Chapter 1
Introduction

With the seemingly infinite amount of information available in online environments, a growing number of users seeks an effective way to find information online. Accordingly, recommender systems that provide personalized support to online users in their information search and decision-making are increasingly seen as necessary and critical components of the online user's web experience (Ochi et al. 2010; Zanker and Ninaus 2010). Recommender systems are available across various domains, including online dating, travel, books, movies, electronics, etc. Yet, although these systems are expected to support online users in complex decision-making processes, they are often not used efficiently due to a lack of confidence in the recommendations they provide (Moulin et al. 2002). Recent survey findings (ChoiceStream 2009) indicated that more than one-half (59 %) of Internet users were not happy with the product recommendations they received at e-commerce sites. These findings suggest that it is important for recommender system research to examine factors that influence the likelihood of recommendations to be accepted and integrated into decision-making processes. Most recommender system research has focused on improving the matching algorithms while a considerably smaller stream of research has explored factors that influence qualities of the system-user interaction (Mahmood et al. 2008). Interactions with recommender systems are in essence conversations that should be examined from a communication point of view (Lucente 2000). The traditional persuasion literature suggests that people are more likely to accept recommendations when the sources display persuasive cues during the interaction process. Recommender systems are sources with the need to persuade their users. Indeed, it has been argued that creating a persuasive recommender system is important in increasing the likelihood of recommendation acceptance (Fogg 2003; Dijkstra et al. 1998; Jiang et al. 2000; Zanker et al. 2006; Gretzel and Fesenmaier 2007; Nguyen et al. 2007; Yoo and Gretzel 2008). The question of how to actually translate persuasiveness into system characteristics in the context of recommender systems, however, still underexplored.

Existing research conducted from a communication perspective suggests that technologies can be more persuasive when leveraging social aspects that elicit

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social responses from their human users (Fogg 2003; Nass and Moon 2000). This notion emphasizes the role of recommender systems as quasi-social actors who interact with users socially. If seen as a social communication process, it becomes clear that the characteristics of recommender systems displayed to users in the interaction process influence the perceptions of their users. Various factors have been investigated in the traditional persuasion literature based on human–human communication. Recent studies in the context of human–computer interaction found that these characteristics are also important when humans interact with technologies (Fogg 2003; Fogg et al. 2002; Nass and Moon 2000; Reeves and Nass 1996). With regards to recommender systems, some studies have empirically investigated the persuasive role of recommender systems (e.g. Cosley et al. 2003; Gretzel and Fesenmaier 2007; McNee et al. 2003; Nguyen et al. 2007; Pu and Chen 2007; Qiu 2006; Yoo 2010; Zanker et al. 2006). While these studies identified a number of important factors that help to develop more persuasive recommender systems, still many other factors have not been examined. Further, relevant findings are scattered across the academic literatures in computer science, marketing, management, communication and so on. Thus, the existing recommender system literature does not provide a comprehensive framework for understanding recommender systems as persuasive advice givers.

This book therefore seeks to integrate existing insights into a conceptual framework for persuasive recommender systems. For this purpose, Chap. 2 first provides the theoretical background for understanding recommender systems as persuasive social actors. The factors identified in traditional persuasion literature are briefly reviewed in Chaps. 3–5. In addition to providing overviews, the chapters discuss how these factors have been studied in technology contexts and, in particular, in the recommender systems realm. Chapter 6 offers a summary and further discussion. Finally, implications for recommender system design are presented in Chap. 7 and Chap. 8 suggests directions for future research based on identified research gaps. Overall, by exploring existing findings and identifying important knowledge gaps, this book seeks to provide insights for recommender system researchers as far as future research needs are concerned. It also aims at providing practical implications for recommender system designers who seek to enhance the persuasive power of the recommender systems they build.