

# Narrations of Personality Disorders in a Famous Chinese Novel of the Eighteenth Century - A Dream of Red Mansions

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## Abstract

**Background:** Traditional Chinese culture, such as the paternalism, male dominance and collectivism, contribute to normal and disordered personality traits, and the influence might be traced back to an ancient epoch. As a compendium of Chinese culture, the novel, A Dream of Red Mansions (up to first 80 chapters) written in the 18th century, might be a vector of these traces.

**Methods:** We selected and voted on the personality-descriptive terms (adjective)/phrases, and sentences/paragraphs in the novel, and compared them with the dimensional classification criteria of Section III of the Diagnostic and Statistical Manual of Mental Disorder-Version 5.

**Results:** Some characters in the novel, Jia Baoyu, Wang Xifeng, Lin Daiyu, Xue Baochai, Xue Pan, Jia Yucun, Concubine Zhao, Jia Rui, Miaoyu, and Jia Jing, with their impairments in personality functioning and pathological traits, might be diagnosed as antisocial, borderline, narcissistic, obsessive-compulsive, or schizotypal personality disorder, or a trait-specified. In each character, the personality disorders or traits had their family, societal and religious (Taoism or Buddhism) connections.

**Conclusion:** Our study indicates that Chinese culture has contributed to personality disorders or traits at least from 18th century on, and has disclosed the disadvantages of Taoism, Buddhism, and hierarchy, male dominance and collectivism under the influence of Confucianism in the development of personality disorder. Our findings might provide treatment hints for personality disorders at the root of culture, for patients in China, Japan, Singapore, South Korea, Thailand, and other neighboring countries in Asia, who have been emerged from the Chinese culture.

**Keywords:** A Dream of Red Mansion; Chinese traditional culture; Personality disorder

## Introduction

The traditional Chinese culture encompasses diverse and sometimes competing schools of thought, including Confucianism, Taoism, Buddhism, etc., and many other regional cultures. The Confucianism is the most influential one, which forms the foundation of Chinese cultural tradition and foster the bases of Chinese interpersonal behaviors [1]. In Confucianism, rules are spelled out for the social behavior of each individual, governing the entire range of human interactions in society. The basic teaching of Confucius is distilled in the Five Constant Virtues (Wu Chang, 五常): humanity (仁), righteousness (义), propriety (礼), wisdom (智) and faithfulness (信) [2]. Confucius further defined five basic human relations and their principles, namely the Five Cardinal Relationships (Wu Lun, 五伦): Sovereign and subject (or master and follower), and the principle of which relationship was the loyalty and duty (忠); Father and son, the love and obedience (孝); Husband and wife, the obligation and submission (忍); Elder and younger brothers, the seniority and modeling subject (悌); and Friend and friend, the trust (信). Thus, relationships were structured to deliver optimal benefits for both parties. For each relation, certain behavior principles must be followed to ensure a harmonious society. However, the obsession with preserving harmony in society and family systems eventually leads to the excessive power distance and rigid rules, at the expense of flexibility and professionalism [3].

Regarding the five main relations (Wu Lun), the first two of them, the loyalty and filial piety, are generally deemed the most important ones; three of them are family relations, which indicate the importance of family in Chinese society and account for its paternalism; and the first and last ones often stand out when they are applied to management, which lead to the birth of a paternalistic management style in China [4]. The Confucius always uses the male-only language

to define family relations, and the paternal character is clearly expressed in the Chinese system of property inheritance [5]. The Confucianism results in Chinese collectivistic culture, which tends to embrace interdependence, family security, social hierarchies, co-operation, and lower levels of competition; while the individualistic culture is roughly the opposite, which emphasizes independence, freedom, and high levels of competition and pleasure [6-8]. Moreover, a collective orientation implies a tendency to submit to the fate-fatalism of an individual [9], while the individualistic orientation, in the quest for freedom, implies a desire to seek control over the fate of a person. Allik and McCrae [10] have stated that both European and American cultures are dominant in individualism, western people are outgoing, open to new experience, and antagonistic; the Asian (including Chinese) and African people are introverted, traditional, and compliant. Funham and Cheng [11] also have shown that Chinese and Japanese people are less extraverted than British people are. Therefore, the traditional Chinese culture, with uniqueness of paternalism, collectivism and male dominance, might have contributed to personality traits or personality disorders from an ancient epoch on.

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On the other hand, parental bonding styles are closely related to personality in many cultures. Poor parental bonding (lack of maternal care and low paternal overprotection) was associated with a psychopathic personality [12-13]. Two externalizing problems - aggressive and delinquent - were characterized by low maternal care, paternal over-protection, and low maternal overprotection [14]. In China, patients with personality disorder scored lower on parental Care but higher on parental Freedom Control and Autonomy Denial [15,16].

Some efforts have been devoted to a historical and stable Chinese personality structure by examining the ancient Chinese language terms relating to personality, for instance, Yang [17] has focused on a history book named the Records of the Grand Historian (Shiji, 史记), and found four factors: Ren (仁, benevolence), Zhi (智, intelligence or wisdom), Yong (勇, courage) and Yin (隐, being a hermit). In the contemporary era, the personality structures described by the taxonomical pool are even more fruitful, for instance, Yu et al. [18] described a five-factor normal personality trait structure, Intelligent, Emotional, Conscientious, Unsocial and Agreeable, using Chinese adjectival descriptors. The personality structures described in ancient and contemporary eras share some similarities, which confirm that history is often indicative of future. The question therefore arises whether the ancient Chinese culture and the family environment had left some hints on the development of personality structures of that epoch. Answering this question might help trace the cognitive and behavioral imprints in the development of personality, and offer some profound clues for management of the contemporary personality disorders.

The related strategy then, is to look for a reliable vector of ancient scenarios with Chinese culture and describable personality disorders. Being valued as a compendium of Chinese culture [19], and even taken as historical documents [20], Honglou Meng (红楼梦, A Dream of Red Mansions, DRM, in Chinese) [21] would be a wonderful candidate. The novel has been translated into many languages including English. One reliable English version [22] was by an English couple, Mr. Hsien-yi Yang (an English Chinese) and Mrs. Gladys Yang (native English). It is also called the Story of the Stone, the Dream of the Red Mansion, or the Dream of the Red Chamber. Long time ago, Mr. Cao Xueqin (曹雪芹) was thought to have written the novel in 1740, and he had only completed its first 80 chapters (In some DRM versions, chapters 79 and 80 were not clearly separated but rather compiled together as Chapter 79; in our current study, we split the contents into chapters 79 and 80, see later). Recently, a description of its later 28 chapters was discovered and published, which covers a possibility that Mr. Cao Xueqin was just a pen-name and it might stand for a group of authors (in Chinese) [23]. However, the authenticity of these later 28 chapters has not been confirmed yet.

Nevertheless, using the criteria of mass and academic appeal, it has been widely acknowledged as one of the Four Greatest Classical Novels in China, and as one of the world's masterpieces, and comparable to the works of Shakespeare or Goethe [19,24]. The novel described the lives of over 400 characters from virtually every class and profession, e.g., maids-in-waiting, stewards, gardeners, cooks, nuns, actors, officials, members of the imperial family, gamblers and thieves [25]. Beyond its literary merits, scholars consider it a highly realistic document of the life of the Chinese people in the 18th century. For instance, DRM is used for studying the politics [26], economics [3], cultures [27,28], religions [29,30], social customs [31], family structure, even literary taste and objet d'art [32] of that epoch. Over the last century, a science commonly known as Redology has been developed, which encourages researches on the theme, the characters, the versions, and the reciprocal

influences mutually with other classical works (e.g., [19,33,34]). In addition, there are also some studies exploring the psychological world or the psychiatric problems described in DRM, which regarding the internal control concept [35], bisexuality [36,37], homosexuality [38], and the attention deficit/hyperactivity disorder [39,40]. For example, in the novel, a few playboys in an affluent household, such as Jia Baoyu (贾宝玉) and Xue Pan (薛蟠), as philandering with their convoy of pages, school boys, visiting actors, as well as with various women [38].

Up to the present, there is no study about the disordered personality traits in DRM or in ancient Chinese culture. One group of investigators however, by analyzing nearly five hundreds personality-descriptive adjectives in the first 80 chapters of DRM, have reported a five-factor structure of personality traits, namely Wicked, Intelligent, Amiable, Conscientious, and Frank, which was similar to the contemporary five-factor model [41]. With rich social and family environment sources, and detailed character descriptions (including speech, behaviors, and psychological scopes), DRM might provide some information about personality disorders and their related culture/family factors in the 18th century. However, narrations of a character might not be enough to form a personality disorder diagnosis, such as to meet all the necessary criteria proposed in the Diagnostic and Statistical Manual of Mental Disorders, Version 5 (DSM-5) [42], they might offer some hints of disorder personality traits, such as those dimensionally classified in the DSM-5 Section III (personality disorders or trait-specified). While a fitting to DSM-5 Section III criteria avoids the excessive heterogeneity within diagnoses, excessive diagnostic comorbidity, inadequate coverage, arbitrary boundaries with normal psychological functioning, and an inadequate scientific foundation [43-46]. Thereupon, we have hypothesized that the personality-related, information-bearing terms/phrases and sentences/paragraphs in DRM could be used as peer-reports; based on these narrations, (1) some main characters in the novel could be diagnosed into personality disorders or trait-specified in the DSM-5 Section III, and (2) relationships between the cultural, societal, or family factors and personality disorders could be formed.

## Materials and Methods

We selected the 80-chapter version of DRM for the current study. The latter chapters of other versions were neglected for their distinctions from the preceding 80 chapters in writing style. The original first 80 chapters in Chinese were carefully compared with their English translations (Beijing: Foreign Languages Press) [22]. The character names translated into English by Yang and Yang [22] were updated in the contemporary Chinese Pinyin. All co-authors (judges) of the study were involved in selecting and voting on the personality-descriptive terms (adjectives)/phrases, and sentences/paragraphs in DRM, and in further comparing them with the personality disorder criteria described in the DSM-5 Section III [42].

## The novel DRM

The DRM provides a detailed, episodic record of the rise and fall of the two branches of the Jia (贾) Clan, the Ningguo (宁国府) and Rongguo Houses (荣国府), who resided in two large adjacent family compounds in a capital city, during the 18th century. In brief, the Jia's status came from the achievements of two glorious ancestors, but succeeding generations of males had become increasingly inadequate, and their fortunes were definitely in decline. Therefore, the females took center stage and were frequently shown to be more capable than their male counterparts. Most stories in DRM unfold around the Rongguo branch of the Jia household which was ruled by an all-powerful widowed matriarch, the formidable Lady Dowager (Grandmother Jia,

贾母). Freed from the domination of her husband, the Lady Dowager override the authority of her two sons, and the sons as the eldest males in the household in fact exercised authority over Lady Dowager. Altogether more than 400 characters were depicted, including virtually every class and profession [25].

### The judges

All co-authors of the current study who were majoring in Clinical Psychology or Psychiatry, functioned as judges to select and vote on the descriptions of personality trait (adjectives/phrases, and sentences/paragraphs), and to compare and vote on the descriptions for their DSM-5 criteria-fitting. Two co-authors were PhD, and two MSc holders, three were PhD and one MSc candidates. In addition, two co-authors (YQ and JZ) were junior psychiatrists and one a senior (WW).

**The personality-related descriptions:** For a personality description of a DRM character, the judges used interrogative sentences to help identify and determine whether the description referred to impairment in personality functioning or pathological personality traits. Each judge independently examined the first 80 DRM chapters to search for the personality-descriptive adjectives/phrases, and sentences/paragraphs. For instance, for adjectives, the judges used questions such as, “What kind of person is he/she? He/she is [adjective]” and “What do you think of this person? He/she is [adjective]” to help determine whether an adjective referred to states or traits. Altogether 141 adjectives/phrases and 241 sentences/paragraphs were identified after an exhaustive search by each author (judge).

Each description was afterwards voted on by seven judges independently and labeled as “qualified” if it received more than four “yes” votes. If a description received three “yes” and three “no” votes, the seventh judge (one of the PhD holders) made a preliminary decision, which had to be confirmed by the senior judge (WW) later. Finally, 93 adjectives/phrases and 188 sentences/paragraphs survived after voting.

**The comparisons with DSM-5 criteria:** For each DRM character, his/ her personality-related descriptions were carefully compared with the DSM-5 Section III criteria [42]. In brief, for each personality disorder, we examined criteria for the impairments of personality functioning: Identity, Self-direction, Empathy and Intimacy. We also examined the pathological personality traits (25 facet traits from five higher-order trait domains): negative affectivity (emotional lability, anxiousness, separation insecurity, perseveration, submissiveness, hostility, restricted affectivity [lack of], and suspiciousness); detachment (restricted affectivity, depressivity, suspiciousness, withdrawal, anhedonia, and intimacy avoidance); antagonism (hostility, manipulateness, deceitfulness, grandiosity, attention seeking, and callousness); disinhibition (irresponsibility, impulsivity, rigid perfectionism [lack of], distractibility, and risk taking); and psychoticism (unusual beliefs and experiences, eccentricity, and cognitive and perceptual dysregulation). If a specific personality type was not indicated but personality dysfunction was present, we designated a trait-specified for that situation.

Once again, each description for the main DRM characters was voted on by seven judges independently and labeled as “qualified” if it fitted either into an impairment in personality functioning, or a pathological personality trait. If a description received three “yes” and three “no” votes, the seventh judge (one of the PhD holders) made a preliminary decision, which had to be confirmed by the senior judge (WW) later. Afterwards, DRM characters matched with the descriptions and the DSM-5 section III criteria appeared, and their gender, age (up

to Chapter 80), name-showing frequency, and numbers of chapter bearing important information (with specific plot) are illustrated in Table 1.

### Results

After scrutinizing the personality-descriptive adjectives/phrases and sentences/paragraphs which characterized each DRM character, we found some main characters who might meet the criteria for a specific personality disorder or a trait-specified (Table 2), and the related personality-descriptive narrations for each character were informative (Supplementary Table, which is available upon request to the authors). For Jia Huan (贾环) and Xia Jingui (夏金桂), their antisocial personality disorder was not fully granted due to their young ages (less than 18 years old up to Chapter 80), they still could be diagnosed with a trend of the disorder. They had shown some prodromal signs and symptoms that might account for the disorder in their putative adulthood.

For antisocial personality disorder, Xue Pan (薛蟠), the cousin of Jia Baoyu, might be the one who met the related criteria. The mother of Xue Pan was Aunt Xue (薛姨妈), the sister of Lady Wang (王夫人, the mother of Jia Bao-yu). Xue Pan came of a scholarly Jinling (金陵) family, yet his father was dead when he was still a child. He was thoroughly spoiled by his mother as the only son and heir, which resulted in that he had grown up good for nothing (老大无成, chapter 4). He always failed to conform to the lawful and ethical behavior, but was egocentric, lack of concern for others, and was accompanied by manipulateness, callousness, deceitfulness, hostility, impulsivity, and irresponsibility.

Based on the limited information with the first 80 DRM chapters, Xue Baochai (薛宝钗), the younger sister of Xue Pan (born of the same parents), might not receive an antisocial diagnosis, but might potentially meet the criteria of the antagonism domain. Growing up with her troublesome brother, she had learned to masquerade as a non-malicious girl and had achieved some of her goals in the dark.

Jia Huan (贾环) was the half-brother of Jia Baoyu, born from the Concubine Zhao (赵姨娘) to his father Jia Zheng, might receive a diagnosis of the antisocial personality disorder trend. As the younger son by a concubine, he was paid less attention and lacked of good family education. Jia Huan was described as with a vulgar and common appearance. He was contrasted brightly with Jia Baoyu, who

Name	Gender	Age (year)	Name-appearing	
			Frequencies	Chapters
Jia Baoyu (贾宝玉)	Male	15	2625	78
Wang Xifeng (王熙凤)	Female	25	1253	67
Lin Daiyu (林黛玉)	Female	14	947	62
Xue Baochai (薛宝钗)	Female	17	689	63
Qingwen (晴雯)	Female	17	302	34
Xue Pan (薛蟠)	Male	23	244	20
Jia Yucun (贾雨村)	Male	40+ (?)	116	12
Jia Huan (贾环)	Male	13	103	22
Concubine Zhao (赵姨娘)	Female	30± (?)	101	19
Jia Xichun (贾惜春)	Female	13	88	29
Jia Rui (贾瑞)	Male	20+ (?)	73	4
Xia Jingui (夏金桂)	Female	17	58	2
Miaoyu (妙玉)	Female	21	48	6
Jia Jing (贾敬)	Male	66	20	7

**Table 1:** Gender, age (up to Chapter 80), name-showing frequency, and number of information-bearing chapters (with specific plot) of the matched DRM characters.

Character Name	Impairments in personality functioning	Pathological personality traits	Personality disorder	Trait-specified
Jia Baoyu (贾宝玉)	Identity; Self-direction; Intimacy	<i>Psychoticism</i> (cognitive and perceptual dysregulation, unusual beliefs and experiences, eccentricity); <i>Detachment</i> (withdrawal)	Schizotypal	Distractibility
	Identity; Intimacy	<i>Negative affectivity</i> (emotional lability, separation insecurity, depressivity); <i>Disinhibition</i> (impulsivity)	Borderline	
Wang Xifeng (王熙凤)	Identity; Self-direction; Empathy; Intimacy	<i>Antagonism</i> (grandiosity, attention seeking)	Narcissistic	Unusual beliefs and experiences Suspiciousness
	Self-direction; Empathy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, irresponsibility)	Antisocial	
Lin Daiyu (林黛玉)	Identity; Empathy; Intimacy	<i>Negative Affectivity</i> (emotional lability, anxiousness, separation insecurity, depressivity); <i>Disinhibition</i> (impulsivity); <i>Antagonism</i> (hostility)	Borderline	Grandiosity Suspicious
Xue Baochai (薛宝钗)				<i>Antagonism</i>
Qingwen (晴雯)	Empathy; Intimacy		(Probable) Antisocial (Probable) Borderline	Hostility; Impulsivity
Xue Pan (薛蟠)	Self-direction; Empathy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, impulsivity, irresponsibility)	Antisocial	
Jia Yucun (贾雨村)	Identity; Self-indirection; Intimacy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, irresponsibility)	Antisocial	
Jia Huan (贾环)	Self-direction; Empathy; Intimacy	<i>Antagonism</i> (deceitfulness, hostility); <i>Disinhibition</i> (irresponsibility)	(Probable) Antisocial	
Concubine Zhao (赵姨娘)	Self-direction; Empathy; Intimacy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, impulsivity)	Antisocial	
Jia Xichun (贾惜春)	Self-direction; Intimacy			Callousness
Jia Rui (贾瑞)	Self-direction; Intimacy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, impulsivity)	Antisocial	
Xia Jingui (夏金桂)	Self-direction; Empathy; Intimacy	<i>Antagonism</i> (manipulativeness, callousness, deceitfulness, hostility); <i>Disinhibition</i> (risk taking, impulsivity)	(Probable) Antisocial	Emotional lability
Miaoyu (妙玉)	Empathy; Intimacy	<i>Antagonism</i> (grandiosity, attention seeking)	Narcissistic	Withdrawal; Hostility; Grandiosity
	Empathy; Intimacy	<i>Disinhibition</i> (rigid perfectionism); <i>Detachment</i> (intimacy avoidance, restricted affectivity)	Compulsive-Obsessive	
Jia Jing (贾敬)	Identity; Self-direction	<i>Psychoticism</i> (unusual beliefs and experiences, eccentricity); <i>Detachment</i> (restricted affectivity, withdrawal).	Schizotypal	

Table 2: Possible impairments in personality functioning, pathological personality traits, personality disorder or trait specified in each DRM character.

had a striking charm and an air of distinction (神彩飘逸, 秀色夺人, chapter 23). He was spineless (没气性的, chapter 20), shameless/mean and sneaky (下流, chapter 20), having no self-respect (不尊重, chapter 20), and often letting others to warp his mind and to teach him the sneaky ways (歪心邪意, chapter 20). Jia Huan had specific features of deceitfulness, hostility and irresponsibility, accompanied by impairments in coherent personal goals and close relationships.

Concubine Zhao (赵姨娘), mother of Jia Huan, might also be labeled as antisocial personality disorder. It was not a blessing for the woman who was half of master and half of servant to bear a boy. In this case, her son would live under the pressure of Jia Baoyu, who was the son of Jia Zheng's principal wife, and the first heir to Jia household. Concubine Zhao and her son sensed being despised and neglected by masters and servants in Jia household all the time, which cultivated the personality features of manipulateness, callousness, deceitfulness, hostility, risk taking, and impulsivity.

Meanwhile, Jia Yucun (贾雨村), a careerist on the climb, might also meet the criteria of antisocial personality disorder. The highly learned man was so anxious for high official titles with a high salary that he dared not to uphold justice and punish Xue Pan, a good-for-nothing young man from a wealthy family, who had killed a man. Mr. Jia Yucun was brewing plots for purpose of money which resulted in disintegration of families, but he had nothing to repent of.

Jia Rui (贾瑞), whose parents had died long before, was the eldest grandson of Jia Dairu (贾代儒), a venerable Confucian scholar who

was running the school of Jia household. Raised by the strict discipline of his grandfather, Jia Rui got too far out of line on the contrary, and he was an unscrupulous, grasping scoundrel who often used his position in the school to fleece the boys (最是个图便宜没行止的人, chapter 9). Moreover, he tried to fornicate with Wang Xifeng (王熙凤), wife of Jia Lian (贾琏), one of his elder cousins. The antisocial personality features he had were manipulateness, callousness, deceitfulness, hostility, risk taking, and impulsivity.

For borderline personality disorder, the emotional Lin Daiyu (林黛玉), who was the granddaughter of Lady Dowager, the sickly cousin (also lover) of Jia Baoyu, might meet the criteria. Lin Daiyu was intelligent and pretty, so her parents decided to give her a good education. In this case, her parents would make up for their loss of a son and help themselves forget their sorrow. The mother of Lin Daiyu, who was the only and most loved daughter of Lady Dowager, died when Lin Daiyu was young. Later, Lady Dowager sent for Lin Daiyu and brought her up to live with Jia Baoyu in Rongguo Mansion. Lin Daiyu always regarded herself as a guest in the Mansion and was insecure and lack of confidence to others including her lover Jia Baoyu. She had an unstable self-image and interpersonal relationships, and maladaptive traits of emotional lability, separation insecurity, depression, hostility and impulsivity.

For narcissistic personality disorder, Wang Xifeng (王熙凤), who was the niece of Lady Wang, also the wife of Jia Lian, son of Jia She (贾赦, uncle of Jia Baoyu) might meet the criteria. Wang Xifeng had been educated like a boy (and thus was given a schoolroom name -

Xifeng), and was described as extremely good-looking and a clever talker. She was so resourceful and astute that not a man in ten thousand was a match for her (男人万不及一, chapter 2). She had a variable and vulnerable self-esteem, with attempts at regulation through attention and approval seeking, and she had an overt grandiosity. Meanwhile, the descriptions about her might conform to the diagnosis of antisocial personality disorder, for example, she had a maladaptive trait in the domains of antagonism and disinhibition, which contributed to the zalignant narcissism. Moreover, Wang Xifeng had suspiciousness, and once had unusual beliefs and experiences due to the secret harmful action performed by Concubine Zhao and Priestess Ma (马道婆).

Jia Baoyu (贾宝玉), the main character of DRM, was also the most complicated one in regard to personality features. He was described as remarkably mischievous yet very clever. He came into the world with a piece of clear, brilliantly colored jade in his mouth, and there were even inscriptions on the jade. Therefore, Lady Dowager, who had almost complete authority over the extended household, had doted on him and regarded him as her darling, by indulging him even more than the beautiful son, privileged to inherit the wealthy household under ordinary circumstance. Jia Baoyu was even allowed to live with his beloved sisters and girl cousins in the Grand View Garden. His father Jia Zheng was very strict with him and prepared him to meet his social obligations to carry on the family line and bring glory to its name. However, Jia Baoyu had grown up just plainly spoiled by the all-powerful protection of the doting Lady Dowager from his strict father. These two totally contrary and conflict nursing patterns might contribute to the features of two types of personality disorder, i.e., the schizotypal and borderline.

Xia Jingui (夏金桂), the wife of Xue Pan, was another specially described female in the DRM who seemed to be totally negative. Xia Jingui, who had just turned seventeen when making her debut, was quite good-looking and educated. In regard to her ability and craftiness, she was comparable to Wang Xifeng. Similar to her husband Xue Pan, her father had died when she was a child, and she had no brothers either. The widowed mother had spoiled her since she was her only daughter, doting on her and falling in with all her whims. Inevitably, this over-indulgence had made her like a brigand (盗跖, chapter 79). With a self-grandiosity, callousness, and lack of concern for others, she displayed maladaptive traits of antagonism and disinhibition. With the information, we might diagnose Xia Jingui as suffering from trends of antisocial and narcissistic personality disorders.

For the schizotypal personality disorder, Jia Jing (贾敬) might be diagnosed as suffering from the disorder. He was the younger son of Jia Daihua (贾代化), the elder son of the Duke of Ningguo (宁国公), and he had inherited the Duke title. However, he was so wrapped up in Taoism that he took no interest in anything but distilling elixirs. Luckily when he was younger he had a son Jia Zhen (贾珍), to whom he was relinquished the Duke title so that he himself could give his entire mind to becoming an immortal. Jia Jing washed his hands of all mundane matters and chased unrealistic goals, accompanied by his unusual beliefs and experiences and avoidant behaviors.

Qingwen (晴雯) was one of the intimate maidservants of Jia Baoyu, who was also pretty and intelligent. Marked by impairments in empathy and intimacy, along with her maladaptive traits of hostility and impulsivity, she had displayed a trend of antisocial personality disorder.

For the obsessive-compulsive personality, Miaoyu (妙玉) might be one sufferer. She was a lay sister invited by the Jia Clan in the Grand View Garden for the Reunion of imperial concubine Jia Yuanchun (贾

元春, sister of Jia Baoyu). She came from a Suzhou family of scholars and officials. She was delicate as a child, and although her relatives had bought many substitute novices for her, it was no use, i.e., her health was not improved until she had joined the Buddhist order (without shaving her head). Her parents were dead at her debut, and she only had two old nurses and one maid to look after her. She had become widely read and well-versed in the sutras, besides being very good-looking. There was remarkable rigid perfectionism in Miaoyu, accompanied by intimacy avoidance, restrictions, withdrawal hostility and grandiosity.

Jia Xichun (贾惜春) was the young daughter of Jia Jing, who was good at drawing. Though the description for her was relatively less, her preference for Buddhism had referred her to the impairment of self-direction and intimacy, and her callousness was also evident, which might point to a diagnosis of schizoid personality disorder (DSM-5, Section II).

There were also many other females depicted in DRM, who were all poor (可怜, chapter 80), soft and weak (软弱, chapter 69), and might be linked with the anxiousness and submissiveness (negative affectivity). They might have low self-esteem and problems in maintaining intimate relationship. For example, Xiangling (香菱, a concubine of Xue Pan), Second Sister You (尤二姐, a concubine of Jia Lian), and Jia Yingchun (贾迎春, one of the sisters of Jia Baoyu). For instance, Xiangling had to follow Xia Jingui's unreasonable orders, and when Xue Pan beat her, she could not resist (chapter 80). They all had to marry someone they did not like: Xiangling to Xue Pan (chapter 3), Second Sister You to Jia Lian (chapter 65), and Jia Yingchun to Sun Shaozu (孙绍祖, chapter 80). They might be diagnosed to have a trend of avoidant personality disorder with a submissiveness trait. On the contrary, their husbands had displayed high levels of irresponsibility (disinhibition), callousness and manipulation (antagonism).

## Discussion

Through summarizing copious and precise detail descriptions for each DRM character, we could render the DSM-5 Section III-defined antisocial, borderline, narcissistic, obsessive-compulsive, and schizotypal personality disorders to Jia Baoyu, Wang Xifeng, Lin Daiyu, Xue Pan, Concubine Zhao, Jia Rui, Miaoyu, and Jia Jing. Antisocial personality disorder was the most frequently met one. The characters presented more impairments in their interpersonal functionings than self-functionings. Maladaptive traits in antagonism domain were the most described, as for Wang Xifeng, Lin Daiyu, Qingwen, Xue Pan, Jia Yucun, Jia Huan, Concubine Zhao, Jia Xichun, Jia Rui, Xia Jingui, and Miaoyu.

The ancient Chinese society placed a great emphasis on the family system, from which all social characteristics were seen to derive [24]. Traditional Chinese families are authoritarian and hierarchical, with the dominance of elders and men [47,48]. The hierarchy in the family is often backed by legal and moral rules, such as filial piety for younger generations. Whereas children are encouraged to pledge obedience and reverence to parents, Chinese parents in turn are responsible for governing (i.e., teaching and disciplining) their children [49]. Therefore, child achievement is closely linked to the reputation of the family. For example, failure of a child in social and academic performance might bring disgrace and shame to parents and ancestors [50]. Thus, it is important for parents, particularly the father, who often shows less care but extreme strict, and has the most responsibility to maintain and enhance the reputation of the family, to help children achieve to the highest level; meanwhile, the mother is submissive to father and influences less [47]. On the other aspect, personality disorder is closely

related to the poor parent-child interactions and problematic parenting practices [51], which might be particularly the case in ancient China. For example, parental neglect and a lack of family cohesion were implicated in the development of schizoid and dependent personality disorders respectively [52,53]. Therefore, the excessive authoritarian even assault, accompanied by the doting of Lady Dowager, might facilitate the development of psychoticism and negative affectivity (separation insecurity) in Jia Baoyu. Jia Rui, who was controlled and taught with rigor by his grandfather, might also be another casualty. The antisocial personality is associated with experiences of low parental care and maternal overprotection [54], which was exemplified by Xue Pan, Xia Jingui, and Jia Huan; or is associated with a parental loss in childhood [55,56], which again exemplified by Xue Pan and Xia Jingui. Unpredictable and intrusive care-giving is associated with borderline personality disorder [57,58], which might be the case for Lin Daiyu. Wang Xifeng was educated as a boy when she was young which resulted in her expanded self-esteem leading to the narcissism [59]. The insecure, disorganized and unresolved adult attachment patterns [60,61] might contribute to the disorders of Jia Huan and Jia Xichun.

The emphasis on the family and on the preservation of social harmony is a negation of individualism, and this negation leads to collectivism [62,63]. According to the hypothesis of Gray [64], societies that tend to embrace collectivism, or accept a large power distance, are more likely to prefer statutory or centralized control. Under such circumstances, self-direction might be easily lost due to the tendency to submit to individual's fate-fatalism [9]. Confucian culture has a high regard for learning and academic achievement, while the collectivism underscores relationships, family closeness, and social harmony. Therefore, individuals strive to achieve not only for their personal success but also for honor of their family and society [65,66]. The distinction between the self and one's family is not clear cut, and the self-achievement is also seen as the family achievement. It is then easier to understand that Jia Baoyu was resistant to or escaped from the obligation, which resulted in the assaults of Jia Zheng; while the later in turn added to negative affectivity and disinhibition found in Jia Baoyu.

Moreover, the preference for Taoism or Buddhism would lead to unrealistic goal setting, avoidance of social contact, and compulsive behaviors, as in cases of Jia Jing and Miaoyu. For example, the Taoism advocates self-transcendence, integration with the Law of Nature, inaction, and infinite frame of reference, instead of social attainment, self-development, progressive endeavor, and personal interpretation [67]. However, most descriptions of the DRM characters were based on their daily activities and their communications with each other. The self-dominated activities of Jia Jing and Miaoyu were not detailed in DRM. The related narrations might be due to the Chinese collectivistic culture, which holds a relatively higher degree of interdependence among individuals [62,63].

As the most-described trait in DRM, antagonism was negatively comparable to forgiveness. Although forgiveness is a part of Confucian philosophy, Chinese people appear to be less forgiving towards underachievement and misbehaviors than Europeans do, and the Chinese people tend to disagree with statements that express toughness, maliciousness, and pro-violence more strongly [68], which might be influenced by the obsession with preserving harmony in society [3]. As free expression of negative emotions might disrupt relationships, collectivists often control such emotions inward [69], which however, might in turn results in an excessive suppression and a later pathological-rebound. In addition, collectivism is relatively more simple and higher in conformity than individualism is [7,70], which also involves more

rigid rules. However, this might be too boring and unbearable for high sensation seekers who are easily distracted by novelty things [71]. Therefore, disinhibition appears more frequently in males, especially the higher sensation seekers [72]. Further, Collectivism emphasizes the experience of living, and is especially concerned with getting along with others, i.e., the dependence [73,74]. Therefore, the trait detachment was the relatively less described one in DRM.

Because of male dominance [5] and collective orientation [9] in Chinese culture, most females had higher tendency to submit to their individual fate-fatalism. This might have caused avoidant proneness for the poor females in the DRM. Xiangling tried to avoid but had bared abuse from her male host - Xue Pan; unfortunately, she was hit and failed in the end. On the contrary, most males in the DRM were philandering and irresponsible as they had more autonomy.

Another important idea is the value, which is the concentrated reflection of culture. In China, most cultural values are laudable, while some could make hidden troubles [5,75]. Governing by leaders instead of by law resulted in that people in a position of authority, just like Xue Pan, Wang Xifeng, Jia Yucun and other masters in DRM could do whatever they wanted to but did not take the consequences. For interpersonal relations, tolerance of others, harmony with others, and propriety need people to swallow their feelings, but exceed negative emotions could lead to more stress and frustration. This might explain the phenomenon (also described in DRM) - people present as a gentleman on the surface but engage in bad things in secret.

One also has to bear in mind the limitations of the current study design. Firstly, all DRM characters were evaluated by the contemporary eight judges (authors), their overall levels of personality functioning might not be accurate. Secondly, we overlooked many other characters in DRM, as their information available was not enough. For example, Hua Xiren (花袭人, personal maid of Jia Baoyu) had shown herself on the stage frequently, but the detailed narrations about her behavior and psychological world were very poor. Thirdly, the diagnoses were only based on the novel narrations, and the writing techniques and styles of a literature might not correspond precisely to the real life. Fourthly, the entire descriptions about the characters came from the first 80 chapters; hence our current conclusion might not be comprehensive. The remaining 28 chapters (as recently published) [23] might provide more information of the characters. Lastly, we only have considered personality disorders defined by DSM-5, while other psychiatric problems such as the bipolar disorder, dissociative identity disorder, or schizophrenia were not noted.

## Conclusion

Although we have studied the ancient Chinese scenarios from the contemporary standpoint, and a variety of thoughts from other cultures has spread over China, but the majority of Chinese culture and it's centered Chinese values have been retained [75]. Our study indicates that personality disorders or their features had existed in the 18th century China. The antisocial personality disorder fictionalized in DRM was apparent in the 18th century. The study also implicates the importance of family in the development of personality traits in Chinese society. Nowadays, people are influenced by Chinese culture in every aspect of the society with numerous traditional factors. Only when the harmful factors are fully revealed can Chinese culture reject the gross and assimilate the fine essence, thus the reductions of personality disorders or other mental disorders can be realized. The current study has disclosed the disadvantages of Taoism, Buddhism, and hierarchy, male dominance, and collectivism under the influence of Confucianism

in personality disorders, but the structure of Chinese culture and its concrete effect on other mental disorders are still unknown. Answers to these questions will reveal the relationship between Chinese culture (ancient and contemporary) and mental disorders, and then provide understanding and treatment for the disorders from the root of culture, for people in China, Japan, Singapore, South Korea, Thailand, and other neighboring countries in Asia, since the Chinese culture has been one of the most influential ones all over the world [76].

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#### Declaration of Interest

Regarding research work described in the paper, each one of our co-authors, Hongying Fan, Wanzhen Chen, Chanchan Shen, Yanhua Qin, Junpeng Zhu, You Xu, Qianqian Gao and Wei Wang, declares that there is no conflict of interest.

#### Authors' Contribution

Study concept and design: WW. Acquisition of data: HF, WC, CS, YQ, JZ, YX, QG and WW. Analysis and interpretation of data: HF, WC, YQ, JZ and WW. Draft written of the manuscript: HF, WC and WW.

#### References

1. Pye LW (1972) *China: An introduction*. Little Brown, Boston.
2. Chen C (1986) *Neo-Confucian terms explained*. Columbia University Press, New York.
3. Chan KH, Lew AY, Tong MYJW (2001) Accounting and management controls in the classical Chinese novel: A dream of the red mansions. *Int J Account* 36: 311-327.
4. Hsiao FST, Jen FC, Lee CF (1990) Impacts of culture and communist orthodoxy on Chinese management. In: Child J, Lockett M (Eds) *Advances in Chinese industrial studies* 1: 301-314.
5. Fan Y (2000) A classification of Chinese culture. *Cross Cult Manag* 7: 3-10.
6. Triandis HC (1989) The self and social behavior in differing cultural contexts. *Psychol Rev* 96: 506-520.
7. Triandis HC (1993) Collectivism and individualism as cultural syndromes. *Cross-Cult Res* 27: 155-180.
8. Triandis HC (2001) Individualism-collectivism and personality. *J Pers* 69: 907-924.
9. Chan W (1967) The individual in Chinese religions. In: Moorehead CA (Eds) *The Chinese Mind*. University of Hawaii Press, Honolulu.
10. Allik J, McCrae RR (2004) Toward a geography of personality traits: Patterns of profiles across 36 cultures. *J Cross-Cult Psychol* 35: 13-28.
11. Furnham A, Cheng H (1999) Personality as predictor of mental health and happiness in the East and West. *Pers Indiv Differ* 27: 395-403.
12. Gao Y, Raine A, Chan F, Venables PH, Mednick SA (2010) Early maternal and paternal bonding, childhood physical abuse and adult psychopathic personality. *Psychol Med* 40: 1007-1016.
13. Xu Y, Lin L, Yang L, Zhou L, Tao Y, et al. (2016) Personality disorder and perceived parenting in Chinese students of divorced and intact families. *Fam J* 24: 70-76.
14. Hiramura H, Uji M, Shikai N, Chen Z, Matsuoka N, et al. (2010) Understanding externalizing behavior from children's personality and parenting characteristics. *Psychiatry Res* 175: 142-147.
15. Yu R, Wang Z, Qian F, Jang KL, Livesley WJ, et al. (2007) Perceived parenting styles and disordered personality traits in adolescent and adult students and in personality disorder patients. *Soc Behav Personal* 35: 587-598.
16. Zheng L, Chai H, Chen W, Yu R, He W, et al. (2011) Recognition of facial emotion and perceived parental bonding styles in healthy volunteers and personality disorder patients. *Psychiatry Clin Neurosci* 65: 648-654.
17. Yang B (2005) A factor analysis of the ancient Chinese personality structure. *Psychol Sci (China)* 28: 668-672 (in Chinese).
18. Yu S, Wei L, He W, Chai H, Wang D, et al. (2009) Description of personality traits by Chinese adjectives: A trial on university students. *Psychol Lang Commun* 13: 5-20.
19. Levy DJ (1999) *Ideal and actual in The Story of the Stone*. Columbia University Press, New York.
20. Yu AC (1997) *Rereading The Stone: Desire and the making of fiction in "Dream of the Red Chamber"*. Princeton University Press, Princeton.
21. Cao X (reprinted 2010) *A Dream of Red Mansions with commentaries by Zhiyan Zhai in the year of Gengchen [Zhiyan Zhai chongping Shitouji Gengchen jiao ben]*. Deng S (Ed). Writers Publishing House (in Chinese), Beijing.
22. Yang H, Yang G (Translators) (1978) *A Dream of the Red Mansions*. Foreign Languages Press, Beijing.
23. Anonymity (2014) *A Dream of Red Mansions in the year of Guiyou [Guiyou ben Shitouji]*. Jin JJ, He XH (Eds). Jiuzhou Publishing House (in Chinese), Beijing.
24. Lin YT (1935) *My country and my people*. John Day: New York.
25. Gao Y (2009) On cultural differences in the two English versions of A Dream of Red Mansions. *Asian Soc Sci* 5: 112-117.
26. Zhao X (2011) Court trials and miscarriage of justice in Dream of the Red Chamber. In: *Curr Leg Iss* 23: 129-156.
27. Levy DJ (1999) Venerable ancestors: Strategies of ageing in the Chinese novel *The Story of the Stone*. *Lancet* 354: 13-16.
28. Liao HS (2007) A Chinese Sinhome: Chan, modern subject and politico-semioticizing Dream of the Red Chamber. *Am J Semiotics* 23: 147-171.
29. Yu AC (1989) The quest of brother amor: Buddhist intimations in the Story of the Stone. *Harvard J Asiat Stud* 49: 55-92.
30. Zhou ZY (2001) Chaos and the gourd in "The Dream of the Red Chamber". *T'oung Pao, Second Series* 87: 251-288.
31. Cooper E, Zhang M (1993) Patterns of cousin marriage in rural Zhejiang and in Dream of the Red Chamber. *J Asian Stud* 52: 90-106.
32. Spence JD (1966) *Ts'ao Yin and the K'ang-hsi Emperor: bondservant and master*. Yale University Press, New Haven.
33. Zhou ZM (1989) *Hung Lou Meng - the enchanted world of art*. Quan Ya Publishing, Taipei.
34. Hu WP (1993) *A Dream of the Red Mansions abroad*. Zhonghua Book Company, Beijing.
35. Li RS, Li SH (1995) An exploratory investigation of internal control concepts in Red Chamber Dream. *J Auding Theory Practice China* 8: 14-17.
36. Edwards L (1990) Gender imperatives in Honglou Meng: Baoyu's bisexuality. *Chinese Literature* 12: 69-81.
37. Yee AC (1995) *Self, Sexuality, and Writing in Honglou Meng*. Harvard J Asiat Stud 55: 373-407.
38. Lau MP, Ng ML (1989) Homosexuality in Chinese culture. *Cult Med Psychiatr* 13: 465-488.
39. Levy DJ (1994) "Why Bao-yu Can't Concentrate": Attention deficit disorder in The Story of the Stone. *Lit Med* 13: 255-273.
40. Huang F, Gillett G (2014) Bao-yu: a mental disorder or a cultural icon? *J Bioethic Inq* 11: 183-189.
41. Zhu J, Chen W, Fan H, Zhang B, Liao K, et al. (2015) Personality traits characterized by adjectives in a famous Chinese novel of the 18th Century: A Dream of Red Mansions. *SAGE Open* 5.
42. American Psychiatric Association (2013) *Diagnostic and Statistical Manual of Mental Disorders, text revision, 5th Edn*. Washington, American Psychiatric Association 761-781.
43. Clark LA (2007) Assessment and diagnosis of personality disorder: Perennial issues and an emerging reconceptualization. *Annu Rev Psychol* 58: 227-257.
44. Livesley WJ (2001) Conceptual and taxonomic issues. In: Livesley WJ (Ed) *Handbook of personality disorders: Theory, research, and treatment*. Guilford Press, New York 3-38.
45. Trull TJ, Durrett CA (2005) Categorical and dimensional models of personality disorder. *Annu Rev Clin Psychol* 1: 355-380.

46. Widiger TA, Trull TJ (2007) Plate tectonics in the classification of personality disorder: Shifting to a dimensional model. *Am Psychol* 62: 71-83.
47. Ho DYF (1987) Fatherhood in Chinese culture. In ME Lamb (Ed) *The father's role: Cross-cultural perspectives*. Erlbaum, Hillsdale 227-245.
48. Lang O (1968) *Chinese family and society*. Yale University Press, New Haven 25: 355.
49. Hsu FLK (1981) *Americans and Chinese: Passage to differences* (3rd Ed). University Press of Hawaii, Honolulu.
50. Luo G (1996) *Chinese traditional social and moral ideas and rules*. The University of Chinese People Press, Beijing.
51. Laulik S, Chou S, Browne KD, Allam J (2013) The link between personality disorder and parenting behaviors: A systematic review. *Aggress Violent Beh* 18: 644-655.
52. Head SB, Baker JD, Williamson DA (1991) Family environment characteristics and dependent personality disorder. *J Pers Disord* 5: 256-263.
53. Leizberg K (1989) Children at risk for schizoid disorders. First international congress on the disorders of personality disorders. *J Pers Disord* 3: 329-337.
54. Reti IM, Samuels JF, Eaton WW, Bienvenu OJ, Costa PT, et al. (2002) Adult antisocial personality traits are associated with experiences of low parental care and maternal overprotection. *Acta Psychiatr Scand* 106: 126-133.
55. Patterson GR, DeBaryshe BD, Ramsey E (1989) A developmental perspective on antisocial behavior. *Am Psychol* 44: 329-335.
56. Reich J (1986) The relationship between early life events and DSM-III personality disorders. *Hillside J Clin Psychiat* 8: 164-173.
57. Paris J, Zweig-Frank H, Gudzer J (1994) Psychological risk factors for borderline personality disorder in female patients. *Compr Psychiat* 35: 301-305.
58. Reich DB, Zanarini MC (2001) Developmental aspects of borderline personality disorder. *Harvard Rev Psychiat* 9: 294-301.
59. Levy KN, Reynoso JS, Wasserman RH, Clarkin JF (2007) Narcissistic personality disorder. In: O'Donohue W, Fowler KA, Lilienfeld, SO (Eds) *Personality disorders towards the DSM V*. Sage, Thousand Oaks 233-277.
60. Crittenden PM, Newman L (2010) Comparing models of borderline personality disorder: Mothers' experience, self-protective strategies, and dispositional representations. *Clin Child Psychol Psychiatry* 15: 433-452.
61. LyddonW, Sherry A (2001) Developmental personality styles: An attachment theory conceptualization of personality disorders. *J Couns Dev* 79: 405-414.
62. Hofstede G (1980) *Culture's consequences*. Sage Publications.
63. Hofstede G (1984) Cultural dimensions in management and planning. *Asia Pac J Manag* 1: 81-99.
64. Gray SJ (1988) Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus* 24: 1-15.
65. Huang R, Leung FKS (2005) Deconstructing teacher-centeredness and student centeredness dichotomy: A case study of a Shanghai mathematics lesson. *Math Educ* 15: 35-41.
66. Mok I (2006) Shedding light on the East Asian learner paradox: Reconstructing student-centredness in a shanghai classroom. *Asia Pac J Educ* 26: 131-142.
67. Yip KS (2004) Taoism and its impact on mental health of the Chinese communities. *Int J Soc Psychiatr* 50: 25-42.
68. Stankov L (2010) Unforgiving Confucian culture: A breeding ground for high academic achievement, test anxiety and self-doubt? *Learn Individ Differ* 20: 555-563.
69. Triandis HC (2000) Culture and conflict. *Int J Psychol* 35: 145-152.
70. Bond R, Smith PB (1996) Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychol Bull* 119: 111-137.
71. Zuckerman M, Eysenck SB, Eysenck HJ (1978) Sensation seeking in England and America: cross-cultural, age, and sex comparisons. *J consult clin psych* 46: 139-149.
72. Wang W, Wu Y, Peng Z, Lu S, Yu L, et al. (2000) Test of sensation seeking in a Chinese sample. *Pers Individ Differ* 28: 169-179.
73. Diaz-Guerrero R (1979) The development of coping style. *Hum Dev* 22: 320-331.
74. Triandis HC, Suh EM (2002) Cultural influences on personality. *Annual Review of Psychology* 53: 133-160.
75. Yang G (1987) Chinese values and the search for culture-free dimensions of culture. *Int J Psychol* 18: 143-164.
76. Wu C, Jia S (1992) Chinese culture and fertility decline. *Chinese J Popul Sci* 4: 95-103.