

# Effort, Depth, Satisfaction, and Resilience across the Spectrum of Online-to-Offline Relationships

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## ABSTRACT

The aim of this study is to explore the differences across the spectrum of digital and in-person relationships, which is more true to the actual social experience of young adults than most of the available research in this area, which tends to falsely dichotomize relationships as “online” or “offline.” The authors measured perceived relationship depth, effort, satisfaction, and resilience for as many relationships as participants chose to list across five categories: primarily in-person, primarily digital, combined in-person and digital, formerly in-person, and formerly-digital. Moderate, positive relationships were found among all variables across all relationship types, indicating that these are not independent constructs and are all important in understanding relationships of any kind. Those relationships with a strong, current in-person component (primarily in-person and combined) were rated as significantly deeper, more satisfying, more resilient, and requiring more effort than those without. Currently digital relationships (e.g., face-to-face friendships that had since transitioned to primarily online communication) consistently represented a middle ground between the high in-person contact and low in-person contact relationships, which substantiates the conceptualization of relationships along a continuum of online to offline. Interesting findings related to gender and relationship type (e.g., friend, relative) were also found.

**Keywords:** Online relationships; Offline relationships; Depth; Effort; Satisfaction; Resilience

## 1. INTRODUCTION

With the advent and growth in popularity of digital forms of communication, a substantially different way of initiating and maintaining relationships was born. Social networking sites (e.g.,

Facebook, Myspace), texting, and other digital communication (e.g., tweeting) form the basis for or contribute to the maintenance of a substantial number of relationships, especially among adolescents and young adults who are most familiar with the technology. The Pew Internet and American Life Project reports that 66% of adults use social networking sites (increased from 8% in 2005), including 86% of young adults (aged 18-29 years)<sup>1</sup>, especially Facebook, which is the most popular social network in the United States and the fourth most visited website on the Internet<sup>2</sup>.

Digitally mediated relationships tend to be large in number; for example, college students have a median of 300 Facebook friends and the numbers often reach the thousands<sup>3</sup>. The majority of these relationships are acquaintances, though the development of stranger-relationships and close relationships does occur<sup>4</sup>. This is likely because social networking sites are designed in a way that facilitates maintaining large networks of “weak tie” relationships (i.e., relationships that are bridged by association to another person); these technologies allow for cheap, easy, and efficient relationship maintenance<sup>5</sup>. Of note, while the reasons given for the use of social networking sites vary, about two thirds of users report that staying in touch with current friends and family is a main reason<sup>1, 6</sup>. In addition, researchers find moderate overlap between online and offline relationships, as much as 50% for adults, meaning that some face-to-face relationships are represented online as well, and use patterns indicate that a primary application of social networking sites is to strengthen offline relationships<sup>6, 7, 8</sup>. These data combine to underscore the idea that there are many types of digitally-mediated relationships, with varying purposes and patterns of communication.

Many studies have examined important differences in “online” versus “offline” relationships, especially in regards to the development of intimacy. Some researchers suggest that online (or “computer-mediated”) communications lack the sophistication and nuance of face-to-face communication, resulting in reduced intimacy<sup>9</sup>. However, others suggest that computer mediated communication involves less interpersonal risk, resulting in higher disclosures and increased intimacy<sup>10</sup>. One group hypothesized that such increased self-disclosure and increased access would promote intimacy, but found that face-to-face relationships were more intimate than virtual relationships<sup>11</sup>. They also found that those participants categorized as “virtual relators” (i.e., those who had pursued computer-mediated relationships) reported less intimacy in their face-to-face relationships, suggesting that perhaps they seek intimacy in online relationships to an attempt to balance their relative lack of intimacy in offline relationships<sup>11</sup>. Despite the bulk of research on relationship intimacy, there is little work published that addresses other differences in online and offline relationships, such as the effort expended, the satisfaction derived, the perceived depth, or the resilience of these relationships.

Regarding effort, digital communication reduces the effort involved in maintaining relationships, especially the relatively superficial relationships so prevalent on social networking sites<sup>5</sup>. For example, Facebook users employ patterns of communication that involve less time- and effort-consuming methods of contact (e.g., playing games rather than writing a post on their wall) with newly acquired “friends”<sup>12</sup>.

Virtually no published work describes the relational depth of online relationships, as the authors define it (“intense, serious, complex”); perhaps this concept has been passed over in favor of communicative (self-disclosure) or emotional intimacy. As noted above, the data on this is mixed, but generally findings indicate that there is often more self-disclosure but less perceived intimacy in online relationships than offline, in-person relationships.

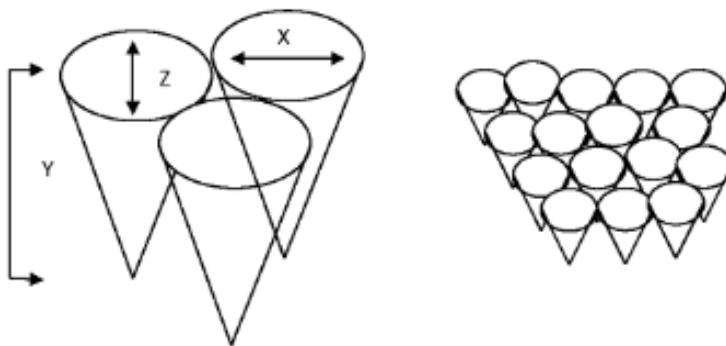
With regard to relationship satisfaction, the concept of sociability implies that perceived social connectedness, regardless of relationship depth, is inherently enjoyable and increases satisfaction with social relationships overall and that these benefits are derived in a variety of exchange forms<sup>13</sup>. When applied to computer-mediated relationships, which often vastly outnumber face-to-face relationships, this may have special implications due to the substantial increase in number of superficial contacts with others (e.g., brief comments on social networking sites, short texts, “liking” and “poking” on Facebook).

The above research and findings support the researching of on and off line relationships. Specifically, the current literature related to effort, depth, satisfaction and resilience. The variables will be used to create a hypothesis encompassing the majority of the afore mentioned research studies. This research study is based on a theoretical framework, where the variables such as effort and satisfaction are measured and compared across relationship types to better explore the intricacies and confluence of these variables.

### **1.1 Hypothesis**

The aim of this study is to explore the differences across the spectrum of digital and in-person relationships, which is more true to the actual social experience of young adults than most of the available research in this area, which tends to falsely dichotomize relationships as “online” or “offline.” Specifically, we are interested in the levels of perceived depth and effort in various types of relationships and how those factors relate to perceived satisfaction and resilience in relationships.

We expect to find positive relationships among all the primary variables, across all types of relationships. Specifically, we expect strong positive relationships between effort and depth, strong positive relationships between depth and resilience, and a weak positive relationship between depth and satisfaction. We further expect that those relationships with a strong face-to-face component will be perceived as requiring more effort, and being deeper, more satisfying, and more resilient. However, we do not expect there to be significant differences in total satisfaction gained from relationships, across type (i.e., the sum of satisfaction from all in Person relationships will be about equal to the sum of satisfaction from all combined relationships, or all currently digital relationships; see figure 1).



**Fig. 1: Conceptualization of Relationships and Influential Factors**

In this figure, each cone represents one relationship. The X axis represents satisfaction, the Z axis represents effort, and the Y axis represents relationship depth. Note on the left figure, this represents 3 relationships of significant effort and satisfaction with substantial depth. The right figure represents many relationships, none of which are very deep, but which cumulatively result

in about the same amount of satisfaction and require about the same amount of effort as the 3 relationships on the left.

## **2. METHOD**

### ***2.1 Participants***

Two hundred college students (undergraduate and graduate) were recruited from a small, Southern university. The sample was 64% female. Average age was 21.3 years old ( $SD = 8.13$ ). All participants reported familiarity with online communication (e.g., texting, tweeting) and social networking websites (e.g., Facebook, Myspace).

### ***2.2 Participants***

The survey packet included basic demographic information, basic definitions of important terms, and rating scales for different types of relationships, including: (1) Primarily Digital Relationships (PD; people with whom the predominate mode of communication is online (e.g., Facebook, texting, tweeting) and with whom there is little face-to-face contact), (2) Primarily In-Person (PIP; people with whom the predominate mode of communication is face-to-face, and with whom there is little to no online communication), (3) Combined (Digital and In Person) Relationships (D+IP; people with whom there is a substantial amount of face-to-face and online interaction), (4) Currently Digital (CD; the origin of the relationship was face-to-face, but now communication is primarily online), and (5) Formerly Digital (FD; the origin of the relationship was online, but now face-to-face communication predominates). The order in which relationships were addressed was randomized to reduce confounding due to order effects or fatigue.

For each type of relationship, participants were asked to list the initials of as many people who fell into each category as they wished, up to 10. Earlier pilot study data indicated that 10 possible entries per relationship type did not demonstrate a ceiling effect and that more than 10 was intimidating to the participants. They were also asked to identify what kind of relationship it was (e.g., relative, friend, romance, coworker) and the gender. For each person they identified, they rated the relationship on effort, depth, satisfaction, and resilience. Each dimension was rated using a mark on a 97mm line, anchored on both ends (see figure 2). Scores were coded as number of millimeters from the left edge. Effort was defined as “the physical, mental, and emotional work exerted during your relationship.” Depth was defined as “involving intense, serious, complex interactions.” Satisfaction was defined as “happiness and fulfillment with the state of your relationship.” Resilience was defined as “the ability of your relationship to withstand conflict and persist across time and change.”

<b>1. Initials:</b> _____	<b>Is this person a:</b> Relative Classmate Friend Other: _____	<b>Is this person: Male or female</b>
No effort at all	.....	A huge amount of effort
Not deep at all	.....	Extremely deep
Not at all satisfying	.....	Completely satisfying
Not at all resilient	.....	Extremely resilient

**Fig. 2:** Sample Survey Section

### 2.3 Procedure

Survey packets were given to students, with approximately 20-30 minutes to complete the packet time. They were instructed to report on as many relationships in each category as they chose, based on which relationships came to mind first.

## 3 RESULT

The average number of total relationships recounted by participants was 13.21 ( $SD = 6.03$ ). Best represented were Primarily In-Person ( $X = 3.91$ ,  $SD = 2.39$ ) relationships. This means, that on average, participants listed a total of 13 relationships and that of the 13 relationships listed, 4 of the relationships represented primarily in person, or face to face, relationships. Combined ( $X = 3.33$ ,  $SD = 2.31$ ), and Currently Digital ( $X = 3.03$ ,  $SD = 1.94$ ) relationships followed in terms of frequency. This means that of the relationships reported an average of approximately 3 of these relationships had components of a combined relationship, also known as relationships with both online and offline components. Further, on average, approximately 3 of the relationships reported by participants were classified, by the participant as being currently digital, indicating that however the relationship was initiated, the primary form of current connection was through an online format. Participants were less likely to describe as many Primarily Digital ( $X = 2.02$ ,  $SD = 1.83$ ) and least likely to report Formerly Digital ( $X = 0.9$ ,  $SD = 1.24$ ) relationships. On average, participants reported only 2 primarily digital relationships, meaning that the reported relationship was both started and maintained through online formats. Also of importance, very few relationships, one per participant on average, were able to list a relationship that was initiated through an online format and then brought into an offline format. These differences were significant,  $F(4, 995) = 73.45$ ,  $p < .001$ , which indicates that significant difference exist between relationships that were initiated in an offline format from those relationships that were initiated with an online format.

The expected positive relationships between effort and depth (.478) and depth and resilience (.589) were found. However, the relationship between depth and satisfaction, which was expected to be weakly positive, was the strongest relationship (.667). As hypothesized, small to moderate positive relationships were found among all main variables (see table 1). These relationships among variables were nearly identical, even after dividing cases by type (e.g., Primarily In-Person; see tables 2-6).

Table 1. Main variable correlations across all cases (n=2651).

	Effort	Depth	Satisfaction	Resilience
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Effort	1	.478**	.312**	.317**
Depth		1	.667**	.589**
Satisfaction			1	.653**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

Table 2. Main variable correlations in Primarily Digital relationships (n=404).

	Effort	Depth	Satisfaction	Resilience
Effort	1	.519**	.286**	.258**
Depth		1	.605**	.496**
Satisfaction			1	.629**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

Table 3. Main variable correlations in Primarily In-Person relationships (n=785).

	Effort	Depth	Satisfaction	Resilience
Effort	1	.422**	.252**	.346**
Depth		1	.668**	.611**
Satisfaction			1	.652**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

Table 4. Main variable correlations in Combined In-Person and Digital relationships (n=671).

	Effort	Depth	Satisfaction	Resilience
Effort	1	.456**	.276**	.266**
Depth		1	.620**	.555**
Satisfaction			1	.592**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

Table 5. Main variable correlations in Currently Digital relationships (n=610).

	Effort	Depth	Satisfaction	Resilience
Effort	1	.465**	.272**	.209**
Depth		1	.624**	.521**
Satisfaction			1	.617**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

Table 6. Main variable correlations in Formerly Digital relationships (n=181).

	Effort	Depth	Satisfaction	Resilience
Effort	1	.345**	.244**	.307**
Depth		1	.654**	.552**
Satisfaction			1	.584**
Resilience				1

\*\*. Pearson correlation is significant at the 0.01 level (2-tailed).

The expected differences among the different types of relationships were also found. Specifically, In-Person and Combined relationships were described as being significantly more effort than the other three types,  $F(4, 2646) = 30.97, p < .001$ . As to depth, In-Person and Combined relationships were rated as significantly deeper than Currently Digital relationships, and Primarily and Formerly Digital relationships were rated as the least deep,  $F(4, 2646) = 61.18, p < .001$ . The same pattern emerged for satisfaction, with In-Person and Combined rated as the most satisfying, followed by Currently Digital, followed by Primarily and Formerly Digital,  $F(4, 2646) = 71.24, p < .001$ . This pattern also held for resilience,  $F(4, 2646) = 71.24, p < .001$ .

Taken together, these findings begin to build a picture of the various kinds of relationships that supports the model in figure 1. That is, effort, satisfaction, and depth hold relatively constant relationships with each other. What varies across relationship type seems to be the overall quality of the relationship, with In-Person and Combined relationships showing higher total scores on all variables, and the digital-based relationships showing lower scores on all variables (see figure 3). These findings indicate even though more effort is exerted to maintain an offline relationship, there is a corresponding level of satisfaction and depth that are achieved. On the other hand, this study found that with the decreased the effort of digital relationships came decreased levels of satisfaction and depth of those relationships by the sample.

Some interesting findings emerged regarding gender. While males and females did not differ significantly in the number of relationships they described, females reported more effort across all types of relationships,  $F(1, 192) = 5.70, p < .05$ , and described their relationships as deeper across all types,  $F(1, 192) = 6.51, p < .05$ . This means that the research found, for this sample, that even though females self-reported exerting more effort into relationships, they also self-reported increased depth of those relationships when compared to their male counterparts. There were no overall differences in reported satisfaction or resilience. However, when inter-action with the relationship partner's gender was considered, a few interesting trends emerged. Males' relationships with other males were reported as the most satisfying, and females' relationships with males were the least satisfying,  $F(1, 1507) = 7.543, p < .01$ . Males' relationships with males were also rated as the most resilient, and males' relationships with females as least resilient,  $F(1, 1507) = 16.359, p < .001$ . No gender interaction effects for depth or effort were found.

Also of note were some significant differences among the reported category of relationship (e.g., relative, friend) regardless of primary type of communication. Romantic relationships were rated as more effort than all others, followed by relatives, and then others (i.e., friends, classmates, coworkers),  $F(1, 1574) = 10.68, p < .001$ . A similar pattern was seen for depth, with romances listed as the deepest, followed by relatives, then friends, then others,  $F(1, 1574) = 16.23, p < .001$ . Romantic partners and relatives were rated as the most satisfying relationships, followed by friends and coworkers, then classmates,  $F(1, 1574) = 6.24, p < .001$ . A slight but important variation on this pattern emerged for resilience, where relatives and romantic partners were rated as the most resilient, with a trend of relatives being the most resilient but no significant differences between them (the "blood is thicker than water" finding). Again, friends fell into the middle category, less resilient than relatives but not significantly less resilient than

romances. Coworkers and classmates were rated as least resilient. No significant interactions between the relationship category (e.g., relative, friend) and the relationship type (e.g., primarily digital, primarily in-person) were found.

### 3.1. Figure 3: Conical Representation of Average Participants Results

These cones represent the average participant's relationships, where the number of ones indicates the average number of relationships disclosed by the participants for each category. The cones are to scale with the X axis representing satisfaction, Y axis representing depth, and the Z axis representing effort (as in Figure 1).

## 4 CONCLUSION

Overall, the hypotheses that were able to be examined were supported. Effort, depth, satisfaction, and resilience appear to be inextricably related relationship variables, regardless of relationship type. However, the relationships with a strong in-person component have higher values in all categories – they require more effort, but are also higher in satisfaction, depth, and resilience. Primarily In-Person and Combined In-Person-and-Digital relationships seem to fall into this category; Currently Digital and Primarily Digital relationships seem to form another category. Of particular interest, Formerly Digital relationships (though they are now primarily in-person) have more in common with the primarily digital relationships than the primarily in-person relationships. This may offer some evidence in opposition to Social Information Processing Theory, which suggests that online relationships may take longer to develop than face-to-face relationships, but over time have the same qualities<sup>14</sup> and instead suggests that what may be most important in determining the current quality of a relationship is how that relationship began.

A particularly interesting finding relates to the Currently Digital category, which includes relationships with those people who a participant once knew primarily in person and at some point became primarily digital (e.g., former schoolmates, out-of-town relatives). These relationships were consistently found to be a “middle ground” between the relationships with a strong current face-to-face component and those that are primarily digital or have their roots in a digital origin. This may be related to research indicating that social similarity and number of joint activities and discussion topics are important factors in perceived closeness to online friends, over and above duration of the relationship<sup>15</sup>.

A significant limitation of this study was present in the format of the survey and administration procedure. Although the choice to have participants complete the survey in a limited time (as well as the necessarily limited number of potential responses) gave some interesting information about salience (i.e., the relationships that came to mind first), it did not give participants the opportunity to give a representative sample of their relationships. That is, the number of Primarily Digital relationships (e.g., Facebook friends) is likely quite substantially higher than the number of In-Person or Combined relationships that participants really have. This made it impossible to address the question of whether participants perceive the same amount of overall satisfaction from their higher number of less intimate and less satisfying online relationships and whether the sociability construct<sup>13</sup> has strong applications here.

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