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How many hours does it take to make a friend?

Journal of Social and Personal Relationships
2019, Vol. 36(4) 1278–1296

DOI: 10.1177/0265407518761225
journals.sagepub.com/home/spr
SAGE

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Abstract

The question of this investigation is, how many hours does it take to make a new friend? Drawing from Dunbar's social brain hypothesis and Communicate Bond Belong theory, friendship status was examined as a function of hours together, shared activities, and everyday talk. In Study 1, MTurk participants ($N = 355$) who had recently relocated estimated time spent with a new acquaintance. Hours together was associated with closer friendships. Time spent engaging in leisure activities also predicted closeness. In Study 2, first-year students ($N = 112$) reported the number of hours spent with two new acquaintances three times over 9 weeks. Hours together was associated changes in closeness between waves. Two types of everyday talk predicted changes in closeness.

Keywords

Communicate Bond Belong, Dunbar, everyday talk, friendship, time

Having friends is an important predictor of happiness and life satisfaction (Demir, Orthel-Clark, Ozedemir, & Ozedemir, 2015). The number and quality of social interactions early in life can predict loneliness, well-being, and depression 30 years later (Carmichael, Reis, & Duberstein, 2015). Despite these well-documented benefits, people do not always prioritize spending time with friends. Americans only spend about 41 min a day socializing, which is one-third of the amount of time spent watching TV or commuting (US Dept. of Labor, 2015). Given significant constraints on free time, especially among working adults and parents, individuals must budget their time wisely to make time for friends (Fehr, 2008).

It is not possible to have friends without first making friends. In addition to propinquity, spending time together is a necessary component of friendship development

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(Fehr, 2008). When defining a friend, shared activities is one of the first qualities mentioned by children (La Gaipa, 1977) and adolescents (Parks, 2007) and is similarly valued in adult friendships (Hall, 2012). This begs the question, how much time does it take to make a new friend? Although there are several longitudinal studies on friendship development (e.g., Hays, 1985; van Duijn, Zeggelink, Huisman, Stokman, & Wasseur, 2003), there is no study to date on friendship formation and development in terms of the number of hours together.

Recognizing that friendship is a broad category that includes relationships at various levels of closeness (i.e., casual friend, friend, good friend), this investigation will estimate the amount of time spent prior to transitioning into friendships at higher levels of closeness in relation to Dunbar's (1996) social brain hypothesis. Drawing from Communicate Bond Belong (CBB) theory (Hall & Davis, 2017), the present investigation will also explore how the use of time with friends influences friendship development, particularly focusing on types of everyday talk. This project will answer fundamental questions about the nature of this important, yet understudied relationship.

The social brain hypothesis: Layers of friendship

Dunbar's (1996, 2010) work on friendship has shaped contemporary thinking on human social networks in important ways. Dunbar (1996) proposed an evolutionary model of human relationships that examined the size of social networks in relation to the volume of the neocortex relative to the remaining volume of the brain. The *social brain hypothesis* predicts that there is a limit to the number of individuals with whom a person can maintain a "coherent face-to-face relationship" (Dunbar, 2010, p. 24). That is, there is a limit on the number of *friends* a person can have. This limit (approximately 150) is an emergent property of cognitive and temporal constraints. The volume of the neocortex constrains the cognitive ability to recognize another person as a unique individual, recall information and prior interactions with that person, and to comprehend that person's association with others within a social network (Dunbar, 1996, 2010).

Available time is finite and friendships take time. This temporal constraint affects the initiation of new friendships (Miritello et al., 2013) and the maintenance of old friendships (Roberts & Dunbar, 2011). Time spent with one person can be conceived as both an opportunity cost for developing other relationships *and* an investment toward the relationship's continuance or development (Hall & Davis, 2017). As relationships become more intimate, they provide more emotional and tangible resources (Dunbar, 1996) and are typically more enduring, even in times of distress (Morgan, Neal, & Carder, 1996). All friends are expected to be somewhat supportive and helpful (Fehr, 2008; Hall, 2012), but expectations rise as relationships become closer—from casual friends to friends to close friends (Hall, Larson, & Watts, 2011). Close friends occupy a larger portion of communication time compared to casual friends (Saramaki et al., 2014) and are more capable of meeting expectations (Hall et al., 2011). Yet, individuals who maintain more and more friendships find their time with every member of the network diminished (Miritello et al., 2013). Analysis of mobile voice calls suggests that maintaining a large network of contacts (>40) is associated with less time spent talking with

each contact (Miritello et al., 2013). Thus, cognitive and temporal constraints limit the number of friends a person can maintain.

Although there is likely a minimum standard for calling someone a friend, friends are not all equal. Classic research on the friendships of children (La Gaipa, 1977) and adults (Weiss & Lowenthal, 1975) has identified distinct types of friends. Dunbar (1996, 2010) proffers five categories in order of decreasing closeness: support clique, sympathy group, friendship group, clansmen, and acquaintances. The first group (1–5 individuals) includes mainly romantic partners and kin (Mollenhorst, Volder, & Flap, 2014; Morgan et al., 1996) but may include nonkin best friends. The sympathy group, which subsumes the support clique, is three times larger (10–15) and likely includes several good friends (La Gaipa, 1977; Parks, 2007). The size of the next two groups follows the rule of three (40–50 friends; 120–150 clansmen) (Dunbar, 1996; Miritello et al., 2013; Roberts & Dunbar, 2011). Dunbar (2010) uses the term *friend* broadly for members of all four categories, including family members, spouses, friends, casual friends, friends of friends, as well as coworkers, classmates, and neighbors. Focusing solely on nonkin and non-romantic relationships, this investigation will estimate the number of hours it takes to transition to friendships at four levels of closeness. Individuals find little difficulty in differentiating a casual friend from an acquaintance (Hall et al., 2011; Hays, 1984; La Gaipa, 1977; Weiss & Lowenthal, 1975) and acknowledge that not all neighbors, classmates, or coworkers are casual friends. This investigation will start by exploring how many hours it takes for a casual friendship to form.

Friendship duration and development

Proximity and opportunities for contact set the stage for friendship but do not guarantee that any given pair of individuals will become friends (Fehr, 2008). The clicking model of relationship development (Berg & Clark, 1986) suggests that potential friends make relatively rapid assessments of the desirability and likability of a potential friend and shortly thereafter elect to spend time together. This rapid selection process creates a niche of similar and liked others from which deeper friendships can grow (Bahns, Crandall, Gillath, & Preacher, 2017). Longitudinal studies of friendship development concur that friendship development happens rather swiftly, usually within 3–9 weeks after meeting (Hays, 1984, 1985). Three to four months may be required for close friendships to develop (Saramaki et al., 2014; van Duijn et al., 2003). Four months after meeting potential friends, few new friendships develop (Saramaki et al., 2014) either because individuals have elected not to pursue a closer relationship (Bahns et al., 2017) or do not have sufficient time to dedicate to new friends (van Duijn et al., 2003).

Thus, it is possible to know someone for years, but not develop a friendship, and to know someone for 6 weeks and become best friends. Therefore, the amount of time that has passed since meeting provides insufficient information about friendship development. Hays (1984) states, the most "obvious difference [between relationships that developed intimacy and those who did not] was in sheer quantity of interaction" (p. 87). Yet, time available to spend making new casual friends further constrains development after meeting (Miritello et al., 2013; van Duijn et al., 2003). The intermediate stage of friendship development (i.e., from casual friend to good friend) is particularly

constrained by time; it requires both repeated contact and time to spend on the relationship (Fehr, 2008). Having enough free time is a frequently mentioned challenge to making friends (Hays, 1985; Wiseman, 1986).

How much time is needed to develop friendships? Two early studies offer rough estimates regarding how many hours it takes to make a friend. Altman and Haythorn (1965) confined pairs of men who were strangers in a small room for 10 days both morning and night. These men were compared to men who worked together for a similar amount of time during the day but engaged in leisure time apart and had separate sleeping quarters. After 160 hr of contact, men who were confined together had developed patterns of self-disclosure approximating best friendship. The men in the control group, who had spent the same time together working but leisure or rest time apart, were more likely to describe their relationship as a casual friendship after 10 days. Altman and Haythorn (1965) speculate that a friendly relationship emerges after around 60 hr of time together. Hornstein and Truesdell (1988) found that 39% of acquaintances developed into casual friends after three interaction sessions of just 30 min each plus an initial investment of less than 6 hr of close personal contact. Unfortunately, no other study has provided hourly estimates of how much time it takes to develop a casual friendship, transition from a casual friendship to a friendship, or for a friend to become a good friend. Thus:

RQ1: How many hours of time together does it take to distinguish (a) an acquaintance from a casual friend, (b) a casual friend from a friend, and (c) a friend from a good/best friend?

CBB theory: Activities and talk

CBB theory (Hall & Davis, 2017) offers an evolutionary perspective on interpersonal communication that focuses on the underlying need to belong (Leary & Kelly, 2008) in relation to the amount and content of social interactions. CBB theory affirms Dunbar's (1996, 2010) contention that there are limits on human sociability and time. The theory asserts that both the amount of time and the type of activity shared with a partner can be thought of as strategic investments toward satiating long-term belongingness needs. As the need to belong is thought to be ultimately satiated only through the possession of enduring, close relationships (Leary & Kelly, 2008), CBB theory asserts that humans must carefully invest their available time and social energy in ways most likely to create promising new relationships or to cement existing ones. Yet, each relationship requires ongoing investments of hours of time and energy, particularly among nonkin (Miritello et al., 2013; Roberts & Dunbar, 2011). Therefore, time spent together, especially leisure time, can be thought of as an investment toward future returns on belongingness need satiation. Thus:

H1: Hours of time spent together will be positively associated with friendship closeness.

Spending time together is a necessary component of friendship development, but the way that time is spent is equally important. CBB theory recognizes that many social

interactions are obligatory, not engaged in by choice. Americans spend a great deal of time at work compared to time socializing with friends or family (US Dept. of Labor, 2015). Workplaces and schools are closed systems wherein members have little influence on who else is included in the group (Berscheid & Regan, 2005). Such relationships are much less durable after 7 years compared to purely social nonkin relationships (Mollenhorst et al., 2014). The amount of time with coworkers and classmates is likely a poor indicator of closeness. Therefore:

H2: The association between time spent and friendship closeness will be moderated for closed system relationships; this association will be weaker among work or school relationships compared to friendships not made in those environments.

Having fun together and enjoying each other's company are essential, yet understudied, components of friendship (Hall, 2012). The most common friendship turning point is participating in a joint activity—either for the purpose of developing a friendship or because of some other circumstance (Becker et al., 2009). When nascent friends both elect to spend time together, it is one of the most important factors in relationship development. This is particularly important for potential friendships born in closed systems. As Wiseman (1986) points out, friendships, unlike work or school relationships, are not organized around particular tasks. When acquaintances elect to do something together outside of the environment where they met, it can change the definition of the relationship because it implies that a closer relationship is desired. Therefore:

H3: As the portion of time spent engaged in joint leisure activities increases, friendship closeness will increase.

Along with shared activity, self-disclosure in friendship has received considerable research attention (Fehr, 2008; Hall, 2012). Shared self-disclosure is one of the final expectations to develop in friendship, both developmentally and temporally (La Gaipa, 1977). Close friends talk more often and in greater depth and affection than do casual friends (Hall et al., 2011; Hays, 1985). Casual friendships engage in constant low depth disclosure over the duration of the relationship (Hays, 1984; Hornstein & Truesdell, 1988). Longitudinal accounts suggest that patterns of communication shift from superficial to intimate a month after meeting (Hays, 1984).

CBB theory offers a way to conceive of the content of social interactions beyond self-disclosure or intimacy. The theory proposes that some types of social interaction are more capable of satiating individuals' need to belong than others. Certain communication episodes, such as meaningful conversation, catching up, joking around, and affectionate communication, are associated with a higher degree of in-the-moment closeness and well-being than do all other types of everyday talk (Hall, 2018). These episodes are theoretically conceptualized as striving communication episodes engaged in for the purpose of satiating the need to belong (Hall & Davis, 2017). By contrast, small talk and talk about mundane topics are less likely to meet relatedness needs (Hall, 2018) and do not contribute to relationship development (Hays, 1984). Thus:

H4: Portion of time spent engaged in conversation will be positively associated with friendship closeness.

H5: Striving communication episodes will be positively associated with increases in friendship closeness over time.

RQ2: Will small talk predict change in friendship closeness over time?

Study 1: Adult geographic relocation and friendship

Method

Procedure. Two waves of data were collected using Amazon's Mechanical Turk. Participants ($N = 429$) were given \$.65 for survey completion. The title of the study was "Geographic Relocation" and the study call requested participants who had relocated 50 miles from their prior place of residence in the last 6 months. Other inclusion criteria included, being from the U.S., >18 years of age, and had >90% completion satisfaction. After reading the online information statement, participants identified a specific person by first name that they met since moving. This person could not be an old friend, a romantic partner, or a relative. Other survey questions were in reference to this person. Data were screened for suspect responses using two criteria: (i) if a participant indicated he or she met this person before the participant had moved or (ii) a participant failed to correctly answer an attention check item. Seventeen percent ($n = 74$) failed one or more check. All data analyses were performed on responses from participants who passed both checks ($N = 355$).

Participants. Participants were 49% female, with a mean age of 32.9 years ($SD = 10.9$, range 19–75, $mdn = 29$, $mode = 30$). Participants were allowed to check all race/ethnicity categories they wished: White/Caucasian (79%), Latino/Hispanic (8.7%), Black (7.6%), Asian-American (5.9%), Native American (1.4%), and mixed race (3.9%). Participants primarily moved because of a new job or a new job for a partner (47.3%) or to be closer to family or for family reasons (21.1%). Other reasons for moving included starting school or training program (11.8%), marriage (5.1%), divorce (1.4%), retirement (2.8%), or some other reason (10.4%). Participants had moved 6 months ago (29.9%), 5 months ago (24.5%), 4 months ago (19.2%), 3 months ago (11.5%), 2 months ago (10.4%), or in the last 4 weeks (4.5%).

Instrumentation. Participants indicated that the person they were describing was a female (51%), who they had met in the neighborhood (35.8%) or at work (25.1%) or through friends (8.2%), at a club/association/group (7.9%), through family (6.8%), at school (5.6%), online (5.1%), or some other way (5.6%). Next, participants answered this yes/no question: "I would say we are friends not just acquaintances." Then, participants indicated the best description of their relationship partner from the following categories: best friend, good friend, friend, casual friend, classmate/coworker, friend of a friend, and acquaintance. Relationships described as classmates and coworkers were identified as *closed system relationships*.

To determine the total hours spent with this person, participants were asked three questions. First, they were asked how long ago in weeks they had met this person, $M_{\text{weeks}} = 11.01$, $SD = 7.17$, range = 0.33–26 weeks. Participants were asked the *number of hours last week* they spent with that person:

> We would like to figure out how many hours you have spent with [funneled name]. If there are 16-17 waking hours in a day, then there are about 120 waking hours in a week. How many hours would you estimate you spent with this person LAST WEEK? For example, if you spent one hour a day, it would be 7 hours last week. If you spent 3 hours a day it would be 21 hours last week. Please indicate the hours you are actually in their company or communicating with them. (So, not just you were working the same shift.)

Responses were given using a sliding bar from 1 hr to 120 hr, $M_{\text{hours}} = 15.43$, $SD = 18.61$, range = 0.0–75 hr. Participants were then asked the *number of hours on a typical week*:

> You said that you met [funneled name] [funneled number] weeks ago. You said you spent about [funneled number] hours together last week. Since meeting this person, how many hours on a TYPICAL week do you spend together since first meeting?

Responses were given using a sliding bar from 1 hr to 120 hr, $M_{\text{hours}} = 12.99$, $SD = 15.30$, range = 0.0–100 hr. *Total hours* were calculated by adding the last week's hours to the typical week hours multiplied by the number of weeks (−1) since meeting.

Next, participants described how they typically spent time with the person. Six categories were offered: Talking to each other/chatting; relaxing or hanging out, including eating or drinking together; doing an activity or a shared interest together (going somewhere, traveling, shopping, going to parties, exercising); working together at a job or attending class together; participating or working on projects or activities (church groups, clubs, athletic teams, parent groups); watching TV/movies or playing video games. Participants were asked the portion of time they spent on each of the six activities with values adding up to 100%.

Friendship closeness was measured combining three measures: emotional closeness, "I feel emotionally close to this person"; commitment, "I am committed to my relationship with this person"; and uniqueness which was measured using 3 items from Wright's (1997) person-qua-person scale (e.g., "This person possesses so many personal qualities I like that I think of him/her as being 'one of a kind', a truly unique person"). All responses were given on a 7-point Likert-type scale. A latent closeness factor in Mplus was created from these 5 items for all further analyses.

Results

The first analyses explored the association between total hours and friendship closeness (H1), whether that association was moderated by type of relationship (H2), and whether apportionment of leisure time together uniquely predicted friendship closeness (H3). The association between hours and relationship type is illustrated in Figure 1. Latent

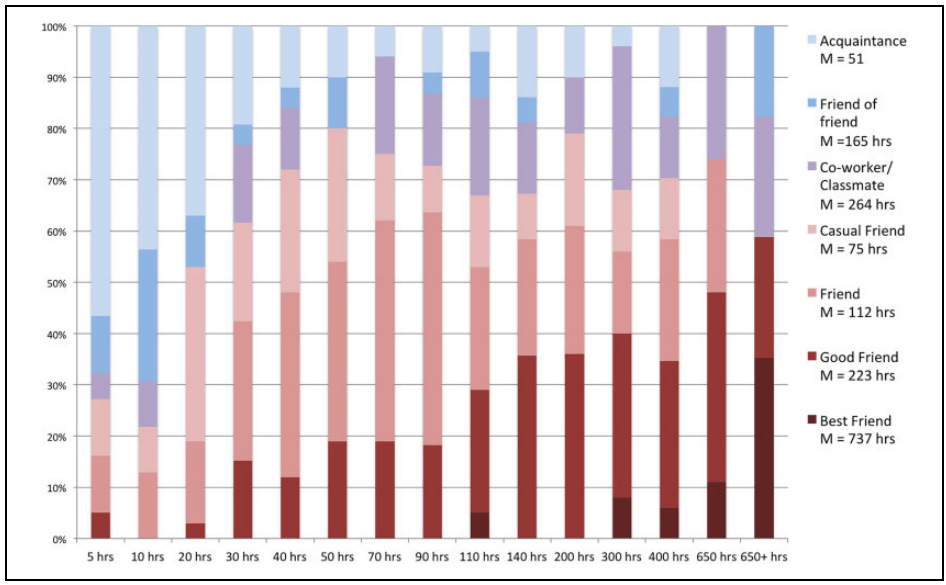

Figure 1. Type of relationship by number of hours for Study 1 ($N = 355$) (% of each type within time.)

friendship closeness was regressed on total time together, closed system relationship (or not), and demographic variables (Table 1, Model 1). Time together and close system relationship both predicted friendship closeness (H1). The second model included the interaction term (close system relationship by time), which was significant (H2) (Table 1, Model 2). Finally, friendship closeness was regressed on the six options for apportioning time together (Table 1, Model 3). Time spent at work/school was associated with less closeness, while time spent hanging out or watching TV or movies or gaming was associated with more closeness (H3). Time spent talking was not associated with friendship closeness, which does not support H4.

Having established that number of hours spent together uniquely predicted friendship closeness in a new relationship, three logistic regressions were conducted to estimate the number of hours between four relationship levels (RQ1): acquaintance to casual friend, casual friend to friend, and friend to close/best friend. Acquaintances ($n = 96$) were defined by participants who responded *no* to the question, "I would say we are friends not just acquaintances." In the first logistic regression, the number of hours together was used to differentiate acquaintances from casual friends ($n = 106$), controlling for participant sex, sex of relationship partner, age, and race/ethnicity. The number of hours (in tens) was a significant predictor, $B = .038$, $SE = .015$, Wald $= 6.467$, $p < .01$, Exp(B) $= 1.039$. Every increase of 10 hr increases the chance of being identified as a casual friend by 3.9%. Using the regression equation and the intercept with mean assignment for control variables, the chance of this transition was >50% at approximately 94 hr spent together. In the second logistic regression, the number of hours together was used to differentiate casual friends ($n = 106$) from friends ($n = 88$). The

Table 1. Study 1: OLS regression on friendship closeness by time use and chosen versus close system relationships ($N = 355$).

	Model 1			Model 2			Model 3		
Predictor	*B*	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
Constant	2.39	.42		2.47	.43		3.83	.76	
Sex	.33	.17	.11	.32	.16	.11	.73	.20	.24***
Race/ethnicity	−.18	.19	−.05	−.19	.19	−.05	−.46	.23	−.13*
Age	.01	.01	.07	.01	.01	.07	−.001	.000	−.012
Sex of partner	.47	.17	.16**	.47	.17	.16**	.14	.27	.06
Total hours	.001	.000	.26***	.001	.001	.21**	.002	.000	.24***
Chosen = 1	.825	.19	.22***	.73	.23	.20**			
Chosen X total hours				.000	.000	.14*			
Talking							−.01	.01	−.12
Hanging out							.02	.01	.18*
Shared activity							.01	.01	.06
Work/school							−.01	.00	−.20**
Group activity							−.01	.01	−.09
TV/games/movies							.02	.01	.21**
R^2	.16			.18			.29		

Note. Sex 1 = female, 0 = male; race/ethnicity 1 = White, 0 = non-White; chosen friendship = 1, closed system relationships = 0.
*$p < .05$; **$p < .01$; ***$p < .001$.

number of hours (in tens) was a significant predictor, $B = .054$, $SE = .020$, Wald = 7.547, $p < .001$, Exp(B) = 1.056. The chance of this transition was >50% at approximately 164 hr spent together. In the third logistic regression, the number of hours together was used to differentiate friends ($n = 88$) from good/best friends ($n = 85$). The number of hours (in tens) was a significant predictor, $B = .045$, $SE = .012$, Wald = 13.409, $p < .001$, Exp(B) = 1.046. The chance of this transition was >50% at approximately 219 hr spent together.

Discussion

As a retrospective account of friendship development after a geographic relocation, Study 1 demonstrated that friendship closeness is a function of amount of time spent together and type of activity. Individuals in closed system relationships spent a considerable amount of time together over a 6-month period, but the number of hours together was a better predictor of friendship closeness for relationships of choice. Results indicate that proportion of time spent working or in class together negatively predicted closeness, but proportion of time spent hanging out or watching TV or gaming positively predicted closeness. The effect size (R^2 change = .11) suggests whether time together is at work or at play is important in understanding friendship closeness.

To answer the primary question about the number of hours to make friends at different levels (RQ1), Figure 1 should be examined in conjunction with the results of the three logistic regressions. According to Figure 1, at low amounts of time (<10 hr), relationships

are best described as acquaintances (51%) or friends of friends (16%). Casual friendships emerge around 30 hr, followed by friendships around 50 hr. Good friendships begin to emerge after 140 hr. Best friendships do not emerge until after 300 hr of time spent. Whether spending 30 or 600 hr of time together, the percentage of all relationships formed in closed systems (e.g., work, school) remains relatively constant. Logistic regressions offered 3-point estimates: 94 hr when acquaintances become casual friends, 164 hr when casual friends become friends, and 219 hr when friends become good/best friends. These numbers are likely conservative estimates due to the inclusion of both closed system and chosen relationships and due to the retrospective nature of the study. It is quite likely that the friendship status transitioned to a higher level before these cut-point estimates.

There are three important limitations of Study 1: (i) the number of hours reported by participants is prone to inaccurate estimation as the number of weeks known increases, (ii) hours together likely accumulated well after transitions between relationship stages, inflating the point estimates for number of hours, and (iii) identified relationships were durable by the nature of this study (i.e., a retrospective). Relationships that had failed to endure were not studied.

Study 2: Longitudinal friendship in first-year students

Method

Procedure. Three weeks after the start of the fall semester at a Midwest public university, participants were recruited from public speaking courses. To be eligible, participants had to have enrolled in their first semester of school that fall (i.e., freshman, transfer) and have moved to the city within 2 weeks prior to the start of class. Students who had moved earlier or taken summer courses were ineligible. The first wave of the survey occurred during the third week of class. The second and third waves were collected 6 and 9 weeks into the semester, respectively. Data were screened for suspect responses using two criteria: (i) if a participant indicated he or she had known this person longer ago than the date they reported moving to the university or (ii) a participant failed to correctly answer 2 attention check items. Eight percent ($n = 9$) failed at least one of these checks and were removed from Wave 1 data set and were not contacted further.

Participants. Wave 1 sample included 112 participants. They were 68% female with a mean age of 18.3 years ($SD = .83$, range 17–22, $mdn = 18$, $mode = 18$). Participants were allowed to check all race/ethnicity categories they wished: White/Caucasian (84%), Latino/Hispanic (7.1%), Black (5.4%), Asian-American (8.9%), Native American (2.7%), and mixed race (2.7%).

Instrumentation. After reading the information statement, participants were asked the exact date they moved to the city. To help improve recall, participants were reminded of the dormitories' move-in date. On average, participants had moved into town 29 days before completing Wave 1. Participants identified two individuals they had met since moving. This person could not be a roommate, an old friend, a romantic partner, or a relative. For each identified person, participants were asked how many weeks ago and how they met.

Participants had met this person on average 23 days ago. To improve recall, the names of participants' new acquaintances were funneled into surveys for Waves 2 and 3. Of the Wave 1 participants, 79% completed Wave 2 and 62% completed all three waves.

In Wave 1, participants indicated that the person they were describing was a female (64%), who they had met typically in the dorms (48.2%) or at classes (18.8%), or at a club/association/ group (18.2%), through friends (8.9%), online (.5%), or some other way (4.9%). Next, participants answered a yes/no question: "I would say we are friends not just acquaintances." Then, participants were asked to identify the best description from these categories: best friend, good friend, friend, casual friend, classmate/co-worker, friend of a friend, and acquaintance.

To determine the total hours spent with this person, participants were asked three questions. Participants were asked the *number of hours last week* they spent with that person, using a sliding bar from 1 hr to 120 hr, $M_{\text{hours}} = 21.24$, $SD = 20.37$, range = 1–97 hr. Then, participants were asked the *number of hours on a typical week* using a sliding bar from 1 hr to 120 hr, $M_{\text{hours}} = 19.14$, $SD = 19.20$, range = 0–91 hr. *Total hours* was calculated in the same way as Study 1. The same questions were used during data collection for other waves focusing on hours in the last 3 weeks. In Wave 2, *last week's hours* were $M_{\text{hours}} = 22.53$, $SD = 23.41$, range = 0–110 hr, and *typical week's hours* were $M_{\text{hours}} = 22.49$, $SD = 21.24$, range = 0–100 hr. In Wave 3, *last week's hours* were $M_{\text{hours}} = 17.72$, $SD = 20.14$, range = 0–120 hr, and typical week's hours were $M_{\text{hours}} = 20.09$, $SD = 21.41$, range = 0–100 hr. *Total hours* for Wave 2 were $M_{\text{total}} = 64.38$, $SD = 64.38$ and for Wave 3 were $M_{\text{total}} = 94.83$, $SD = 96.42$. Participants were asked to apportion how they spent time with this person using the six categories from Study 1. *Friendship closeness* was measured with the same 5 items as Study 1 (Wave 1 $\alpha = .83$, Wave 2 $\alpha = .80$, Wave 3 $\alpha = .88$).

In Waves 2 and 3, two types of everyday talk were measured. The first was a type of everyday talk identified as striving episodes in past research (Hall, 2018; Hall & Davis, 2017). *Striving episodes* were measured using 5 items (i.e., "Catch up by talking about events that have occurred since you last saw each other," "Talk about what's up and about what happened to you during the day," "Have serious conversations where both of you are involved in the conversation," "Engage in playful talk to have fun or release tension," "Talk in ways that express love and give attention and affection") (Schrodt et al., 2007). The second type of everyday talk was *small talk*. It was measured using 1 item from Schrodt et al. ("Talk about current events to pass the time") and 3 new items measuring small talk topics (i.e., talk about pets, sports, TV/music/movies). Using exploratory factor analysis with promax rotation and principle axis factoring, striving episodes was the first factor and it explained 36% of the variance and had an eigenvalue of 7.9, and showed good reliability (Wave 2: $\alpha = .84$; Wave 3: $\alpha = .88$). The small talk factor explained 7% of the variance and had an eigenvalue of 1.5. It had acceptable reliability: $\alpha = .71$ at Wave 2, and $\alpha = .76$ at Wave 3.

Results

Three ordinary least square (OLS) regressions were conducted (Table 2). Across all three waves, hours spent together predicted friendship closeness (H1). In Waves 2 and 3,

Table 2. Study 2: Hours and apportionment of time on friendship closeness and change in closeness.

	Wave 1 ($N = 224$)			Wave 2 ($N = 176$)			Wave 3 ($N = 128$)		
Predictor	*B*	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
Constant	5.57	1.69		.02	1.51		−.71	1.51	
Sex	.23	.15	.11	.02	.13	.01	.29	.14	.11*
Race/ethnicity	−.42	.19	−.13*	−.06	.20	−.02	−.24	.22	−.05
Age	−.06	.09	−.04	−.04	.08	.02	−.001	.08	−.001
Sex of partner	.23	.17	.09	−.21	.15	−.02	.02	.17	.01
Total hours	.007	.001	.40***	.002	.001	.09*	.002	.001	.13**
Talking	−.01	.01	−.09	−.01	.01	−.02	.01	.01	.10
Hanging out	.01	.01	.04	.02	.01	.14*	.01	.01	.07
Shared activity	.00	.01	.01	.01	.01	.07	.01	.01	.12
Work/school	−.01	.00	−.21*	−.00	.00	−.07	.01	.01	.11
Group activity	−.01	.01	−.05	−.00	.01	−.02	.01	.01	.13
TV/games	−.00	.01	−.03	.00	.01	.02	.01	.01	.09
Striving episodes				.77	.11	.49***	.69	.11	.55***
Small talk				.03	.09	.02	−.24	.10	−.15**
Closeness prior wave				.46	.07	.39***	.69	.06	.55***
R^2	.27			.70			.80		

Note. Sex: 1 = female, 0 = male; race/ethnicity 1 = White, 0 = non-White; apportionment of time and episodes measured within wave.
*$p < .05$; **$p < .01$; ***$p < .001$.

friendship closeness from the prior wave was included in the model, which tested change in closeness over time. Time spent hanging out did not predict friendship closeness in Wave 1 or Wave 3 but showed a positive association in Wave 2 (H3). Time spent talking was not associated with friendship closeness, showing no support for H4. Like in Study 1, spending more time at work or school was negatively associated with friendship closeness in Wave 1. To test H5 and RQ2, two measures of everyday talk were included in model. In both Waves 2 and 3, episodes identified as striving behaviors (Hall, 2018) predicted changes in friendship closeness (H5), beyond the variance explained by hours together. The amount of small talk in Weeks 6 through 9 was associated with decreases in friendship closeness from Wave 2 (RQ2).

To answer RQ1 and identify the number of hours marking friendship type transitions, the three logistic regressions conducted in Study 1 were repeated with Wave 1 data: acquaintance to casual friend, casual friend to friend, and friend to close/best friend. The fewer number of weeks accounts for one limitation of Study 1—more hours accumulating after relationships transitioned. Acquaintance relationships ($n = 37$) were defined as those participants responded *no* to the question, "I would say we are friends not just acquaintances." In the first logistic regression, the number of hours together was used to differentiate acquaintances from casual friends ($n = 43$), controlling for participant sex, sex of relationship partner, age, and race/ethnicity. The number of hours (in tens) was a significant predictor, $B = .026$, $SE = .009$, Wald $= 8.317$, $p < .01$, Exp(B) $= 1.026$. Using the regression equation and the intercept

with mean assignment for control variables, the chance of this transition was >50% at 43 hr spent together. In the second logistic regression, the number of hours together was used to differentiate casual friends from friends ($n = 70$). The number of hours (in tens) was a significant predictor, $B = .055$, $SE = .011$, Wald = 23.905, $p < .001$, Exp(B) = 1.057. The chance of this transition was >50% at 57 hr spent together. In the third logistic regression, the number of hours together was used to differentiate friends from good/best friends ($n = 83$). The number of hours (in tens) was a significant predictor, $B = .014$, $SE = .003$, Wald = 16.874, $p < .001$, Exp(B) = 1.014. The chance of this transition was greater than 50% at 119 hr spent together.

Transitions in friendship category between waves were examined. Of participants who completed both Waves 1 and 2, 13% reported a decrease in closeness, 53% reported it had remained constant, and 34% reported that closeness increased. Of participants who completed both Waves 2 and 3, 8% reported a decrease in friendship type from the second wave, 70% reported it had remained constant, and 16% reported that it increased. The number of hours for those who transitioned into more (or less) close partners across waves was compared to those who did not change across waves. Any group with <three individuals (e.g., acquaintances in Wave 2 becoming casual friends in Wave 3) were not considered. Independent samples t-tests or one-way analyses of variance were conducted to compare mean hours between groups in each wave, and paired samples t-tests were used to explore change in hours across waves (see Table 3).

The results of Study 2 consistently demonstrate that when relationships become categorically closer (e.g., friend to best friend), the mean number of hours together increases between waves. This trend is consistent between Waves 1 and 2 and between Waves 2 and 3. Additionally, a decrease in categorical closeness is associated with a decrease in time together in two cases (friends becoming casual friends and good friends becoming friends).

Discussion

As a longitudinal account of friendship development in the first 9 weeks of college, Study 2 demonstrated the amount of time spent together predicts changes in closeness. The proportion of time spent talking did not predict friendship closeness or changes in friendship closeness, but forms of everyday talk identified as striving behaviors (Hall, 2018) predicted increased closeness between Waves 1 and 2 as well as between Waves 2 and 3. Increased small talk predicted decreased closeness from Wave 2 to Wave 3.

General discussion

The primary question of the present investigation is, how many hours does it take to make a friend? At the least intimate type of friendship, the chance of identifying someone as a casual friend rather than an acquaintance is greater than 50% when individuals spend about 43 hr together in the first 3 weeks after meeting. This estimate is somewhat consistent with Altman and Haythorn's (1965) estimate that casual friendships emerge after around 60 hr. Although the hourly estimate from Study 1 was higher

Table 3. Mean number of hours and friendship change between waves for first-year students.

n W_1 and W_2	Wave 1 M_{hours}	Wave 1 SD	Wave 2 M_{hours}	Wave 2 SD	Wave 3 M_{hours}	Wave 3 SD
($n = 13$)	Acquaintance 11.7	9.8	Acquaintance 19.7	11.9	Acquaintance ($n = 9$) 21.7	15.4
($n = 14$)	Acquaintance 30.6*	30.1	**Casual** 69.7***	40.7	Casual ($n = 13$) 67.6	89.4
					Casual 95.8	77.3
($n = 14$)	Casual 21.2	21.1	Casual 38.8	25.8	Casual ($n = 3$) 52.9	32.0
					Friend 130.0τ	167.8
($n = 19$)	Casual 27.5	19.5	**Friend** 76.7**τ	44.7		
					Friend ($n = 17$) 108.5	119.1
					Friend 170.4ττ	165.20
($n = 10$)	Friend 34.6	36.3a	*Casual* 70.0a	102.2		
($n = 24$)	Friend 55.9	57.2a	Friend 102.7b	96.6	Friend ($n = 12$) 80.5	40.7
					Good/Best 170.0ττ	85.9
($n = 20$)	Friend 79.9	53.5b	**Good/Best** 172.2c τ	94.9	Good/Best ($n = 6$) 127.6	97.2
					Friend 190.2	133.3
($n = 42$)	Good/Best 107.4	68.3	Good/Best 193.1τ	105.4	Good/Best ($n = 35$) 186.4	95.1
					Good/Best 354.2ττ*	180.6

Note. Wave 1 = 3.4 weeks after meeting, Wave 2 = 6.3 weeks after meeting, Wave 3 = 8.4 weeks after meeting. Mean hours reported are cumulative across wave. Mean estimates showing different letters significantly differ within wave; bold if friendship status increased and italics when friendship status decreased.
*$p < .05$; **$p < .01$; ***$p < .001$ (independent samples t-test results).
τ$p < .01$; ττ$p < .001$ (paired samples t-test results).

(i.e., 94 hr), it is likely inflated as adult participants were reporting on relationships lasting 3 months on average rather than 3 weeks for Study 2. Examining transitions from acquaintanceship to casual friendship for new college students, results suggest that people who remain acquaintances rarely spend more than 30 hr together cumulatively over 9 weeks. These results in conjunction with past research suggest that it takes somewhere between 40 hr and 60 hr to form a casual friendship in the first 6 weeks after meeting. After 3 months, acquaintances may continue to accumulate hours together, but this time does not appear to increase the chance of becoming casual friends.

Casual friends become friends somewhere between 57 hr (Study 2) after 3 weeks and 164 hr (Study 1) over 3 months. It is illustrative that first-year students who had identified a relationship partner as a friend in Wave 1 of Study 2, but 3 weeks later indicated this person was only a casual friend spent less than 35 hr together in the first 3 weeks and less than 70 hr cumulatively by 6 weeks. Perhaps, these participants were premature in naming that person a friend rather than a casual friend. By contrast, those who had stayed friends invested about 50 more hours together by the next wave and those who had become good/best friends invested about 100 more hours into the relationship by the next wave. Taken together, results suggest that the chance of transitioning from casual friend to friend is greater than 50% after around 80–100 hr together.

Results suggest that the chance of transitioning from friends to good/best friends is greater than 50% after 119 hr over 3 weeks and 219 hr over 3 months. This concurs with Altman and Haythorn's (1965) claim that close friendship is possible after 160 hr over 10 days. For first-year students, good/best friends invested large amounts of time together across all waves, supporting past research that close friends develop quickly between 3 weeks and 9 weeks (van Duijn et al., 2003). Indeed, good/best friends added significantly more hours at each wave, nearly doubling their time together at each interval. Consider that students reported spending one-third of all waking hours in a month with one good/close friend. Taken together, although good friendship can develop after spending 120–160 hr together over 3 weeks, 200+ hr is likely needed over 6 weeks for friends to become good/best friends.

Three findings offer additional support for the predictive value of time spent together. In both studies, hours together was a strong predictor of friendship closeness, particularly for relationships of choice rather than closed system relationships. Study 2 demonstrated that time spent within a wave was a unique predictor of changes in closeness between waves. Students who invested additional time in a friendship, controlling for how close the friendship was beforehand, reported more closeness. Second, a change in friendship status between Waves 2 and 3 was more likely when students put more time into the relationship. In both cases (i.e., casual to friend; friend to good/best), friends more than doubled their initial investment of time. Third, this pattern of time use held for those who cooled on their friendship as well. Good friends who stayed good friends were starkly different from those who lose this status (i.e., become just friends). To maintain a good friendship, student participants added days and days of time together in a few short weeks.

Temporal constraints on friendship

This investigation confirms Dunbar's (1996, 2010) argument that time is an important constraint of friendship. Good/best friends are likely members of Dunbar's sympathy group. If one's sympathy group were composed entirely of nonkin, then these 13–15 friends collectively represent 2,000–3,000 hr of invested time to merely achieve that status, not including time needed to maintain closeness. Study 1's results suggest it is reasonable to estimate that over 3 months 700–1,000 hr per person could be further invested in each member of one's sympathy group. The large difference in the number of hours with good/best friends compared to friends and casual friends in Study 2 suggest

that a great deal of time is focused on a small number of important others (Saramaki et al., 2014). The additional 25–35 individuals thought to be part of one's friendship group (Dunbar, 1996, 2010) require a collective investment of 2,000–3,500 hr, which is very similar to the combined estimate for the 13–15 members of the sympathy group. This supports Saramaki et al.'s (2014) observation that individuals talk to a few members of their sympathy group as much as they talk to a large group of other friends.

Investments and episodes

The first principle of CBB theory (Hall & Davis, 2017) states that relationships are adaptive mechanisms that streamline decisions about the type and amount of investment of resources in others. It is long acknowledged that a core expectation of friendship is spending time together (Hall, 2012; Weiss & Lowenthal, 1975) and that time together is associated with closeness, particularly among college students (Parks, 2007). Study 2 suggests that as individuals choose whom to spend time with, they dramatically differentiate time investments. For example, students greatly increased their time with one good/best friend at each wave of Study 2, yet this time with one person could have been used to make three other friends or nine other casual friends. Furthermore, these investments predicted change in friendship closeness over time. Investing time spent with someone results in the development of an enduring relationship, which ultimately satiates the need to belong (Leary & Kelly, 2008). Large time investments continue after the initial period of getting to know someone. Between 6 weeks and 9 weeks, participants doubled their time with causal friends who became friends and doubled their time with friends who became good/best friends, while halving time spent in friendships that remained static. As CBB theory would predict, individuals steer their investments of time toward relationships more capable of satiating both daily and long-term belongingness needs.

This investigation demonstrates the importance of particular forms of everyday talk, specifically catching up, checking in, joking around, and meaningful conversation. Although intimate conversation has long been thought to contribute to friendship intimacy (e.g., Hays, 1984), Study 2 suggests that keeping abreast of friends' daily lives by catching up and joking around predict change in friendship closeness above and beyond the number of hours together. This confirms CBB theory's (Hall, 2018; Hall & Davis, 2017) prediction that communication episodes conceptualized as striving behaviors toward the need to belong encourage relationship development. Another interpretation of these results is that striving communication episodes represent an efficient use of friendship time, which supports CBB theory's principle of energy investment. Integrating friends into one another's daily life through everyday talk essentially conserves energy by reducing the number of hours needed to develop closeness. By contrast, Study 1 shows that time in obligatory workplace and classroom relationships is not associated with closeness. CBB theory would suggest time spent in this way is a poor investment toward satiating a need to belong, although indubitably important for meeting other needs (e.g., financial security, autonomy).

Notably, small talk predicted a reduction in friendship closeness from 6 weeks to 9 weeks. That is, friendships engaging in small talk become less close over time. These

findings add another element to Dunbar's (1996) assertion that time is a constraint to friendship development; namely, what people do with their time together uniquely explains the development of friendship closeness. Although the portion of time spent talking was unrelated to closeness in general, striving episodes positively and small talk negatively predicted change in closeness. This indicates that it matters greatly what form talk takes. Taken together, findings support CBB theory's assertion that certain types of talk are more capable of meeting belongingness needs than others and these types of talk are efficient investments in the relationship.

Directions for future research

Although this investigation implies that time together is due to participants' choices, friendships are mutual and reciprocal, particularly as they become closer. Fehr (2008) cautions that people tend to overestimate their control over friendship development and underestimate contextual factors, such as potential friends' available time and the amount of time saved by routine social interactions. Although one implication of this investigation is individuals should try to spend more time with friends, this unlikely to be a decision that can be made unilaterally.

Neither spending time together at work/school nor portion of time spent talking was associated with friendship closeness. As Wiseman (1986) pointed out, intimate conversation is not the only pathway to friendship. Shared time together catching up, joking around, and hanging out is time well spent. One interpretation of the role of hanging out in friendship development is when potential friends agree to shift contexts and try out a relationship in a new context, such as in someone's home or for the sake of just being with another person, friends are agreeing to trying out a new type of relationship. In doing so, friends show that they are willing to budget their constrained time for the purpose of relationship development and upkeep (Fehr, 2008).

This brings into focus the importance of having time available and the conveniences of a shared community (Fehr, 2008). Many more high school friends report seeing their friend daily (75%) than do middle-aged adults (30%) (Weiss & Lowenthal, 1975), and college uniquely affords students social opportunities in terms of time and freedom (Parks, 2007). Shared living conditions, such as dorms and shared apartments, certainly increase the ease and amount of time spent together, especially in comparison to adults who live with their families or alone. These crucial differences open the possibility that the differences in time estimates between studies are due to comparing working adults to college students. Perhaps older adults take longer in terms of hours to transition into closer friendships. Furthermore, the role of striving behaviors was not explored in the adult sample and could be uniquely valuable for younger adults compared to older adults. Another possibility is that young adults tend to overestimate the closeness of friendship or the status of friendship (e.g., best friends) compared to adults, which could have led to higher hour estimates before friendship transitions by adult participants. Because the majority of prior research on friendship has been conducted on student samples, future work should explore whether stage of life influences the identification of friendship, the role of activities, the types of everyday talk, and the amount of time it takes to make a friend.

Author's note

A prior version of this manuscript was presented at the National Communication Association Conference in Dallas, TX, in November 2017.

Acknowledgement

The author acknowledges Holly Burt and Haley Salyer for their assistance in data collection.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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