Development and Validation of "Divorcing the Self-Incompatible Scale" (DSIS)

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Abstract

Background: Divorce has become an individualistic as well as collective problem in all societies requiring a sound theory and statistics to address it explanatorily and empirically.

Objective: Almost all studies in various fields of knowledge have addressed divorce categorically. The present study was, however, designed to explore it as a cognitive domain by resorting to psychiatry, psychology, and religion and schema theory.

Methodology: Several male and female individuals who were divorcing or divorced were interviewed to develop the 30-item divorcing the self-incompatible scale (DSIS). The scale was then administered to 548 divorcing and/or divorced selves (DDS) and their responses were subjected to Principal Axis Factoring and Promax with Kaiser Normalization to specify what factors underlie the scale.

Results: The 30 items comprising the DSIS loaded acceptably on eight *factors* representing the *cognitive families* of Having Various Conflicts, Prioritizing Personal Interests, Having No Principles, Having No Decency, Having Different Tastes, Social Media Addiction, No Marital Education, and Misunderstanding Married Life. The families correlated significantly not only with each other but also with the DSIS representing the *domain* of divorce.

Conclusion: Divorce is a cognitive domain through which the DDS reveal their self-theistic, polytheistic or practicing monotheistic selves.

Key words: divorce; psychiatry; psychology; religion; schema theory; self; parasyntactic

Introduction

The mental concept or schema represented by the noun "self" is important not only in physical sciences such as biology [1] but also in social sciences such as psychiatry, psychology and religion [2]. The importance lies in its frequency or token of 46, 249, 37 and 62 in the textbooks that represent the four fields, respectively: "Life: The Science of Biology" [3], "Kaplan & Sadock's Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry" [4], "Abnormal Psychology" [5] and "*the Quran*".

The present researchers' chi-square analysis of the frequency with which the schema "self" is employed in the representative texts of biology, psychiatry, psychology and religion, however, shows that these fields differ significantly from each other (X^2= 309.858, df=3, $p < .0001$). The difference lies in the biological, psychiatric, psychological and religious conceptualization and application of "self" as explained by Linnaeus' [6] taxonomy and Khodadady's [7] microstructural approach of schema theory (MICAST).

Linnaeus [6] argued that the biological characteristics of any living things such as humans can be employed to name them at eight levels or taxa, i.e., species, genus, family, order, class, phylum, kingdom, and domain. He did, for example, call humans *sapiens* who belong to the genus of Homo sapiens, the family of hominidae, order of primates, class of mammals, phylum of vertebrates, kingdom of animals, and domain of organisms, Based on the MICAST and empirical findings Khodadady [8] and his associates, e.g., Khodadady and Dastgahian [9], however, argued that Linnaeus' eight-taxon hierarchical structure is not only biological but also *cognitive* in characteristics.

The very scientific name Linnaeus [6] himself gave to a human, i.e., *sapiens* is, for example, cognitive rather than physiological because it means "wise" or "rational" [3, p. 7] in Latin. Furthermore, all the words through which living things are named in fields such as biology depend first and foremost on cognition rather than any other feature such as morphology in order to be understood. For this very reason, all hierarchical structures including that of Linnaeus can be used to study *sapiens* as *selves* as conceptualized by their developers.

Maslow's [11, 12] classification of needs within a five-taxon structure is, for example, not only biological but also cognitive. As the first taxon, human "physiological needs", for instance, require eating food, drinking water and having sex. Upon satisfying these basic physiological needs, sapiens face the second taxon of "safety needs" requiring security, order, and stability. The satisfaction of "safety needs" helps sapiens focus on their "belongingness and love", "esteem" and "selfactualization" needs as the third, fourth and fifth taxa, respectively. Maslow's taxonomy of needs have, therefore, not only "a hereditary component" [13, p. 246] such as sex instinct but also cognitive components such as self-actualization.

According to biology, plant species belonging to *Leptosiphon* genus, for example, follow their "hereditary component", i.e., instincts, to "regularly fertilize their ovules using their own pollen; they are, therefore, referred to as self-fertilizing, or selfing, species, and their *gametes* as self-compatible" [3, p. 460]. Sapiens, according to religion, are, however, *the only* species on the earth that possess cognition and emotion along with God's psyche, allowing them to behave as His vicegerents (e.g., Q6:165), not only to satisfy their own instincts or needs but also regulate them along with those of other species including *Leptosiphon* by following God (e.g., Q2:189).

Biology and religion do, therefore, differ from each other in their treatment of schemata such as self-compatibility, i.e., *sexual reproduction* or *marriage*. While the former confines itself to securing sexual reproduction or selfing as the only key to life on the earth, religion renders it sapiens-specific by setting certain criteria to be optionally accepted and followed by sapiens themselves to secure life not only *on the earth* but also *in the hereafter*. They are, for example, instructed not to marry "idolatresses [polytheistic selves] until they believe [and become practicing monotheists]. Truly a believing slave woman is better than a [free] idolatress, though she be pleasing to you. And marry none to the idolaters until they believe. Truly a believing slave is better than a [free] idolater, though he should impress you [through wealth and social class and status]" (Q2:221). (Nasr, Dagli, Dakake, Lumbard and Rustom's [14] English translations of the Arabic Quranic Ayat are reproduced in this study unless stated otherwise.]

Furthermore, in sharp contrast to biology which adopts biologists as its authorities and defines incompatibility as "self" vs. "other-than-self" in all species including *sapiens*, by resorting to God as its one-and-only authority religion forbids its believing *sapiens* from mating certain "other-than-self" such as "their mothers, daughters, sisters, fathers' sisters, mothers' sisters, brothers' daughters, sisters' daughters … and the mothers of your wives .." (Q4:23). Biology also falls short of bringing up "divorce" in its representative text *even once*. The present researchers' statistical analysis, however, shows that the representative texts of psychiatry, psychology and religion have used eight cognitive features to address "divorce" as a *sapiens*-specific schema (Table 1). While psychiatry and psychology address *divorce* most frequently as a simple noun, i.e., 115, 21 times, respectively, religion employs it as a simple verb to achieve the same function, i.e., 7 times.

No	Linguistic species	Cognitive species	Psychiatry	Psychology	Religion	Total
1	complex noun	post-divorce	1	0	0	1
2	compound noun	divorce-celibacy	1	0	0	1
3	simple noun	Divorce	115	21	2	138
4	simple verb	Divorce	8	1	7	16
5	simple third person verb	divorces	0	0	1	1
6	objective adjective	divorced	42	9	4	55
7	subjective adjective	divorcing	3	0	0	3
8	simple past verb	divorced	1	0	0	1
	Total		171	31	14	216

Table 1: *Frequency of linguistic and cognitive species of "divorce" employed as psychiatric, psychological and religious*

In spite of employing various linguistic species of "divorce" 171 and 31 times, respectively (Table 1), neither psychiatry nor psychology tells the readers of their representative texts what cognitive domain the schema "divorce" belongs to and when *sapiens* can divorce their mates. They do, however, relate it to various types of mental disorder. Psychiatry, for example, announces that "The only social factor identified as contributing to the development of panic disorder is a recent history of divorce or separation" [4, p. 392]. Similarly, psychology refers to researchers such as Kumari et al [15] and Martens [16] who found that people with antisocial personality disorder "are more likely than others to have had significant stress in their childhoods, particularly in such forms as … conflict or divorce" [5, p. 532].

Religion, nonetheless, relates "divorce" to "self" as a schema addressed at eight cognitive taxa [2]. While its first four highest taxa, i.e., God's self, the practicing monotheistic self, the polytheistic self, and the self-theistic self are religion-specific, its remaining four taxa of self are *implicitly* shared by both psychiatry and psychology, i.e., psyche (mind), cognition and emotion, instincts, and body. Psychiatrists and psychologists have, however, related divorce to adjustment [17], anxiety [18], bipolar [19], cocaine use [20], conduct [21], derealization [22], gambling [23],

gastrointestinal [24], enuresis [25], and Tourette [26] disorders, to name a few.

In spite of establishing a relationship between divorce and various mental disorders, no scholar has approached divorce as a *willful choice* as religion does. Akiskal [27], for example, related mania to divorce reporting that 'A 37-year-old engineer had experienced three manic episodes for which he had been hospitalized; all three episodes were preceded by several weeks of moderate psychomotor retardation. Although he had responded to lithium (Eskalith) each time, once outside the hospital, he had been reluctant to take it and eventually refused to do so. Now that he was "euthymic," after his third and most disruptive episode during which he had badly beaten his wife, he could more accurately explain how he felt when manic. He experienced mania as "God implanted in him," so he could serve as "testimony to man's communication with God." He elaborated as follows: "Ordinary mortals will never, never understand the supreme manic state which I'm privileged to experience every few years. It is so vivid, so intense, so compelling. When I feel that way, there can be no other explanation: To be manic is, ultimately, to be God. God himself must be supermanic: I can feel it when mania enters through my left brain like laser beams, transforming my sluggish thoughts, recharging them, galvanizing them.

My thoughts acquire such momentum, they rush out of my head, to disseminate knowledge about the true nature of mania to psychiatrists and all other ordinary mortals. That's why I will never accept lithium again—to do so is to obstruct the divinity in me." Although he was on the brink of divorce, he would not yield to his wife's plea to go back on lithium' (p. 4210).

As the case reported above shows researchers have paid little, if any, attention to the active role the patients themselves play in divorce. The inattention is supported by the statistical analyses run on the texts representing psychiatry and psychology in this study. They show that the *objective* adjective "divorced" had the second highest frequency, i.e., 42 and 9 in these two fields (Table 1). Furthermore, both patients and their therapists have *no religiously informed understanding* of what "divinity" (27, p. 4210) is. It is, in fact, for this very reason that religion requires its observants to deliver themselves from *theistically* incompatible selves through divorce.

Mrs. M, A, a shy 32-year-old patient of the present researchers, was, for example, suffering from depression when she sought their help. After three sessions of schema therapy she admitted that she had serious problems with her husband. She had married him mainly because of falling in love with his exceptionally beautiful physique and blond hair. Feeling more comfortable with expressing her feelings and attitudes she also admitted that he had physically abused her quite often, particularly whenever he drank alcohol. She had finally found no choice but to leave him and live with her parents. For supporting herself and becoming independent she had started working in wedding saloons where she had met many women like herself.

Finding no scales to relate Mrs. M's marital problems to depression as well as low academic achievement, the present researchers asked   her

whether she had filed for divorce in a court. Upon receiving her positive answer she was asked to write down as many reasons as she had for divorcing her husband and submit them to the present researchers. The analysis of these reasons along with those voluntarily brought up by female and male divorcees interviewed by Mrs. M in various places ranging from wedding saloons to divorce and family courts helped design and validate the DSIS in this study. The questions below were raised to guide it.

1. How many statistical factors representing the cognitive families of divorce underlie the DSIS?

2 How reliable are the DSIS and its underlying cognitive families?

3. Do the cognitive families of divorce correlate significantly with their domain as well as with each other?

Methodology

Participants

A total of 548 divorcing and/or divorced selves (DDSs) took part in this study voluntarily. The number was, however, reduced to 541, i.e., 327 female (60.4%) and 214 male (39.6%) because seven had not responded to the majority of items comprising the three measures administered in the study, i.e., 7-item demographic scale (DS), 30-item DSIS and 48-item Quranic Orientation Scale (QOS). The age of the DDSs ranged between 16 and 75 (mean = 34.73, SD = 9.562). The majority were Iranians (92%) who spoke Persian (85%) as their mother language. They had majored in humanities and social sciences in tertiary education centers (34%) and received their bachelor degree (30%) as shown in Table 2.

Category	Subcategory	Number	Percent
Nationality	Iranian	499	92.2
	Afghan	21	3.9
	Arab	21	3.9
Mother language	Persian	459	84.8
	Turkish	40	7.4
	Kurdish	27	5.0
	Arabic	14	2.6
	Missing	1	0.2
Educational level	Elementary	77	14.2
	Secondary	130	24.0
	Tertiary	333	61.6
	Missing	1	0.2
Educational field	Technical and engineering	105	19.4
	Humanities and social sciences	183	33.8
	Agriculture	29	5.4
	Medical sciences	43	7.9
	Physical sciences	42	7.8
	Missing	139	25.7
Educational degree	BA/BS	163	30.1
	MA/MD/MS	81	15.0
	Associate Diploma	74	13.7
	PhD	35	6.5
	Missing	188	34.8

Table 2: *Descriptive statistics of participants*

Instruments

Three Persian instruments were employed in this study: the DS, QOS and DSIS. The first two were designed by Khodadady and Dastgahian [9] to collect the demographic data of pre-university students and explain their religious orientation from a scriptural perspective, respectively. (The

validation of the QOS with the DDSs will be reported in a separate article.) The DSIS was, however, designed in this study by interviewing five divorced women and men. It was conducted by a woman who was herself divorcing her husband as described at the end of the introduction section of this paper. The interviewees were acquaintances of   the

interviewer who had accepted to meet her in a coffee shop to talk about their divorce. Upon completing the interviews their content was transcribed, sorted out and modified in 30 items representing cognitive genera such as "my spouse is addicted to traditional/ synthetic drugs or alcohol".

The 30 items comprising the DSIS were also analyzed by utilizing Khodadady's [10] 125 codes so that their readability level could be estimated. To this end, the language of the DSIS was operationalized as a linguistic domain consisting of three kingdoms: semantic, syntactic, and parasyntactic (Table 3). The semantic kingdom consisting of adjective, adverb, noun and verb genera plays the most important role in cognition because they consist of schema species or types which are meaningful by themselves. The adjective schema type "barren", for example, activates the mental image of a woman who bears no children or a man who is sterile when a DSIS taker reads the cognitive genus "My spouse is barren".

Linguistic Kingdoms	Linguistic Genera	Example schema type	Token		Type	
			F	%	F	%
Semantic	Adjectives	barren, foreign, Joint,	39	12.3	30	19.5
	Adverbs	Extremely	8	2.5	5	3.2
	Nouns	life, family, spouse,	76	24.1	42	27.3
	Verbs	follows, married	50	15.8	32	20.8
		Total	**173**	**54.7**	**109**	**70.8**
Syntactic	Conjunctions	and, nor, or	22	7.0	3	1.9
	Determiners	her/his, my, our	47	14.9	9	5.8
	Prepositions	about, between, with	32	10.1	13	8.4
	Pronouns	her/him, I, me, mine	21	6.6	7	4.5
	Syntactic verbs	cannot, do, is	8	2.5	5	3.2
		Total	**130**	**41.1**	**37**	**24.0**
Parasyntactic	Abbreviations	TV	1	0.3	1	0.6
	Names	Telegram	3	0.9	3	1.9
	Para-adverbs	always, not, too	7	2.2	3	1.9
	Particles	To	2	0.6	1	0.6
		Total	**13**	**4.1**	**8**	**5.2**
		Total	**316**	**100.0**	**154**	**100.0**

Table 3: *Frequency (F) and percentage (%) of linguistic kingdoms and example schema types constituting the DSIS*

In contrast to semantic schema types such as "barren", the syntactic and parasyntactic schemata carry little, if any, independent meaning by themselves. They do, therefore, depend on the semantic schemata they substitute. The syntactic pronoun "I" and the parasyntactic proper name "Telegram," for example, depend on "who takes the DSIS" and the phrasal noun schema "social media" in order to be understood within the two genera of "I am barren" and "My spouse is continuously busy with and abuses social media such as Telegram", respectively.

Upon determining the number of schema types comprising the linguistic kingdoms of the DSIS, they were used to determine its readability level utilizing Khodadady Readability Ease Score (KRES), i.e., (Σ syntactic + parasyntactic schema types) ÷ Σ semantic schema types. The KRES ranges from .99 (extremely easy) to .01 (extremely difficult). The results obtained by inserting the relevant values in the formula, i.e., $(37 + 8) \div 109$, specified the KRESs of 0.41 for the DSIS. Since it was higher than the KRESs of 0.34 obtained by Khodadady and Ghergloo [28] on the textbook "Learning to Read English for Pre-University Students" [29] taught to Iranian high schools it showed that the takers of DSIS whose educational level ranged from secondary to tertiary could easily read and understand it.

In addition to rendering the content of each item of the DSIS readable to its takers of secondary and tertiary educational levels, it was presented with 5-points on the Likert scale through which they could strongly disagree (1), disagree (2), express no idea (3), agree (4) or strongly agree (5) with the cognitive genus it represented. Thus, the scores obtained on the DSIS ranged from 30 to 150. They were utilized to determine the number of factors underlying the DSIS if validated statistically through factor analysis.

Procedures

Upon preparing the final version of DSIS, it was printed along with the DS and QOS as a single booklet and presented to six undergraduate and four graduate students of *a private higher education institute*. They had taken the course "Research II" and "Measurement and Evaluation", respectively, with the first author of the present paper. The undergraduate students were told that they would receive 10 out of 20 in their final examination if they distributed the booklets and reported their administration each week starting with the second academic semester on February 25 and ending on June 19, 2021. The graduate students who had already passed the "Research Principle and Methods" with the author in the previous semester were, however, told they would receive an extra four scores in their final examination if they administered the scales as instructed. Both undergraduate and graduate students were also informed that their names would be *acknowledged* if any papers were published based on the scales. Upon their verbal agreement, a session lasting for one and a half hours was held with the students to read the scales and discuss their content and administration in as many details as possible.

Being in direct contact with the present researchers via their cell phones, the undergraduate and graduate students started distributing the scales among the DDSs who accepted to take them in a place of their choice, i.e., coffee shops, counseling centers, divorce registration offices, family gatherings, lawyers' offices, prisons, language institutes and sports

centers in Mashhad and Neyshabur, two cities in Khorasan-e-Razavi province, Iran. The scales were also administered in social media such as Telegram virtually. The distributors reported the number of volunteers who took the DSIS and discussed their interactions with the DDSs at the very beginning of each class session held virtually every week. They submitted the completed booklets to the first author at the end of June 2021.

Data Analysis

Principal Axis Factoring (PAF) was utilized to extract the factors representing the cognitive families of divorce because it is "preferable to principal components analysis" [30] and provides a true factor analysis [31-40]. For simplifying the structure of factors suggested by Landau and Everitt [41], Gorsuch [42] was followed by utilizing the oblique rotation of Promax with Kaiser Normalization (PKN). Since Cronbach's [43] alpha reliability coefficient provides "the most important and pervasive statistics" [44, p. 98] of the internal consistency, it was applied to the DSIS and its underlying factors. For being "the most frequently used

measure of association" [45, p. 56] the Pearson product-moment correlations were estimated to explore the association between the cognitive domain of divorce and its families on the one hand and the association between the cognitive families of divorce themselves on the other. All descriptive and inferential statistical analyses were run via IBM SPSS Statistics 24.

Results

The descriptive statistics as well as communalities of 30 items comprising the DSIS were estimated to scrutinize their functioning (Table 4). Their means and standard deviations (SDs) ranged from 2.15 (item 25) and 1.401(item 4) to 3.50 (item 24) and 1.583 (item 7), respectively, indicating that they were all homogenous in terms of the cognitive domain they dealt with. Similarly, extraction communalities ranged from 0.184 (item 25) to 0.605 (item 2). Since none of the communality values equaled or exceeded 1" they indicated that there were no problems with "the number of factors extracted" [45, p. 653].

Item	Mean	SD	Initial	Extraction	Item	Mean	SD	Initial	Extraction
1	2.53	1.540	0.406	0.510	16	3.25	1.425	0.451	0.513
2	2.93	1.531	0.461	0.605	17	2.65	1.583	0.182	0.234
3	2.71	1.460	0.226	0.241	18	3.02	1.440	0.361	0.493
4	3.27	1.401	0.379	0.407	19	2.52	1.469	0.264	0.229
5	2.62	1.453	0.265	0.289	20	3.16	1.437	0.356	0.417
6	3.23	1.415	0.363	0.549	21	2.95	1.563	0.306	0.391
7	3.29	1.409	0.298	0.375	22	3.07	1.498	0.385	0.399
8	2.70	1.448	0.238	0.252	23	3.36	1.466	0.429	0.545
9	2.53	1.464	0.322	0.383	24	3.50	1.434	0.409	0.573
10	2.28	1.427	0.374	0.539	25	2.15	1.410	0.212	0.184
11	2.69	1.475	0.287	0.346	26	3.01	1.518	0.381	0.425
12	2.92	1.449	0.264	0.259	27	2.89	1.454	0.371	0.415
13	2.40	1.489	0.234	0.277	28	2.60	1.556	0.445	0.537
14	3.44	1.449	0.275	0.422	29	2.63	1.469	0.433	0.494
15	3.09	1.488	0.400	0.436	30	2.23	1.411	0.423	0.546

Table 4: *Descriptive statistics and communalites of items comprising the DSIS*

Before extracting any factors, however, the Kaiser-Myer-Olkin (KMO) measure of sampling accuracy [46] was estimated. The obtained KMO value of 0.863 showed that applying a common-factor model to the data collected in this study was appropriate. Since it was in 0.80s the measure, according to Kaiser [47], provided a "meritorious" [48, p. 250]) index for the factors extracted from the DSIS. Running Bartlett's [49, 50] test of sphericity yielded a significant chi-square, i.e., $\chi^2 = 4302.136$, df=435, p<.0001, showing that the correlation matrix was not "an identity matrix" [51, p. 397], and thus there existed "patterned relationships amongst the variables" [52, p. 88] explored by the DSIS.

The PAF and PKN were then applied to the data to answer the *first* research question. They resulted in the extraction of eight factors having eigenvalues of 1 and higher (Table 5). The adoption of loadings *higher* than 0.32 as the minimum acceptable magnitude suggested by Tabachnick and Fidell [45], however, showed that only five items, i.e., 10, 13, 14, 17, and 25, had loaded acceptably on just one factor. The remaining 25 items had cross loaded acceptably on other factors as well. The factor upon which each of these items had the highest acceptable loading was, therefore, adopted as the cognitive family to which it contributed exclusively and its acceptable cross loadings were removed from the structure of other factors.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	T	V	C	T	V	C	T
1	6.818	22.728	22.728	6.255	20.849	20.849	3.622
2	2.062	6.873	29.602	1.486	4.954	25.804	2.818
3	1.770	5.900	35.502	1.234	4.115	29.919	3.654
4	1.406	4.685	40.187	0.838	2.794	32.712	3.255
5	1.300	4.335	44.522	0.729	2.430	35.142	4.020
6	1.253	4.177	48.698	0.644	2.148	37.290	4.266
7	1.146	3.819	52.517	0.570	1.900	39.191	2.916
8	1.037	3.456	55.973	0.526	1.754	40.944	1.882

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Note. Total = T, V=% of Variance, C= Cumulative %

Table 5: *Total variance explained*

Having specified the cognitive families of divorce represented by the eight statistical factors they were named *Having Various Conflicts* (HVC), *Prioritizing Personal Interests* (PPI), *Having No Principles* (HNP), *Having No Decency* (HND), *Having Different Tastes* (HDT), *Social Media Addiction* (SMA), *No Marital Education* (NME), and *Misunderstanding Married Life* (MML). These families consisted of 4, 6, 4, 4, 4, 4, 2, and 2 cognitive genera, respectively (Table 6).

I	Cognitive Genera	HVC	PPI	HNP	HND	HDT	SMA	NME	MML
27	There is a social class conflict between me and my spouse.	**.508**	.230	.378	.203	.394	.464	.361	-.069
28	My spouse continuously hits me with no reason.	**.723**	.211	.297	.375	.334	.298	.357	.090
29	My spouse is suffering from a mental disorder such as OCD.	**.672**	.155	.278	.291	.269	.348	.226	.238
30	My spouse has physical, biological or physiological disability.	**.715**	.247	.261	.377	.210	.254	.216	.149
9	My own family interferes in everything related to my married life.	.258	**.588**	.148	.260	.342	.270	.246	.231
10	My spouse has decided to continue her/his studies without considering our joint life conditions.	.150	**.721**	.079	.250	.181	.159	.122	.122
11	My spouse is extremely formal and follows wrong social ethics and principles	.032	**.484**	.300	.136	.301	.293	.087	.167
12	I knew nothing about characteristic desires and demands of opposite sex.	.226	**.416**	.225	.226	.261	.302	.392	.178
13	My spouse is barren.	.131	**.394**	-.034	.197	-.079	-.082	.221	-.108
25	I am barren.	.288	**.341**	.124	.279	.093	.125	.187	-.032
16	My spouse violates many of my lawful rights of which I had no information before marrying.	.337	.120	**.570**	.228	.459	.508	.564	.260
17	My marriage is not done traditionally.	.154	.171	**.452**	.120	.219	.230	.222	.073
18	My spouse is not committed to any religious, spiritual or ethical principles.	.272	.053	**.677**	.268	.333	.363	.185	.288
19	There is a huge difference between my spouse's educational level and mine.	.320	.227	**.391**	.219	.269	.347	.281	.268
1	My spouse is addicted to traditional/ synthetic drugs or alcohol.	.396	.260	.153	**.687**	.157	.142	.261	.109
2	My spouse has no decency or modesty and indulges in extramarital relations.	.359	.245	.417	**.748**	.320	.346	.204	.255
3	There is a huge age difference between me and my spouse	.149	.298	.132	**.416**	.317	.202	.220	.229
5	Neither my spouse nor I am capable of meeting our joint economic needs.	.244	.318	.129	**.444**	.395	.218	.197	.188
4	My spouse is extravagant with many unwarranted expectations.	.145	.215	.423	.420	**.541**	.439	.183	.305
6	Our differences in taste and style of life are unbearable.	.225	.212	.401	.259	**.725**	.394	.284	.187
7	My spouse follows her/his family's views as regards our joint life.	.283	.154	.292	.147	**.581**	.413	.213	.284
8	I cannot (or do not like to) satisfy my spouse's emotions or feelings	.272	.363	.150	.340	**.393**	.264	.305	.109
22	My spouse is extremely suspicious and always doubts me.	.378	.318	.389	.303	.483	**.516**	.349	.427
23	My spouse is continuously busy with and abuses social media such as Telegram.	.228	.230	.457	.214	.393	**.707**	.226	.398
24	Before marrying I was not adequately and completely familiar with my spouse's family.	.323	.191	.310	.203	.424	**.718**	.388	.185
26	I suspect my spouse and am extremely suspicious of her/him.	.346	.238	.530	.308	.438	**.554**	.308	.024
14	Before marrying I had no education regarding the issues and problems involved in joint life.	.140	.159	.205	.155	.242	.274	**.616**	.162
15	My spouse can not satisfy my sexual needs.	.399	.269	.437	.317	.363	.402	**.595**	.252
20	My spouse watches foreign TV channels and expects me to behave like foreign actors/ actresses.	.245	.183	.497	.276	.331	.429	.201	**.530**

21	I married too young without understanding the problems involved in married life.	.268	.230	.232	.292	.340	.300	.344	**.540**

Note. I = Item, HVC = Having Various Conflicts, PPI = Prioritizing Personal Interests, HNP = Having No Principles, HND = Having No Decency, HDT = Having Different Tastes, SMA = Social Media Addiction, NME = No Marital Education, MML = Misunderstanding Married Life

Table 6: *Principal Axis Factor Loadings Rotated via Promax with Kaiser Normalization*

Cronbach alpha reliability analysis was run to answer the *second* research question. The results showed that the internal consistency of not only the DSIS but also its eighth factor representing the family of *Misunderstanding Married Life* were "high" [53, p. 115) because their

coefficients were greater than 0.80 (i.e., 0.876 and 0.839, respectively). The remaining seven factors underlying the DSIS, however, enjoyed "moderate" reliability because their alphas fell between 0.50 and 0.80 (Table 7).

F/D	Families and Domain	# of items	Min	Max	Mean	SD	Alpha
1	Having Various Conflicts	4	4	20	10.35	4.435	0.744
2	Prioritizing Personal Interests	6	6	30	14.97	5.191	0.636
3	Having No Principles	4	4	20	11.44	4.030	0.613
4	Having No Decency	4	4	20	10.79	4.175	0.648
5	Having Different Tastes	4	4	20	12.48	3.894	0.626
6	Social Media Addiction	4	4	20	12.94	4.317	0.707
7	No Marital Education	2	2	10	6.53	2.412	0.518
8	Misunderstanding Married Life	2	2	10	6.11	2.458	0.839
D	Divorcing the Self-Incompatible	30	30	140	85.57	20.585	0.876

Table 7: *Descriptive statistics and reliability estimates of DSIS and its underlying factors (F)*

Pearson correlations were finally run to answer the *third* research question. The results showed that all families constituting the domain of divorce not only correlate significantly with the domain itself but also with each other (Table 8). Among the eight factors, factor six representing

the cognitive family of *Depending on Social Media* correlated the highest with the domain i.e., r= 75, *p*<.01. This particular family did also correlate the highest with the families of *Having Different Tastes*, r= 52, *p*<.01, and *Having No Principles*, i.e., r= 49, *p*<.01).

F	Cognitive families	DSIS	1	2	3	4	5	6	7
1	Having Various Conflicts	.670**							
2	Prioritizing Personal Interests	.619**	.280**						
3	Having No Principles	.680**	.389**	.242**					
4	Having No Decency	.664**	.386**	.366**	.288**				
5	Having Different Tastes	.706**	.369**	.303**	.420**	.442**			
6	Depending on Social Media	.751**	.440**	.326**	.489**	.344**	.515**		
7	Having No Marital Education	.585**	.290**	.280**	.421**	.280**	.324**	.405**	
8	Misunderstanding Married Life	.607**	.296**	.243**	.434**	.352**	.378**	.440**	.367**

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8: *Correlations between DSIS and its underlying factors (F)*

Discussion

Following Khodadady and Zahani [1] the present researchers approached self as a cognitive domain whose kingdom, phylum, class and order are formed by the practicing monotheistic, polytheistic and self-theistic sapiens and the psyche, respectively. These taxa are clearly defined in the

Quran by the one-and-only one God as a self who occupies its highest taxon Himself (Table 9). The findings of this study show that instead of following God as the practicing monotheistic DDSs do, the polytheistic and self-theistic DDSs follow their own desires and their own selves as their main authorities, respectively, and create their own eight families, 30 genera and 154 species of divorce.

Taxa	Divorce	Constituting features
Domain	God (excluded)	Sets the causes and conditions of divorce
Kingdom	The practicing monotheistic (excluded)	Believes in and follows none but god in divorce
Phylum	The polytheistic	Believes and follows its own desires in divorce
Class	The self-theistic	Believes and follows only itself in divorce
Order	Psyche	God's soul enabling sapiens to exercise their adopted self
Family	8 factors underling the DSIS	8 families represented by the factors
Genus	30 items comprising the DSIS	30 genera represented by the items
Species	154 word types comprising the DSIS	154 species represented by the word types

Table 9: *The taxa of divorce within the cognitive domain of self*

In contrast to the hierarchical and schema-based definition of divorce offered by religion above, psychiatry and psychology provide no taxonomical definition for divorce [e.g., 5, 54]. Even those who have tried to address it as comprehensively as possible have adopted an instrumental rather than explanatory approach. Bohannan [55], for example, categorized divorce as psychic, legal, no-fault, economic, community, and coparental, paying little attention to the *self* who brings it about. The psychic divorce, for example, bypasses the DDSs altogether and highlights "the love object", which "is given up, and a grief reaction about the death of the relationship occurs" [4, p. 1332]. In other words, Bohannan addresses the taxon of cognition and emotion in *self* rather than *divorce* [1].

The findings of the present study established divorce as a distinct cognitive domain whose species, genus and family consists of 154 word types, 30 sentences and eight factors. Among the word types, *spouse*, has the highest frequency (23) and percentage (7%) in the DSIS. It also has the highest token (3 out of 40) and percentage (8%) in the first cognitive family of *Having Various Conflicts* consisting of four genera the first of

which is *my spouse continuously hits me with no reason*. It brings up the divorcing self's being hit as a routine and then offers its underlying causes in the remaining three genera: the divorced self's having physical, biological or physiological disability, suffering from a mental disorder such as OCD and being from different social class.

In addition to establishing itself as the *first* cognitive family of divorce, *Having Various Conflicts* provides empirical evidence to challenge treating the divorced self as a patient in psychiatry and psychology. In stark opposition to psychiatry and psychology which portrays the divorced as an "affected" [56, p. 76] self via the *objective adjective* divorced as their second most frequent species (Table 10), the DSIS singles it out as the very agent of divorce as described in case studies. It was, for example, the self-on-the-brink of divorce that "had badly beaten his wife" [27, p. 4210]. In other words, while psychiatry and psychology pinpoint mental disorders such as *mania* as the cause of divorce, i.e., hitting the spouse, the DSIS relates it to the self's having a conflict of personal interest with its spouse.

Linguistic species	Cognitive species	Psychiatry	Psychology	Religion
complex noun	post-divorce	1	0	0
compound noun	divorce-celibacy	1	0	0
simple noun	divorce	115	21	2
simple verb	divorce	8	1	7
simple third person verb	divorces	0	0	1
objective adjective	divorced	42	9	4
subjective adjective	divorcing	3	0	0
simple past verb	divorced	1	0	0
	Total	171	31	14

Table 10: *Linguistic and cognitive species of divorce*

The 37-year-old engineer was, for example, the self-on-the-brink of divorce not because of his mania as Akiskal [27] claimed it to be. He was making sense of his life in the easiest possible way through mania. He preferred mania to health because it made him a self-theist, e.g., to "be manic is, ultimately, to be God". By becoming a god he gave himself every right to do whatever he liked and follow his own personal desires such as disseminating "knowledge about the true nature of mania to psychiatrists and all other ordinary mortals"! [It must be mentioned Akiskal and his manic patient's understanding of God has no basis in any Holy Scripture in general and the *Quran* in particular.]

In addition to self-theism, the patients suffering from mental disorders adopt a polytheistic orientation in *divorce* as explained by one of McQuaid and Thase's [57] patients: a "47-year-old, *divorced* Caucasian man … [having] mixed symptoms of depression and mania" (p. 4374). After facing difficulty in treating the divorced self psychiatrically McQuaid and Thase referred him to a psychotherapist. He confessed to his psychotherapist that in spite of taking his medications he could not overcome his problems, i.e., "I have no friends, I have no girlfriend, I have no job, I have no money, no one helps me, my family's disowned me. And when I'm taking my medication, I just become a lump, and none of that gets better" (p. 4375).

In other words, McQuaid and Thase's [57] patient was a divorced polytheistic self who had conflicts with his spouse because he followed the *second* cognitive family of *Prioritizing Personal Interests* in divorce. He indulged in "excessive spending, alcohol and drug use, and sexual acting out" (p. 4374) when he was in the military resulting in his being divorced! These polytheistic behaviours are broadly brought up in its six genera: continuing studies at higher educational levels without considering the joint life conditions, allowing one's parents and siblings interfere with one's married life, being formal and following wrong social

ethics and principles, not paying attention to the characteristic desires and demands of opposite sex, and exploiting its own or spouse's barrenness.

The polytheistic orientation of the divorced *as well as* divorcing selves is best described by the four genera constituting *Having No Principles*, the *third* family of DSIS: i.e., not being committed to any religious, spiritual or ethical principles, violating many of the spouse's lawful rights of which it had no information before marrying, not marrying traditionally, and the existence of a huge difference between the divorcing and divorced spouses' educational level. Along with the divorcing selves some scholars have addressed *Having No Principles* from a polytheistic perspective.

Safizadeh and Nakhaee [58], for example, utilized the so-called *grounded theory* and interviewed five Muslim clergymen presiding family courts as judges, three female and three male lawyers with at least five years of experience in marital cases and seven people active in counseling and couple therapy with degrees in psychology, social work, and counseling and interviewed them in order to examine "the recent trends in divorce in Iran" and analyze the "data about the determinants and consequences of divorce" (p. 53). The interviewees also took part in social group discussions conducted by three psychiatrists and two sociologists.

One of the experts interviewed, for example, asserted that "I think divorce is like the side effect of an illness in the society which can be called 'fading religious beliefs'". Based on this and similar views Safizadeh and Nakhaee [58] concluded that "a lack of religious beliefs, brought on by a rapid adoption of Western culture, was the major reason behind the increased divorce rate in the country" (p. 2). More than half of the "divorcing selves" in the present study, i.e. 303 out of 541 (54%), however, *did not* agree with the genus that "My spouse is *not* committed to any religious, spiritual or ethical principles", challenging Safizadeh and Nakhaee' conclusion.

Safizadeh and Nakhaee's [58] approach towards divorce is polytheistic because they believed that it was not the spouses themselves but *their rapid adoption of Western culture* that brought about the divorce. Transferring the cause of divorce from the spouses themselves to the adoption of Western culture *serves the personal desires of* specialists such as Safizadeh and Nakhaee because it not only justifies but also requires the patients to seek psychiatric, psychological, sociological and theological help, i.e., the main constituting features of polytheism [1].

Having No Principles is also closely related to the *fourth* family of divorce, *Having No Decency*, because its constituting four genera provide more features of polytheistic selves, i.e., having no decency or modesty and indulging in extramarital relations, being addicted to traditional/ synthetic drugs or alcohol, not being capable of meeting joint economic needs and the existence of a huge age difference between the spouses.

Similar to *Having No Decency* the *fifth* family of divorce, *Having Different Tastes*, provides more distinctive features of polytheism practiced by DDSs through its four genera, i.e., unbearable differences in taste and style of life, following their family's views as regards their joint life, being extravagant with many unwarranted expectations, and being unable to satisfy the emotions or feelings of each other. Since *Having Different Tastes* correlates the highest with *Having No Decency* (r=44, *p*<.01) it highlights DDSs' deliberate attempt to blame *not* themselves but other things such as the style of life and other people such as the spouse's family.

As the *sixth* family, *Social Media Addiction* offers spouses' avoidance of religiously endorsed principles resulting in seeking and establishing social media relations as the cause of divorce. The four constituting genera of *Social Media Addiction* provide its distinctive features, i.e., not being adequately and completely familiar with the spouse's family before marrying; being continuously busy with and abusing social media such as Telegram, suspecting and being extremely suspicious of the spouse and always doubting each other. Because of these genera *Social Media Addiction* correlates the highest with *Having Various Conflicts* (r=44, *p*<.01).

Along with relations established in *Social Media Addiction* education is blamed for divorce in its *seventh* family, i.e., *No Marital Education*. It consists of two genera, i.e., having no education regarding the issues and problems involved in joint life before marrying and not being sexually satisfied. Since *No Marital Education* correlates the highest with *Having No Principles* (r=42, *p*<.01) it shows that the DDSs did not seek education. Nor did they adopt any religious, spiritual or ethical principles to orient their married life. Not having education cannot result in divorce for at least two reasons.

First, the number of educational centers at primary, secondary and tertiary levels has dramatically increased recently in Iran due to privatization. There is, for example, at least one private university in any of the cities and *towns* in Iran now. *Secondly*, a large amount of budget is spent on religious education. The budget approved by the Iranian parliament for the High Council of Seminaries (HCS) in 2021 was, for example, 7,520,000,000,000 whereas that of Tehran University, the first and oldest higher education center, was 5,456,665,000,000 riyal (Roohani, 59). (In 2021 42000 riyals was officially exchanged for an American dollar.) It was to cover "an increase in the managerial centers of seminaries and the program to produce content for virtual cites" (p. 13). 4,260,000,000,000 riyal was also allocated to the Islamic Propagation Organization (IPO) for paying salaries to clergymen and their training. Furthermore, the virtual IPO received the budget of 2,000,000,000,000 riyal for producing electronic social media!

As regards *not being sexually satisfied*, one of the two genera comprising the family of *No Marital Education*, Frootan and Milani [60]   analyzed

400 DDSs' responses to a number of questions in their study. When asked whether they were sexually satisfied in their marriage the *highest* percentage of DDSs, i.e., 197 female (68.4%) and 71 male (66.7%), responded *negatively*. These statistics are misleading because they establish a *linear* and *causal* relationship between sexual dissatisfaction and divorce. The present study, however, showed that rather than being a linear or *one-dimensional* variable, divorce is an eight-dimensional or familial domain in which sexual dissatisfaction is addressed as only one of the two genera forming the family of *No Marital Education*. Even in this particular family its loading (0.60) is lower than that of the first genus *having no education regarding the issues and problems involved in joint life*, i.e., 0.62 (see Table 6).

The relatively low loading of sexual dissatisfaction is due to its having the same percentage, i.e., 49%, in the present study for both female (160 out of 327) and male (65 out of 212) DDSs. In Frootan and Milani's [60] study, however, the *second* highest percentage of the same DDSs, i.e., 201 female (61%) and 118 male (57%), agreed that they *did not have education regarding the issues and problems involved in joint life*. These findings indicate that sexual dissatisfaction is *explanatorily* cognitive and emotional, i.e., the third taxon of *self*, rather than physiological, i.e., the first taxon of *self*, or instinctual, i.e., the second taxon of *self* [1]. The findings are further supported by the fact that the DDSs had not made the best of their primary, secondary and tertiary education because of the variables of power and money.

Education has little to offer as regards *problems involved in joint life* because its objectives have been shifted from truth to power and from academic to unacademic norms on the part of educators and exploitation of the power and norms on the part of the students whose parents or they themselves pay for the services they receive in the name of education. As regards the educators, a *full professor* academic member of a department, for example, usually had 21 graduate students he was supervising at the same time! In a departmental meeting he *boastingly* confessed that *he did not even read their theses and dissertations before their being defended*. The defenders had chosen him as their supervisor to get the highest score for whatever they had written not because of its academic quality but because of their supervisor's strong relationships known as networking in the west!

The power holding educators establish unacademic norms and their students exploit them because there is a positive and significant relationship between their leniency and the students' achievement. Khodadady and Dastgahian [61], for example, validated the English Language Teachers' Attribute Scale (ELTAS) designed by Khodadady, Fakhrabadi, and Azar [62] with 1483 grade four senior high school (G4SHS) students in order to explore the relationship between teacher effectiveness and English language achievement. Khodadady and Dastgahian's results showed that as a measure of teacher effectiveness the ELTAS consists of 92 items and 11 factors representing the families of Qualified, Social, Proficient, Humanistic, Stimulating, Organized, Pragmatic, Systematic, Prompt, Exam-Wise, and Lenient.

Along with the ELTAS Khodadady and Dastgahian [63] administered a multiple choice item reading comprehension test called S-Test to 440 G4SHS students and tailored its constituting items to 39 based on their difficulty and discrimination indices (see Kamimoto [64]). The S-Test was developed and validated by Khodadady and Ghergloo [28] on the textbook "Learning to Read English for Pre-University Students" [29] taught nationally to G4SHS students during their school year. Khodadady and Dastgahian also obtained the students' scores on their grade three final English examination (G3FEE) designed by the Iranian ministry of education and correlated them with the cognitive domain of teacher effectiveness and its constituting families (Table 11).

Domain and its families	G3FEE N=440	S-Test 39 N=440	Domain and its families	G3FEE N=440	S-Test 39 N=440
Teacher effectiveness	.272**	-.113*	Organized	.250**	-.105*
Qualified	.288**	-.153**	Pragmatic	.292**	-.087
Social	.254**	-.074	Systematic	.193**	-.159**
Proficient	.172**	-.099*	Prompt	.093	-.147**
Humanistic	.226**	-.080	Exam-Wise	.284**	-.086
Stimulating	.067	.057	Lenient	.178**	-.011

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Table 11: *Correlations between teacher effectiveness (domain), its families, G3FEE and S-Test*

As the results presented in Table 11 above show the cognitive Lenient family of teacher effectiveness correlates significantly with the scores on the G3FEE, i.e., r=.18, *p*<.01. Based on the three genera constituting the family, the findings empirically show that the more *teachers ignore cheating*, the more *good grades they give to their students* and *the simpler and easier tests they design*, the *higher* their students *achieve in learning the English language*! Had the students' English achievement been measured by the objective S-Test, these students' failure in learning English would, however, have been easily documented because their scores on the test show *no significant* relationship with the family of *lenient* teachers.

Similarly, many students enter and graduate from tertiary educational centers *without acquiring the education required to solve problems involved in true personal and joint life*. The main reason is that there were only 141 state universities in Iran. After the revolution in 1957, however, 2428 private higher educational institutes and universities have been allowed to operate throughout the country. Having reported these statistics, Iranian Students' News Agency [65] acknowledged that the mushroom-like increase in the number of higher education institutes has brought about many problems among which is studying-for-degree, a euphonious expression for gaining university degrees through money and/or networking.

Similar to higher education institutes many private schools have been founded at primary and secondary education levels whose main objective is nothing but money. The majority of graduates from these private schools do, therefore, gain degrees without any qualification. Due to the fact that their parents hold power along with money, they also enter and gradate from higher education centers. These graduates along with those of state universities being so-called educated by *power holding professors* get employed not only in private but also in public organizations through networking. Their qualifications are evaluated not by valid measures such as S-Tests but through questionnaires such as the ELTAS. They also gain acceptance and popularity among the students by holding examinations such as the G3FEEs. They do, however, face *Misunderstanding Married Life* when the variables of power and money lose their relevance in single and married life.

As the *last* cognitive family of divorce, *Misunderstanding Married Life* consists of two cognitive genera: marrying too young without understanding the problems involved in married life and watching foreign TV channels and expecting the spouse to behave like foreign actors/ actresses. Since *Misunderstanding Married Life* correlates the highest with *Depending on Social Media* (r=42, *p*<.01), it highlights the fact that the DDSs do not know why they married and do, therefore, follow the relationships outside their married life to make their own relationships meaningful. These findings highlight the polytheistic orientation of the

DDSs when they expect their spouses to behave like foreign actors/ actresses (Q6:164)

Conclusion

While divorce has been broadly described from various perspectives such as being a "multistage process" (Leopold [66] cited in Eslami et al, [67, p. 1]), "acute life crisis or times of life transition" [22, p. 4960) and "other conditions that may be a focus of clinical attention" [68, p. 715), the present study establishes divorce as a cognitive domain measured by the DSIS. The domain not only taps into psychiatric and psychological disorders but also characterizes the religious orientation of divorcing and divorced sapiens as self-theistic, polytheistic and practicing monotheistic selves.

Declarations

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