.33, -0.25	0.02	2413.82	-14.86	<.0001
connectedness	0.09	0.06, 0.13	0.02	2313.17	5.10	<.0001

Predicting connectedness: *M* = 2.76, *SD* = 1.76, 95% CI = [2.69, 2.82]

Predictor	*b*	95% CI	*SE*	*df*	*t*	*p*
harm/wrong	0.11	0.07, 0.15	0.02	2538.79	5.33	<.0001
sociality	**0.32**	**0.29, 0.36**	**0.02**	**2500.47**	**17.6**	**<.0001**
agency	0.04	0.01, 0.08	0.02	2518.26	2.25	.02
immoral	-0.08	-0.24, 0.07	0.08	33.55	-1.03	.31
relational	0.07	-0.09, 0.23	0.08	32.64	0.89	.38
profession/goal	-0.20	-0.37, -0.04	0.08	34.46	-2.43	.02
shame	0.13	0.08, 0.17	0.02	2534.73	5.79	<.0001
insight	0.09	0.05, 0.13	0.02	1980.31	4.48	<.0001

Note: Predicted relationships in bold. In predicting each experience, to isolate unique relationships we controlled for the other two experiences (in italics).

Discussion

These studies suggest that three dimensions found from Study 1's data-driven approach refer primarily to the content of secrets. From the model's coordinates alone, we can predict how people rate the content of their own personal secret (and as in the main-text studies, the downstream experiences participants report their secrets engender).

Additionally, we connected each content rating to each experience. The more the content of the secret is immoral, participants rated their secret as being harmful and wrong and reported greater feelings of shame from the secret. The more the content of the secret is profession/goal-oriented, participants reported that they had agency in their secret and also reported they had insight into the secret. The more the content of the secret is relational, participants reported their secret as based in sociality and as offering social connection. In each case, the content rating was related to the experience.

Additional Analyses (Studies 2 and 3)

As mentioned in the General Discussion, while the present data indicate the dimensions are orthogonal to each other (Study 1), there is the possibility that these dimensions of secrecy interact to predict downstream experiences. To assess this possibility, we modeled every possible interaction of the secret's coordinates in predicting the reports of shame from the secret, social connectedness from the secret, and insight into the secret (from Studies 2 and 3). Specifically, we first examined each possible interaction in isolation, we then simultaneously entered each two-way interaction term, and finally, we also entered the three-way interaction term.

Table S5. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of shame from a secret, Study 2a

Predicting shame						
Study 2a	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	**0.29**	**0.05, 0.52**	**0.12**	**30.78**	**2.41**	**.02**
relational	0.08	-0.08, 0.25	0.08	29.90	1.00	.32
profession/goal	-0.01	-0.19, 0.16	0.09	32.31	-0.16	.87
imm. × relat.	-0.16	-0.49, 0.17	0.17	30.29	-0.95	.35
Predicting shame, Study 2a						
immoral	**0.38**	**0.21, 0.54**	**0.09**	**30.15**	**4.43**	**.0001**
relational	0.07	-0.14, 0.28	0.11	29.14	0.70	.49
profession/goal	-0.03	-0.21, 0.15	0.09	32.57	-0.34	.74
relat. × prof/goal	-0.03	-0.34, 0.29	0.16	29.55	-0.16	.87
Predicting shame, Study 2a						
immoral	**0.51**	**0.32, 0.69**	**0.09**	**31.19**	**5.37**	**<.0001**
relational	0.12	-0.04, 0.27	0.08	29.12	1.47	.15
profession/goal	-0.05	-0.20, 0.11	0.08	31.69	-0.58	.57
imm. × prof/goal	-0.28	-0.52, -0.05	0.12	32.87	-2.36	.02
Predicting shame, Study 2a						
immoral	**0.49**	**0.18, 0.80**	**0.16**	**30.22**	**3.09**	**.004**
relational	0.12	-0.08, 0.33	0.10	26.89	1.18	.25
profession/goal	-0.04	-0.22, 0.13	0.09	31.47	-0.50	.62
imm. × relat.	-0.03	-0.38, 0.33	0.18	28.74	-0.14	.89
relat. × prof/goal	0.02	-0.29, 0.33	0.16	27.00	0.11	.91
imm. × prof/goal	-0.28	-0.54, -0.01	0.13	32.45	-2.06	.05
Predicting shame, Study 2a						
immoral	**0.49**	**0.17, 0.81**	**0.16**	**29.37**	**3.04**	**.005**
relational	0.13	-0.08, 0.34	0.11	26.10	1.18	.25
profession/goal	-0.04	-0.22, 0.14	0.09	30.22	-0.47	.64
imm. × relat.	-0.02	-0.38, 0.35	0.19	28.31	-0.10	.92
relat. × prof/goal	0.01	-0.30, 0.33	0.16	26.17	0.09	.93
imm. × prof/goal	-0.29	-0.58, 0.005	0.15	32.13	-1.93	.06
im. × rel. × pr/goal	-0.06	-0.60, 0.49	0.28	26.66	-0.21	.83

Note: Predicted relationships in bold.

Table S6. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of shame from a secret, Study 3

Predicting shame						
Study 3	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	**0.30**	**0.10, 0.50**	**0.10**	**29.77**	**2.97**	**.006**
relational	0.04	-0.10, 0.18	0.07	28.58	0.58	.57
profession/goal	0.03	-0.11, 0.18	0.07	31.10	0.43	.67
imm. × relat.	-0.04	-0.32, 0.24	0.14	28.99	-0.30	.77
insight	-0.42	-0.46, -0.39	0.02	3158.77	-23.48	<.0001
connectedness	0.13	0.10, 0.16	0.02	3152.63	8.04	<.0001
Predicting shame, Study 3						
immoral	**0.33**	**0.19, 0.47**	**0.07**	**28.97**	**4.68**	**<.0001**
relational	0.02	-0.15, 0.20	0.09	27.30	0.24	.81
profession/goal	0.04	-0.11, 0.18	0.08	31.05	0.46	.65
relat. × prof/goal	-0.05	-0.31, 0.21	0.13	27.43	-0.37	.71
insight	-0.42	-0.46, -0.39	0.02	3159.30	-23.50	<.0001
connectedness	0.13	0.10, 0.16	0.02	3118.05	8.03	<.0001
Predicting shame, Study 3						
immoral	**0.45**	**0.29, 0.60**	**0.08**	**31.21**	**5.68**	**<.0001**
relational	0.07	-0.06, 0.20	0.07	28.8	1.06	.30
profession/goal	0.02	-0.11, 0.15	0.07	31.63	0.27	.79
imm. × prof/goal	-0.26	-0.45, -0.06	0.1	32.97	-2.56	.02
insight	-0.42	-0.46, -0.39	0.02	3162.25	-23.53	<.0001
connectedness	0.13	0.10, 0.16	0.02	3044.47	8.08	<.0001
Predicting shame, Study 3						
immoral	**0.52**	**0.27, 0.78**	**0.13**	**30.23**	**4.01**	**.0004**
relational	0.06	-0.11, 0.23	0.09	26.18	0.70	.49
profession/goal	0.01	-0.14, 0.15	0.07	31.61	0.10	.92
imm. × relat.	0.11	-0.18, 0.40	0.15	28.50	0.73	.47
relat. × prof/goal	-0.04	-0.29, 0.22	0.13	26.13	-0.27	.79
imm. × prof/goal	-0.29	-0.50, -0.07	0.11	32.58	-2.57	.01
insight	-0.42	-0.46, -0.39	0.02	3159.72	-23.52	<.0001
connectedness	0.13	0.10, 0.16	0.02	3100.19	8.01	<.0001
Predicting shame, Study 3						
immoral	**0.53**	**0.27, 0.79**	**0.13**	**29.51**	**3.99**	**.0004**
relational	0.07	-0.10, 0.24	0.09	25.49	0.77	.45
profession/goal	0.01	-0.14, 0.16	0.08	30.37	0.16	.88
imm. × relat.	0.13	-0.17, 0.43	0.15	28.26	0.82	.42
relat. × prof/goal	-0.04	-0.30, 0.22	0.13	25.36	-0.33	.75
imm. × prof/goal	-0.32	-0.56, -0.07	0.12	32.58	-2.55	.02
im. × rel. × pr/goal	-0.13	-0.58, 0.31	0.23	26.10	-0.58	.57
insight	-0.42	-0.46, -0.39	0.02	3159.27	-23.52	<.0001
connectedness	0.13	0.10, 0.16	0.02	3132.28	7.97	<.0001

Note: Predicted relationships in bold. Alternate experiences in italics.

Table S7. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of insight into a secret, Study 2b

Predicting insight						
Study 2b	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	0.07	-0.11, 0.25	0.09	32.65	0.72	.47
relational	0.08	-0.04, 0.21	0.06	31.24	1.32	.20
profession/goal	**0.19**	**0.06, 0.33**	**0.07**	**35.50**	**2.81**	**.008**
imm. × relat.	0.13	-0.12, 0.39	0.13	31.73	1.04	.31
Predicting insight, Study 2b						
immoral	0.02	-0.10, 0.14	0.06	31.38	0.32	.75
relational	0.01	-0.14, 0.17	0.08	29.34	0.16	.87
profession/goal	**0.25**	**0.11, 0.38**	**0.07**	**35.79**	**3.61**	**.0009**
relat. × prof/goal	-0.18	-0.41, 0.05	0.12	30.09	-1.53	.14
Predicting insight, Study 2b						
immoral	-0.10	-0.25, 0.05	0.08	34.41	-1.32	.20
relational	0.06	-0.06, 0.18	0.06	30.54	1.05	.30
profession/goal	**0.22**	**0.10, 0.35**	**0.06**	**34.78**	**3.53**	**.001**
imm. × prof/goal	0.20	0.01, 0.38	0.10	37.15	2.02	.05
Predicting insight, Study 2b						
immoral	-0.02	-0.25, 0.21	0.12	34.11	-0.18	.85
relational	-0.03	-0.17, 0.12	0.07	26.74	-0.38	.70
profession/goal	**0.26**	**0.13, 0.39**	**0.07**	**36.75**	**3.82**	**.0005**
imm. × relat.	0.09	-0.17, 0.35	0.13	30.68	0.67	.51
relat. × prof/goal	-0.24	-0.46, -0.01	0.11	27.17	-2.09	.05
imm. × prof/goal	0.20	-0.003, 0.40	0.10	38.93	1.93	.06
Predicting insight, Study 2b						
immoral	-0.02	-0.25, 0.22	0.12	33.84	-0.13	.90
relational	-0.02	-0.17, 0.13	0.08	26.31	-0.30	.77
profession/goal	**0.26**	**0.13, 0.39**	**0.07**	**35.3**	**3.79**	**.0006**
imm. × relat.	0.10	-0.16, 0.37	0.14	31.08	0.75	.46
relat. × prof/goal	-0.24	-0.47, -0.01	0.12	26.46	-2.09	.05
imm. × prof/goal	0.17	-0.05, 0.40	0.11	39.81	1.51	.14
im. × rel. × pr/goal	-0.10	-0.49, 0.29	0.20	27.37	-0.49	.63

Note: Predicted relationships in bold.

Table S8. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of insight into a secret, Study 3

Predicting insight Study 3	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	0.05	-0.05, 0.14	0.05	33.88	0.90	.38
relational	0.02	-0.04, 0.09	0.03	30.94	0.70	.49
profession/goal	**0.07**	**0.001, 0.15**	**0.04**	**36.85**	**1.98**	**.06**
imm. × relat.	0.11	-0.03, 0.24	0.07	31.54	1.52	.14
shame	-0.34	-0.37, -0.31	0.01	3045.10	-23.47	<.0001
connectedness	0.09	0.06, 0.12	0.01	2025.06	6.37	<.0001
Predicting insight, Study 3						
immoral	0.004	-0.06, 0.07	0.03	30.91	0.12	.91
relational	-0.02	-0.10, 0.06	0.04	23.54	-0.50	.62
profession/goal	**0.12**	**0.04, 0.19**	**0.04**	**31.41**	**3.17**	**.003**
relat. × prof/goal	-0.11	-0.23, 0.01	0.06	22.59	-1.86	.08
shame	-0.34	-0.37, -0.31	0.01	2956.13	-23.59	<.0001
connectedness	0.09	0.06, 0.12	0.01	1536.59	6.58	<.0001
Predicting insight, Study 3						
immoral	0.01	-0.08, 0.10	0.04	36.70	0.18	.86
relational	0.03	-0.04, 0.10	0.04	29.79	0.74	.47
profession/goal	**0.09**	**0.02, 0.16**	**0.04**	**34.79**	**2.39**	**.02**
imm. × prof/goal	-0.04	-0.15, 0.07	0.06	37.94	-0.69	.49
shame	-0.34	-0.37, -0.31	0.01	3109.61	-23.47	<.0001
connectedness	0.09	0.06, 0.12	0.01	1915.20	6.56	<.0001
Predicting insight, Study 3						
immoral	0.14	0.01, 0.27	0.07	33.66	2.14	.04
relational	-0.02	-0.10, 0.06	0.04	23.91	-0.51	.62
profession/goal	**0.09**	**0.01, 0.16**	**0.04**	**38.76**	**2.30**	**.03**
imm. × relat.	0.18	0.04, 0.32	0.07	28.75	2.51	.02
relat. × prof/goal	-0.14	-0.26, -0.02	0.06	23.15	-2.29	.03
imm. × prof/goal	-0.07	-0.19, 0.04	0.06	40.08	-1.28	.21
shame	-0.34	-0.37, -0.31	0.01	2978.46	-23.64	<.0001
connectedness	0.09	0.06, 0.12	0.01	1590.28	6.26	<.0001
Predicting insight, Study 3						
immoral	0.15	0.01, 0.28	0.07	35.20	2.15	.04
relational	-0.02	-0.10, 0.06	0.04	23.83	-0.43	.67
profession/goal	**0.09**	**0.01, 0.16**	**0.04**	**37.33**	**2.28**	**.03**
imm. × relat.	0.19	0.04, 0.34	0.08	30.86	2.49	.02
relat. × prof/goal	-0.14	-0.26, -0.02	0.06	22.97	-2.27	.03
imm. × prof/goal	-0.09	-0.21, 0.04	0.07	44.43	-1.31	.20
im. × rel. × pr/goal	-0.04	-0.25, 0.17	0.11	25.30	-0.37	.72
shame	-0.34	-0.37, -0.31	0.01	2991.89	-23.62	<.0001
connectedness	0.09	0.06, 0.12	0.01	1810.16	6.21	<.0001

Note: Predicted relationships in bold. Alternate experiences in italics.

Table S9. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of connectedness from a secret, Study 2c

Predicting conn. Study 2c	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	0.32	-0.02, 0.67	0.18	31.91	1.84	.08
relational	**0.23**	**-0.01, 0.47**	**0.12**	**31.31**	**1.86**	**.07**
profession/goal	-0.33	-0.58, -0.08	0.13	32.86	-2.55	.02
imm. × relat.	0.46	-0.03, 0.95	0.25	31.64	1.85	.07
Predicting connectedness, Study 2c						
immoral	0.08	-0.17, 0.34	0.13	31.35	0.65	.52
relational	**0.23**	**-0.09, 0.55**	**0.16**	**30.74**	**1.38**	**.18**
profession/goal	-0.27	-0.54, 0.002	0.14	32.73	-1.94	.06
relat. × prof/goal	-0.001	-0.49, 0.49	0.25	31.04	-0.004	>.99
Predicting connectedness, Study 2c						
immoral	0.13	-0.18, 0.43	0.16	32.42	0.81	.43
relational	**0.24**	**-0.02, 0.50**	**0.13**	**31.05**	**1.81**	**.08**
profession/goal	-0.27	-0.53, -0.01	0.13	32.47	-2.07	.05
imm. × prof/goal	-0.09	-0.48, 0.30	0.29	33.17	-0.45	.65
Predicting connectedness, Study 2c						
immoral	0.54	0.07, 1.01	0.24	31.25	2.25	.03
relational	**0.21**	**-0.10, 0.53**	**0.16**	**29.04**	**1.33**	**.20**
profession/goal	-0.34	-0.60, -0.07	0.14	31.68	-2.48	.02
imm. × relat.	0.61	0.07, 1.15	0.28	30.28	2.22	.03
relat. × prof/goal	-0.12	-0.60, 0.36	0.24	29.14	-0.48	.63
imm. × prof/goal	-0.25	-0.65, 0.15	0.20	32.47	-1.24	.23
Predicting connectedness, Study 2c						
immoral	0.56	0.12, 1.01	0.23	30.45	2.47	.02
relational	**0.26**	**-0.04, 0.56**	**0.15**	**28.00**	**1.69**	**.10**
profession/goal	-0.31	-0.56, -0.06	0.13	30.73	-2.40	.02
imm. × relat.	0.71	0.20, 1.23	0.26	29.63	2.71	.01
relat. × prof/goal	-0.17	-0.62, 0.29	0.23	28.07	-0.73	.47
imm. × prof/goal	-0.44	-0.85, -0.03	0.21	32.15	-2.08	.05
im. × rel. × pr/goal	-0.86	-1.64, -0.09	0.40	28.40	-2.18	.04

Note: Predicted relationships in bold.

Table S10. Examining interactions between a secret's coordinates along two dimensions, examining each possible interaction in isolation, in predicting reports of insight into a secret, Study 3

Predicting conn. Study 3	***b***	**95% CI**	***SE***	***df***	***t***	***p***
immoral	0.21	-0.13, 0.55	0.17	32.04	1.21	.24
relational	**0.30**	**0.06, 0.54**	**0.12**	**31.27**	**2.47**	**.02**
profession/goal	-0.29	-0.53, -0.04	0.13	32.51	-2.27	.03
imm. × relat.	0.47	-0.01, 0.94	0.24	31.54	1.92	.06
shame	0.15	0.11, 0.19	0.02	3222.24	8.06	<.0001
insight	0.13	0.09, 0.17	0.02	3170.96	6.35	<.0001
Predicting connectedness, Study 3						
immoral	-0.04	-0.29, 0.21	0.13	31.69	-0.29	.77
relational	**0.30**	**-0.02, 0.62**	**0.16**	**30.81**	**1.86**	**.07**
profession/goal	-0.23	-0.49, 0.04	0.14	32.47	-1.67	.10
relat. × prof/goal	0.01	-0.47, 0.49	0.24	30.99	0.04	.97
shame	0.15	0.11, 0.19	0.02	3220.57	8.05	<.0001
insight	0.13	0.09, 0.17	0.02	3170.97	6.38	<.0001
Predicting connectedness, Study 3						
immoral	-0.07	-0.37, 0.23	0.15	32.32	-0.43	.67
relational	**0.29**	**0.03, 0.54**	**0.13**	**31.13**	**2.23**	**.03**
profession/goal	-0.22	-0.48, 0.03	0.13	32.23	-1.74	.09
imm. × prof/goal	0.07	-0.31, 0.45	0.19	32.84	0.34	.74
shame	0.15	0.11, 0.19	0.02	3218.18	8.06	<.0001
insight	0.13	0.09, 0.17	0.02	3171.05	6.38	<.0001
Predicting connectedness, Study 3						
immoral	0.29	-0.18, 0.76	0.24	30.70	1.21	.23
relational	**0.26**	**-0.05, 0.58**	**0.16**	**28.93**	**1.64**	**.11**
profession/goal	-0.28	-0.54, -0.01	0.14	30.93	-2.05	.05
imm. × relat.	0.53	-0.01, 1.07	0.28	29.86	1.92	.06
relat. × prof/goal	-0.11	-0.59, 0.37	0.25	28.97	-0.45	.66
imm. × prof/goal	-0.07	-0.47, 0.33	0.20	31.50	-0.35	.73
shame	0.15	0.11, 0.19	0.02	3218.05	8.04	<.0001
insight	0.13	0.09, 0.17	0.02	3169.12	6.34	<.0001
Predicting connectedness, Study 3						
immoral	0.31	-0.16, 0.77	0.24	29.68	1.30	.21
relational	**0.30**	**-0.02, 0.61**	**0.16**	**27.87**	**1.86**	**.07**
profession/goal	-0.26	-0.52, 0.004	0.13	29.82	-1.93	.06
imm. × relat.	0.60	0.06, 1.14	0.27	29.00	2.20	.04
relat. × prof/goal	-0.15	-0.62, 0.33	0.24	27.89	-0.61	.55
imm. × prof/goal	-0.21	-0.63, 0.22	0.22	30.79	-0.95	.35
im. × rel. × pr/goal	-0.63	-1.44, 0.18	0.41	28.16	-1.53	.14
shame	0.15	0.11, 0.19	0.02	3218.11	8.03	<.0001
insight	0.13	0.09, 0.17	0.02	3169.14	6.33	<.0001

Note: Predicted relationships in bold. Alternate experiences in italics.

Only one interaction was significant in all models that included the two-way interactions, and that was the interaction between the immoral and profession/goal-oriented coordinates on reports of shame from the secret. This interaction showed that at all levels of profession/goal-orientation, the immoral coordinates of the secret predicted reports of shame from the secret (the following analysis does not control for the other interaction terms, but the results are unchanged by doing so).

In Study 2, the relationship between the immoral coordinates and shame from the secret was strongest at low levels (-1SD) of profession/goal-orientation (b = 0.79, 95% CI = [0.41, 1.18], SE = 0.19, t(32.66) = 4.09, p = .0003), and less strong at high levels (+1SD) of profession/goal-orientation (b = 0.22, 95% CI = [0.03, 0.42], SE = 0.10, t(30.62) = 2.24, p = .03)

In Study 3, the same pattern emerged (now also including the other two experiences as controls, per the main text): the relationship between the immoral coordinates and shame from the secret was strongest at low levels (-1SD) of profession/goal-orientation (b = 0.71, 95% CI = [0.39, 1.03], SE = 0.16, t(32.67) = 4.37, p = .0001), and less strong at high levels (+1SD) of profession/goal-orientation (b = 0.19, 95% CI = [0.03, 0.35], SE = 0.08, t(30.87) = 2.27, p = .03)

These results suggest that the more people feel they have a clear goal or aspiration behind their immoral secret behavior, the less shame they report the secret brings.