

A Study of Cohesion in Charles Dickens's Hard Times (Part One)

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Abstract

The present study attempts to conduct an analysis of cohesion in part of Charles Dickens's Hard Times (1854) in terms of Halliday and Hasan's model. Accordingly, it endeavours to scrutinise the novelist's method of using this device to accomplish his work and fabricates its successful discourse. Hopefully, this will be of some significance to studies related to the structure of the novel which is said to be a unique one. This is achieved by analysing and categorizing the five devices proposed and measuring their role to some aspects of the novel including characters, themes, and imageries. By doing so, it is signified that Dickens skilfully employees these cohesive devices to build up the texture and serve his novel.

دراسة الترابط الدلالي في الجزء الأول من رواية "أوقات عصيبة" لتشارلز ديكنز

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المخلص

تسعى الدراسة الحالية لامعان النظر في دور ادوات الربط (Cohesion) في بناء النسيج والتركييب النصي في جزء من رواية " أوقات عصيبة" للروائي الانجليزي تشارلز ديكنز. وذلك بعد اجراء تحليل لكثافة وأنواع هذه الادوات في نص الجزء الاول للرواية والبحث في علاقتها مع عناصر تركيب الرواية. وقد بينت النتائج الدور الهام لتلك الادوات في دعم عناصر بنية النص من حيث المساهمة باستمرارية المعنى في تقديم الشخصيات والأفكار والصور الرمزية. حيث تبين ان كثافة الروابط النصية تزداد عندما يكون هنالك تشديد من قبل الكاتب على شخصية او فكرة او صورة معينة وعلى العكس تقل تلك الكثافة وتزداد مساحة الانتشار عندما تكون هذه العناصر ثانوية.

1.1 Introduction

Literary language is a fertile ground for a varied number of academic and scientific affiliations for both students and researchers. Hitherto, Charles Dickens (1812-1870) is one of the towering and genius figures of the English and Victorian literature whose works have left their effective touches in forming and reforming the social and literary aspects of that era. However, Dickens's *Hard Times* is one of his most controversial works which is said to be having peculiar forms, unique structure, and private linguistic features.

As proposed by Halliday and Hasan (1976) that cohesion analysis doesn't interpret texts but it shows how and why they are interpreted in certain ways. They also see that cohesion is a non-structural relation which mainly builds up the texture of text by means of cohesive ties that provide the discourse with meaning continuity. Accordingly, the present paper endeavours to analyze a set of extracts from novel first part discourse in terms of the proposed model. In turn this is accomplished through:

- 1- Analyzing, categorizing, and describing the densities, types, subtypes, and distribution of the cohesive devices found in the novel.
- 2- Finding authentic textual conclusions and insinuations underlying the types and distribution of cohesive ties within the discourse and exploring the correlations between their percentages and its topics.

1.2 Halliday and Hasan's Model of Cohesion

Though Jakobson (1960) talked about the role of patterning and repetition in the creation of textual parallelism, but the first major investigation of cohesion has been carried out by Halliday and Hasan in their seminal work (1976) *Cohesion in English* (As cited in Martin, 2009; Malmkjar: 2010). Halliday and Hasan (1976) define cohesion as a semantic concept referring to sources of meaningful relations within the text and across the boundaries of sentences which happens where the interpretation of some element in the discourse is dependent on the presence of another. It is mainly achieved through the availability of two types of cohesive categories grammatical and lexical. Grammatical cohesion is created by reference, substitution, ellipsis, and conjunction. Lexical cohesion is brought by reiteration and collocation. Below, Table 1 shows this classification:

Table(1): Types of Non-Structural Cohesion (Halliday & Hasan, 1976: 29)

Non-Structural Cohesion					
Grammatical Cohesion				Lexical Cohesion	
Reference	Substitution	Ellipsis	Conjunction	Reiteration	Collocation
Personal	Nominal	Nominal	Additive		
Demonstrative	Verbal	Verbal	Adversative		

1.2.1 Reference

Reference items are those items which are interpreted by relating them to something else instead of being interpreted semantically in their own right. In English, these items are PERSONALS (i.e. John, he, the book, it), DEMONSTRATIVES (i.e. here, there) and COMPARATIVES (i.e. fewer). Accordingly, this interpretation is done by two ways of reference either internal reference in which the needed items are inside the text or by the aid of the outer context of situation. In both cases a phoric relation is set up, but in each case, certain phoric relation is made. Within the text an endophoric reference is made while beyond the text borders an exophoric reference is used (Halliday & Hasan, 1976: 31-50).

Reference is a relationship between things, or facts. It may be established at varying distances although it usually links functional elements inside clause borders. Two types of phoric relations are recognized: exophoric underlies situational reference and endophoric that describes internal textual links (Halliday & Hasan, 1976: 36).

As defined by Crystal (2008: 25) anaphora is a way of interpreting a linguistic item depending on some previously expressed item which is referred to it as the antecedent. Anaphoric reference is one way of marking the identity between what is being expressed and what has already been expressed. It is often contrasted with cataphora: where the words refer forward, and sometimes with deixis or exophora: where the words refer immediately to the extra-linguistic situation. It may, however, also be found subsuming both forwards- and backwards-referring functions.

Cataphora is a term compared to anaphora referring to a linguistic unit which indicates information directly following the utterance. Deixis such as

determiners, personal pronouns, possessive pronouns, and interrogative pronouns in sections are cataphoric (Bussman, 1996: 162).

1.2.2 Substitution & Ellipsis

Substitution and ellipsis are two related cohesive devices and both of them are related to wording rather than meaning. Substitution refers to the process by which linguistic item is replaced by another while ellipsis is another form of substitution indicates zero replacement to the omitted item. The two categories mainly share a common set of mechanisms, but ellipsis is a more complex one. It is differentiated from reference in being concerned with wording rather than meaning. But the two devices interfere in many cases where a semantic component has a different interpretation from that of the grammatical one. In such case, we have to adopt the two depending on certain general conventions. Generally, substitution is a relation that occurs inside the text. It is a kind of strategy used to avoid repetition. As a general condition, the substitute item should have the same structural function (Halliday and Hasan, 1976: 88).

As a textual cohesive category, substitution is similar to reference as being potentially anaphoric and a text linking device. But the two also possess different feature in that reference is a non-verbal relation and has the priority of pointing at any direction. Substitution on the other hand is a verbal bond which rarely has an exophoric linking (Halliday & Hasan, 1976: 90).

1.2.3 Conjunction

As a cohesive category, conjunction possesses both of the grammatical and lexical aspects of the lexicogrammar, but it is closer to the grammatical in identity. Conjunctions is not an anaphoric relation and this what distinguishes it from other categories. Conjunctive items are not self-cohesive, but cohesiveness is attributed to their own senses. Moreover, they are not phoric relations that presuppose other items in the discourse (Halliday & Hasan, 1976: 226).

1.2.4 Lexical Cohesion

Lexical cohesion is provided via the choice of a lexical item that is in some sense synonymous with a preceding one; for example, sound with noise, cavalry with horses (Halliday & Matthiessen, 2004: 572). Baker & Ellice (2011: 69) define lexical cohesion as a way of achieving cohesion by repeating the same word or phrase or using chains of related words that contribute towards the continuity of lexical meaning. Another definition by Yeh (2004: 8) indicates that lexical cohesion is an open-ended and a less adequately defined cohesive means that differs from other devices in being not bound with any special group of items.

In its simplest forms, lexical cohesion occurs where the same word is repeated and has the same referent on both occasions. There is no necessity for the second example to be exactly an identical item; it works within the REITERATION categories as being either synonym, superordinate, or general word (Halliday & Hasan, 1976: 282; Crystal, 2008: 410).

Synonyms are two or more forms that have a very closed meaning and are often, but not always used interchangeably in discourse. In this respect sameness is partial and sometimes we have an item which suits some sentence while its synonym does not (Yule, 1996: 118). In Halliday (1994) there are subclasses of synonyms such as HYPONYM indicating a relation of specific-general, or a part-whole relation called MERONYMY. Yet, Hyponymy is a meaning relation that expresses hierarchical order of notions and class membership of concepts. Such as, the concept of human underlies the concepts man, boy, woman, girl as subordinate concepts (Ellece & Barker, 2011: 127).

Halliday & Hasan (1976: 287) use the notions of COLLOCATION and COLLOCATIONAL COHESION as an umbrella term for the kind of cohesion produced by the co-occurrence of lexical elements that are in certain point or another typically linked with each other due to their identical context. Furthermore, Halliday & Matthiessen (2004: 577) state that it is made by a particular association between words based on their tendency to accompany each other. Most of time, collocations are linked with a certain kind of register or a function as a variety of language.

Another point, collocation is an important device to provide connectedness to text segments. It is not limited to a couple of items, but it builds up lexical links long cohesive chains within the whole text. A collocation of longer cohesive chain is a stronger one in having more cohesive force because these long chains contribute to the expansion of the discourse topic. So, it is a significant factor in developing one's perspective and acting as a thread of the text (Wu, 2010: 100).

1.3 Cohesion in Hard Times (Part One: Louisa's Childhood)

As the title suggests, the present study data source is Charles Dickens's novel *Hard Times* in its one-volume format. In order to accomplish the announced objectives of the study, data assortment procedures has been carried out in line with its demands and limitations. Consequently, the first step was made via re-dividing the text into three phases according to the novel main plot vs.: Part One: Louisa's Upbringing , Part Two: Louisa's Marriage and Part Three: Louisa's Freedom. As far as the present study is concerned a set of 18 extracts have been selected from the flow of discourse in the novel first part.

The analysis of cohesion in Part One of the novel reveals the method via which the novelist employs the available options of the cohesive categories of English language in order to present his thoughts and ideas and prepares his readers to the context of his story as it unfolds. Here, the analysis exhibits that the total number of the utilised cohesive ties is 5174 ties. It is found that the grammatical categories occupies the highest percentage of P1CTC. They share approximately 3110 ties signifying about 60.10% of the total number. The conjunctive devices accounts an amount of about 366 ties which represents a percentage of 11.76% of the grammatical kind. While the lexical cohesion categories share about 2064 ties and stand for 39.90 % from P1CTC. However, Table 15 below summarizes these results:

Table (2): Types of Cohesion in Part One of Hard Times

Types of Cohesion	No.	%
Grammatical	3110	60.10
Lexical	2064	39.90
Total	5174	100

More specifically, the analyses moves to sort out the percentages for each one of the five cohesive categories in relation to the total number of the ties and in relation to other devices. Also, it examines the density and distribution of the cohesive categories in each of the selected extracts in order to measure their relevance to some of the structural elements of the text. Accordingly, we see that the density of these devices fluctuates from the lowest number of 87 ties; nearly 1.68% in Ext.4 to the highest in Ext.12 by an amount of 617 ties; nearly 11.92% from P1CTC.

In all instances, reference and lexical cohesion have the highest dominant ratios. As illustrated above, reference scores the highest percent by 2652 ties; nearly 52.25% followed by lexical cohesion as sharing the second highest number of 2064 ties; nearly 39.90%. In addition, the other three categories have marked as: 366 conjunction ties; almost 7.07 % as the third followed by 59 ellipsis ties; nearly 1.14% as the fourth with the least utilized device of 33 substitution ties; nearly 0.63 % from P1CTC. Hereafter, Table 3 and Figure 1 exhibit these results:

Table (3): Cohesive Ties Categories in Part One of Hard Times

Exts.	Reference		Substitution		Ellipsis		Conjunction		Lex. Coh.		G.T.
	No.	%	No.	%	No.	%	No.	%	No.	%	
Ext.1	187	7.05	1	3	10	17	21	5.7	193	9.35	412
Ext.2	169	6.37	3	9.1	3	5.1	17	4.6	89	4.31	281
Ext.3	65	2.45	0	0	0	0	10	2.7	63	3.05	138
Ext.4	64	2.41	5	15	0	0	9	2.5	9	0.44	87
Ext.5	179	6.75	2	6.1	4	6.8	22	6	123	5.96	330
Ext.6	302	11.4	0	0	3	5.1	40	11	117	5.67	462
Ext.7	117	4.41	3	9.1	5	8.5	35	9.6	15	0.73	175
Ext.8	21	0.79	1	3	5	8.5	21	5.7	116	5.62	164
Ext.9	94	3.54	1	3	1	1.7	19	5.2	78	3.78	193
Ext.10	116	4.37	0	0	1	1.7	22	6	109	5.28	248
Ext.11	247	9.31	4	12	6	10	17	4.6	155	7.51	429
Ext.12	309	11.7	0	0	5	8.5	34	9.3	269	13	617
Ext.13	100	3.77	6	18	2	3.4	17	4.6	100	4.85	225
Ext.14	118	4.45	2	6.1	6	10	9	2.5	149	7.22	284
Ext.15	140	5.28	1	3	2	3.4	13	3.6	134	6.49	290
Ext.16	134	5.05	0	0	0	0	13	3.6	154	7.46	301
Ext.17	144	5.43	1	3	2	3.4	19	5.2	97	4.7	263
Ext.18	146	5.51	3	9.1	4	6.8	28	7.7	94	4.55	275
Total	2652	60.10	33	0.63	59	1.14	366	7.07	2064	39.9	5174

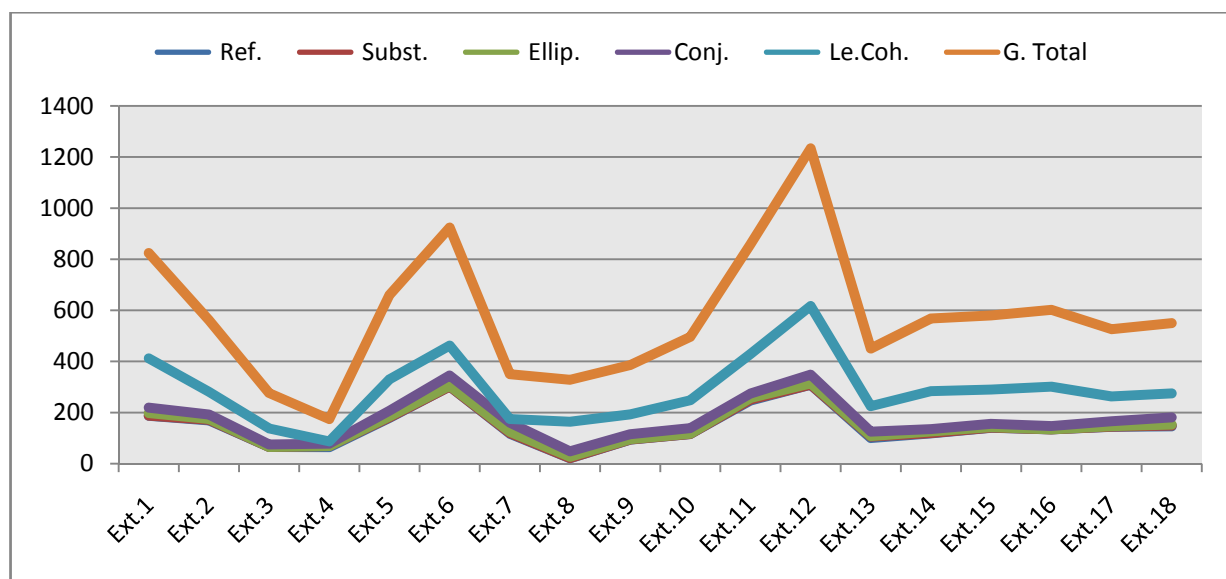


Figure (6): The Distribution of the Cohesive Categories in Part One

Next, the analysis proceeds to inspect this part density of texture of the text by finding the types of ties categories distance. As introduced by Hallidy and Hasan's model of cohesion, these are classified as Immediate (IM), Mediated (M), Remote (R), Remote Mediated (RM), and Cataphoric (K), it has been found that this part has a high density of cohesive ties in which immediate, mediated and remote mediated distances dominate in contrast the other types. As illustrated in Table 4 below, the remote mediated type scores the highest number by 1600 ties; nearly 30.92 %, followed by 1414 ties; almost 27.32% for the mediated as the second with 1215 ties; nearly 23.48% for the immediate as the third from the total. In contrast, remotes and cataphoric categories mark low percentages as 885 ties; nearly 17.10% for the former and only 60 ties; nearly 1.15 % for the later.

Table (4): Cohesive Ties Distance Types in Part One of Hard Times

Ext. No.	IM		M		R		RM		K		G. Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Ex.1	86	7.08	109	7.71	68	7.68	138	8.63	11	18.3	412
Ex.2	54	4.44	46	3.25	31	3.5	150	9.38	0	0	281
Ex.3	41	3.37	42	2.97	25	2.82	30	1.88	0	0	138
Ex.4	20	1.65	22	1.56	15	1.69	30	1.88	0	0	87
Ex.5	80	6.58	80	5.66	48	5.42	122	7.63	0	0	330
Ex.6	123	10.1	167	11.8	49	5.54	123	7.69	0	0	462
Ex.7	54	4.44	47	3.32	30	3.39	44	2.75	0	0	175
Ex.8	34	2.8	43	3.04	32	3.62	55	3.44	0	0	164
Ex.9	45	3.7	71	5.02	27	3.05	50	3.13	0	0	193
Ex.10	57	2.8	66	3.04	56	3.62	69	3.44	0	0	248
Ex.11	119	9.79	95	6.72	64	7.23	140	8.75	11	18.3	429
Ex.12	102	8.4	202	14.3	107	12.1	206	12.9	0	0	617
Ex.13	54	4.44	70	4.95	35	3.95	66	4.13	0	0	225
Ex.14	87	7.16	73	5.16	56	6.33	60	3.75	8	13.3	284
Ex.15	72	5.93	50	3.54	107	12.1	60	3.75	1	1.67	290
Ex.16	61	5.02	81	5.73	37	4.18	104	6.5	18	30	301
Ex.17	57	4.69	80	5.66	40	4.52	86	5.38	0	0	263
Ex.18	69	5.68	70	4.95	58	6.55	67	4.19	11	18.3	275
Total	1215	23.48	1414	27.32	885	17.10	1600	30.92	60	1.16	5174

Actually, this shows that in parts where these indicate intense discourse parts correlate with the novelist's focus on certain: theme, character, or an imagery. Hereunder, Figure 2 explains areas of ties intensity within this part:

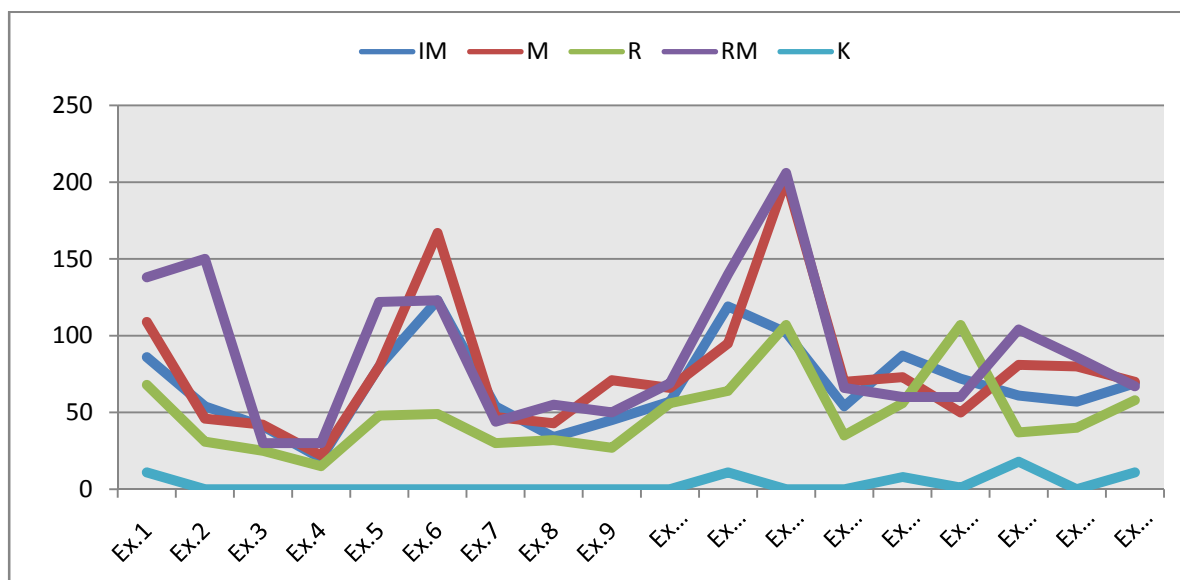


Figure (2): The Density of Texture in Part One of Hard Times

1.3.1 Reference in Part One

The analysis of cohesion in the first part of Dickens's Hard Times divulges his present treatment of reference cohesive categories. As the statistics indicate, cohesive reference items signify a total of 2652 ties with an average of 51.25 % from P1CTC and rank as the highest among the other four devices. More specifically, anaphoric reference is the most dominant type in comparison with the cataphoric. The analysis shows that there are 2592 anaphoric ties; almost 47.19% and only 60 cataphoric ties; almost at 1.09% from P1CTC.

Furthermore, the writer makes use of all the three kinds of cohesive reference, but he uses them with great divergence in terms of their density and distribution in this part of the text discourse. Most of the employed reference items are of the personal type. They compose about 81.74% of the total number. The second high average of the reference items is that of the demonstrative class in being of 21.79% While the lowest portion is given to the comparative cohesive which represents about 2.18%. Hereafter, these results are explained in Table 5:

Table (5): Reference Subcategories in Part One

Reference Type	No.	%
Personal	2168	81.74%
Demonstrative	578	21.79%
Comparative	58	2.18%
Total	2652	100

Furthermore, the analysis has examined the novelist's use of demonstrative reference by accounting its two subtypes: Neutral "the Article" and other Selective Demonstratives like this, that, here, now etc. It is found that he employs both of them with some divergence in their percentages according to his discourse needs. As stated below in Table 6, they show relatively equal numbers of ties as 298 ties; nearly 51.55% and 280 ties; nearly 48.44% from the total of the demonstrative subtype of cohesive reference.

Table (6): Demonstrative Reference Types in Part One

Demonstrative Reference Types	No.	%
Article "the"	298	51.55
Others	280	48.44
Total	578	100

1.3.2 Substitution in Part One

As stated hereunder in Table 20, substitution occupies one of the lowest rates in this part. It shares only an amount of 33 ties which signifies 0.63% from P1CTC. Most of these are verbal substitutes since they rank as the highest in number of 28 ties at 84.84% . While comparative reference stands as the second as being of 5 ties at 15.15% from the grand total. Yet, it is noticeable here we see an absence to the cohesive use of nominal substitution in this part. Table 7 below shows these ratios:

Table (7): Substitution Subcategories in Part One

Substitution Type	No.	%
Nominal	0	0
Verbal	28	84.84%
Clausal	5	15.15%
Total	33	100

As stated above, verbal substitutes are more preferable by the novelist than the other two types. For instance, he even uses this cohesive device more than once in the same occasion which in turn serves the requirements of the discourse success. Here, as in the following example, this contributes as an emphasis to the characters' speech and through this intensify focus on the imagery used too.

Example (1):

I see traces of the **turtle soup**, and venison, and gold spoon in this. Yes, **I do!**'
cried Mr. Bounderby, shaking his **head** with obstinate cunning. 'By the Lord
Harry, **I do!**' (HT:II:5)

1.3.3 Ellipsis in Part One

In terms of cohesive ellipsis ties, the analysis shows that this device exceeds the previous category as being of 59 ties at 1.14% from P1CTC. As in Table 8, clausal ellipsis is the dominated subcategory which implies 33 ties; almost at 55.93 % from the total. In contrast to verbal substitution, verbal ellipsis ranks the second as being of 21 ties; nearly at 35.59%. Also, nominal ellipsis has only 5 ties; nearly at 8.47 % in comparison to its substitution equivalent which has no use at all.

Table (8): Ellipsis Subcategories in Part One

Ellipsis Subcategories	No.	%
Nominal	5	8.47
Verbal	21	35.59
Clausal	33	55.93
Total	59	100

Referring to the novelist interest in this category, we may easily remark here that he mostly uses it in dialogues more than narration. In this regard, it shows the dominance of some characters upon others as they just signals their obedience to their speech partners. We notice this aspect in dialogues between Louisa and her father, Sissy's dialogues with Mr. Gradgrind, Master Choakumchild, and Mr.Bounderby, and Stephens' speech with Mr.Bounderby and his labor friends. The below examples may certify this point:

Example (2):

Describe your father as a horsebreaker. **He doctors sick horses**, I dare say?' 'Oh **yes**, sir/.' 'Very well, then. He is a veterinary surgeon, a farrier, and housebreaker. (HT:I:1)

Example (3):

Now, let me ask you girls and boys, Would you paper a room with representations of horses?' After a pause, one half of the children cried in chorus, '**Yes**, sir!' Upon which the other half, seeing in the gentleman's face that Yes was wrong, cried out in chorus, '**No**, sir!'—as the custom is, in these examinations. 'Of course, **No**. Why **wouldn't** you?' (HT:I:2)

4.2.2.1.4 Conjunction in Part One

In terms of the cohesive conjunction, as Table 9 presents, this device has been accounted as 366 ties at 7.07 % from P1CTC. This percentage varies among the four subtypes of additive, adversative, temporal, and causal. The highest share is registered to the adversative subcategory as being of 144 ties; almost 39.34 %. Temporal conjunctives wins the second rank of 84 ties; nearly 22.95 %, and causal subcategory ranks as the third by 77 ties; nearly 21.03 %. whereas, additive subtype stands as the lowest frequent with just 61 ties; nearly 16.66 % from the total.

Table (9): Conjunction Subcategories in Part One

Conjunction Subcategories	No.	%
Additive	61	16.66
Adversative	144	39.34
Temporal	84	22.95
Causal	77	21.03
Total	366	100

Looking at the various uses of these subcategories, we see that the writer uses them to provide transitions within the subtexts to serve narration and dialogues. Through this means, he controls his discourse directions that serve the demands of discourse meaning continuity and plot progress. Besides this, the novelist employs this device to establish the context of the situations to envisage his characters mental and physical status. The following examples may represent this view:

Example (4):

Now, let me ask you girls and boys, Would you paper a room with representations of horses?' **(HT:I:2)**

Example (5):

After a pause, one half of the children cried in chorus, 'Yes, sir!' Upon which the other half, seeing in the gentleman's face that Yes was wrong, cried out in chorus, 'No, sir!'—as the custom is, in these examinations. **(HT:I:2)**

Example (6):

'And, Mrs. Gradgrind,' said her husband in a lofty manner, 'I should as soon have expected to find my children reading poetry' **(HT:I:3)**

4.2.2.1.5 Lexical Cohesion in Part One

After investigating four grammatical cohesive categories, the analysis moves to the fifth device of lexical cohesion. In this regard, two main subcategories of lexical cohesion have been analyzed namely reiteration and collocation. Furthermore, the former one has been tackled under five subtypes as: repetition, synonymy, antonymy, hyponymy, and meronymy. As stated in Table 2, lexical cohesion ties account as 2064 ties; nearly 39.10 % from P1CTC. More specifically, this number is dominated by 1789 reiteration ties; almost at 86.67 % and a small portion of collocations which signify only 275 ties; nearly at 13.32 % from the total as shown in Table 10 below:

Table (10): Lexical Cohesion Subcategories in Part One

Lexical Cohesion Subcategories	No.	Percentage
Reiteration	1789	86.67
Collocation	275	13.32
Total	2064	100

Next, Table 11 puts on the four subtypes of reiteration mentioned above. Noticeably, repetition is the highest frequent one which has 1410 ties; almost at 78.81% followed by 136 synonymy ties; nearly 7.60 % and the third rank goes to 104 hyponymy ties; nearly 5.81%. Yet, antonymy and meronymy marked as the lowest as they both have 85 ties; nearly 4.75% for the later and only 54 ties ; nearly 3.01% for the latter from the total.

Table (11): Reiteration Subtypes in Part One

Reiteration Subtypes	No.	Percentage
Repetition	1410	78.81
Synonymy	136	7.60
Antonymy	54	3.01
Hyponymy	104	5.81
Meronymy	85	4.75
Total	1789	100

Actually, it is easy to notice the novelist's flurry employment of repetition in this part as the novel begins. We also may find in this regard that Dickens utilizes this device to bring attention to certain meaningful aspects of his discourse. For instance, he repeats words such as "Facts", and "square" serve the thematic progression and purpose within this part discourse as in the example below:

Example (7):

'NOW, what I want is, Facts. Teach these boys and girls nothing but **Facts**. **Facts** alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon **Facts**: nothing else will ever be of any service to them. Stick to **Facts, sir!** (HT:I:1)

Hereunder, a set of some the most repeated words in this part that Dickens reiterates throughout his novel first part to serve his textual needs like dialogue speech roles, narration, contextual aspects, themes, imageries, etc.

face	woman	men	facts	Political Economy	gentleman	Hand
say	lady	husband	fancy	monotony	book	hand

said	lass	father	square	time	walk	observe
returned	mother	brother	head	day	step	kiss
eyes	grandmother	think	reason	month	love	hate
look	wife	thought	mind	year	school	room
glance	daughter	wonder	figure	spring	hear	bring
child	sister	horse	body	bed	number	stand
children	girl	education	hard	sofa	chimney	country
baby	boy	educate	life	house	smoke	rain
infant	man	science	place	town	tell	sun
arm	friend	factory	city	street	river	take
give	moon	astonish	speak	path	see	difficult
coat	stars	sit	know	road	tree	repeated
windows						(HT:I)

Beside the intense usage of reiterated cohesion, the novelist uses just small portion of cohesive collocations in this part. Here, we notice that these devices vary in accordance with the textual topics and registers as appearing in parts where the discourse focuses on certain theme or imagery. Below a list of these instances found by the analysis:

sun	shone	framed	painter	knowledge	science
lesson	taught	glazed	Painter	school	education
lecture	school	bar	wine	hard	starved
eye	look	furnished	chair	voyage	sea
eye	glance	terror	surprise	percent	statistics
eye	shut	communicated	sense	ask	answer
eye	glimpse	educate	school	said	retorted
coarse	stare	conqueror	captivated	said	replied
baby	birth	subjects	learning	said	returned
high	ladder	fable	fairy	ask	question
black	smoke	read	wrote	learn	mistake
hands	arms	probation	school	shining	brightness
menace	violence	shoulders	head	threw	staggered
snoring	bed	chair	bed	morning	night
pavement	street	forest	elephant	mind	mad
mill	loom	engine	power	govern	patriotism
day	morning	coal	smoke	wheel	clogs
basket	journey	lips	kiss	slackened	jarring
home	gone	lay	bed	sense	gentle
hungry	shelter	child	birth	hurt	poison
progress	rapid	sister	brother	pen	book
love	marriage	mind	disquietude	tasteful	dress
reverie	night	mounted	summits		(HT:I)

Furthermore, the density and distribution of the five cohesive categories have been measured in relation to the story characters presented in its first part. It shows that all characters has been cohesively referred to, but with variation in terms of number and quality of these devices. Also, it reveals that this variation is related to the importance of each character and its role within the textual parts of these devices distribution. The major characters such as “Thomas Gradgrind”, “Josiah Bounderby” ,“Louisa”, “Sissy Jupe”, and “Stephen Blackpool” have received the highest percentages of employed ties in part one. Hereunder, these are presented and illustrated Table 12 and Figure 3:

Table (12): Cohesive Types Related to Major Characters in Part One

Characters	Reference		Substitution		Ellipsis		Conjunction		Lex. Cohesion		G. Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Mr.Gradgrind	156	10	1	4.35	5	11	14	6.3	82	7.53	258
Mrs.Gradgrind	17	1.09	0	0	0	0	4	1.8	12	1.1	33
Louisia	142	9.11	0	0	11	23	18	8	116	10.7	286
Thom	128	8.22	3	13	2	4.3	16	7.1	51	4.68	199
Sissy Jupe	223	14.3	2	8.7	12	26	36	16	110	10.1	373
Mr. Bounderby	222	14.2	6	26.1	5	11	30	13	168	15.4	422
Mrs.Pegler	100	6.42	3	13	2	4.3	24	11	76	6.98	205
Mrs.Sparsit	109	7	2	8.7	2	4.3	18	8	118	10.8	249
Bitzer	20	1.28	0	0	0	0	3	1.3	10	0.92	23
Stephen	318	20.4	3	13	6	13	51	23	249	22.9	626
Rachael	54	3.47	0	0	1	2.1	6	2.7	25	2.3	66
Harthouse	69	4.43	3	13	1	2.1	4	1.8	72	6.61	149
Total	1558	53.9	23	0.8	47	1.6	224	7.8	1089	37.7	2889

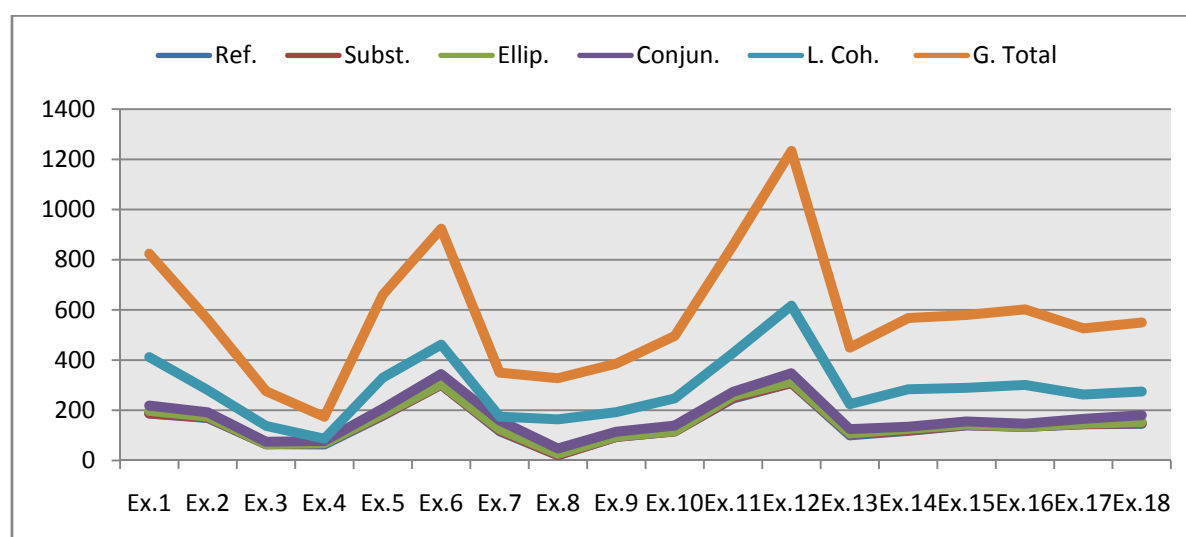


Figure (3): Cohesive Types Distribution to Major Characters in Part One

However, as shown above in Table 12 and Figure 3, we can notice that reference items dominate on the averages of the employed cohesive types used to link the novel major characters in its first part. The percentage of these devices in Part One is 55.83 % of the total number of the cohesive devices used. Accordingly, reference shares a number of 1558 ties; that represents nearly 53.92% of the total. In addition to this, reference ties rank as the highest for each individual character in comparison with other cohesive types. Yet, other types of grammatical cohesion such as substitution and ellipsis have the lowest portion as being 23 substitution ties; nearly 0.79% and ellipsis with a higher percentage of 1.62% made by 47 ties. While conjunction shows the highest ratio among the other two as being of 7.75% made through 224 ties. Lexical cohesion follows reference and stands as the second highest cohesive category in contrast to the other four grammatical devices. It composes about 37.69% of the total through an amount of 1089 ties which are involved in the first part of the text with certain linkages to its major characters.

Next, the analysis advances to find out the categories and densities of cohesion related to this part element of themes. However, this is achieved by picking up the most prominent cohesive ties which are employed to serve this part meaningful continuity of themes. Accordingly, a set of seven thematic topic have been selected for this purpose including: *Facts vs. Fancy, knowledge vs. Surveillance, Escape and Fidelity, Mechanization of Human, Labors' Rights, Marriage, and Feminism*. In this regard, the analysis tackles cohesive items related to these themes in order to measure their cohesiveness within the text of the novel. For instance, some of the cohesive words which serve the Facts vs. Fancy theme like: *facts, fancy, square, science, number twenty, flowers, and imagination*. While, items such as *girl, lady, woman, mother, female, and feminine* operate cohesively to enhance the “*Feminism*” thematic topic.

Hereafter, Table 13 recaps the obtained results of theme-related cohesive ties analysis in this first part of the novel. Accordingly, a total of 1450 ties has been accounted with a percent of 26.45% from P1CTC. In turn, this amount is set up by a predominance of 1007 lexical cohesive ties having the highest ratio of 69.45% followed by 213 reference ties; nearly 14.69% as the second. Hitherto, the other three categories found as: 161; ties nearly 11.1% for conjunction as the third followed by 46 ties; nearly 3.17% for ellipsis and the lowest quantity being for just 12 ties; nearly 0.83% for substitution. Remarkably, these ratios keep an approximate consistency in contrast to the above obtained results of imagery ties categories.

Table (13): Cohesive Ties Categories Related to Themes in Part One

Themes	Reference		Substitution		Ellipsis		Conjunction		Lex. Cohesion		G. Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Knowledge vs. Surveillance	37	17.37	0	0	5	10.9	21	13.04	203	20.15	266
Facts vs. Fancy	45	21.12	6	50	19	41.3	35	21.73	321	31.87	426
Fidelity & Escape	19	8.92	4	33.3	2	4.34	10	6.21	53	5.26	85
Human Mechanization	29	13.61	1	8.33	14	30.4	27	16.77	72	7.14	157
Labors Laws	53	24.88	1	8.33	2	4.34	28	17.39	157	15.59	241
Marriage	18	8.45	0	0	4	8.69	17	10.55	71	7.05	110
Feminism	12	5.63	0	0	0	0	23	14.28	130	12.9	165
Total	213	14.69	12	0.83	46	3.17	161	11.1	1007	69.45	1450

These categories of ties also here fluctuate from one thematic topic to another and operate as indicators for the significances and distributions of these themes. In this regard, “*Facts and Fancy*” shares the biggest number of 426 ties; nearly 29.37% followed by 266 ties; nearly 18.34% related to “*Knowledge and Surveillance*” as the second. While other topics have received the following portions: 241 ties; almost 16.62% as the third, 165 ties; almost, 11.37% for “*Feminism*”, 157 ties; nearly 10.82% for “*Human Mechanization*”, 110 ties; nearly 7.58% for “*Marriage*” and the lowest portion of 85 ties nearly; 5.86% from the total. Figure 20 below shows how these thematic topic distributed according to the ties types and numbers:

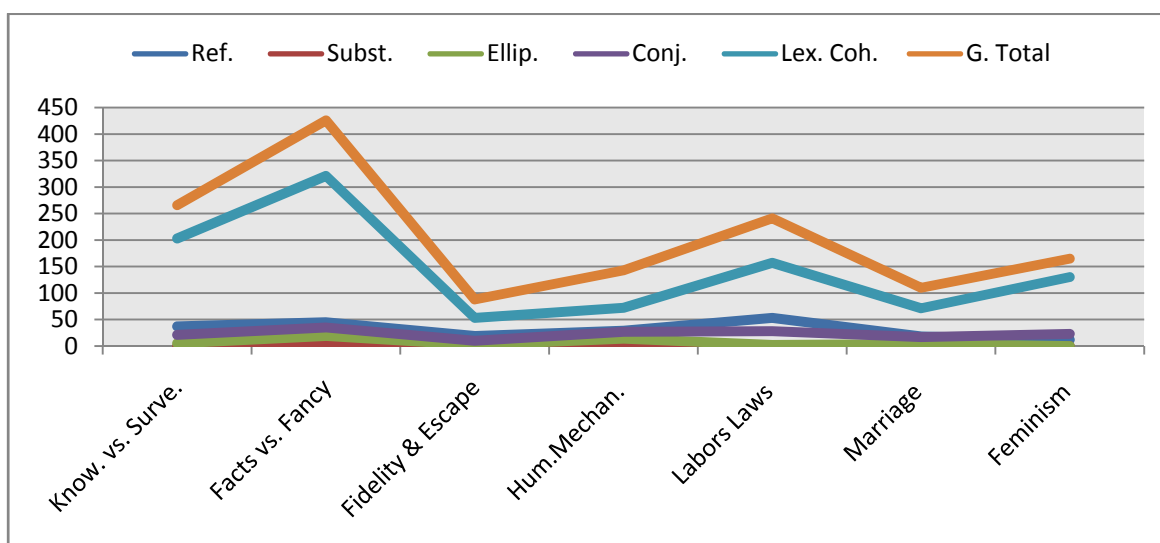


Figure (4): Distribution of Cohesive Ties Categories related to Themes in Part One

Figure (20): Distribution of Cohesive Ties Categories related to Themes in Part One

Next to this, the analysis moves to find out the types and numbers of the cohesive ties used to serve the novelist's presentation of imageries within this part of the novel. As in Table 14 below, a total of 146 ties which signifies a percent of 7.43% from TCTC. We notice here that lexical cohesion ranks as the highest category as being of 47.95% followed by 51 reference ties sharing about 34.93% from the total. In addition, there are 17 conjunction ties with 11.64% as the third on the scale followed by 4 nearly; 2.74% ellipsis and the least number of just 2 ties; almost 1.37% substitutions from the total.

Table (14): Cohesive Ties Categories Related to Imageries in Part One

Imageries	Ref.		Subst.		Ellip.		Conj.		Lex. Coh.		G. Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Fire & Life	23	45	0	0	2	50	12	70.58	45	64.28	82
The Pegasus Arms	17	33.33	0	0	0	0	3	17.64	9	12.85	29
The Nine Oils	7	13.72	0	0	2	50	2	11.76	2	2.85	15
Turtle Soup	1	1.96	2	100	0	0	0	0	10	14.28	13
The Deadly Clock	3	5.88	0	0	0	0	0	0	4	5.71	7
Total Grand	51	34.93	2	1.37	4	2.74	17	11.64	70	47.95	146

Consequently, these portions of ties vary from one imagery to another and are distributed in discourse parts where these imageries are established. Also, ties amounts used to specify and intensify the importance of each imagery. *Fire & Life* imagery has gained the biggest quantity as having 82 ties, nearly 56.16% followed by 29 ties; nearly 19.86% related to Pegasus Arms imagery. As well, other imageries have accounted as: 15 ties; almost 10.27% for *The Nine Oils* imagery as the third, 13 ties of 8.90% for *Turtle Soup* imagery as the fourth, and the least number of only 7 ties; almost about 4.79% for *The Deadly Clock* imagery. Figure 5 below exhibits how these are distributed within this part discourse.

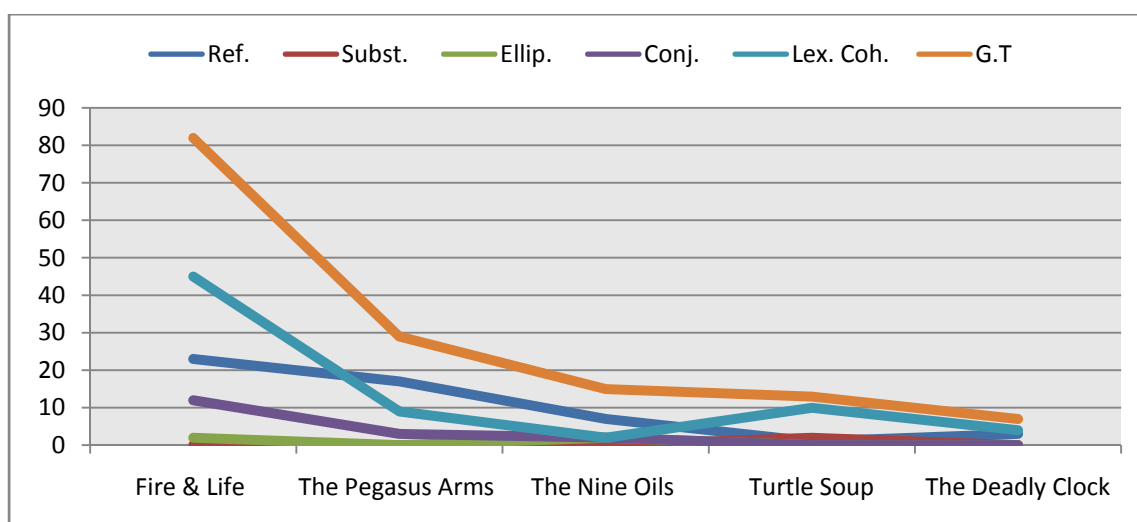


Figure (5): Distribution of Cohesive Ties Categories related to Imageries in Part One

1.4 Conclusions

The novelist uses all the available options of cohesive devices categories in this part of the novel. This usage is not a haphazard one, but the various cohesive devices operate differently according to their occurrences in the text. an intended correspondence between the categories and density of the cohesive ties on one hand and the textual thematic aspects on the other. So far, this correlation is revealed by the following factors:

- 1- The quantity of cohesive ties increases when the novelist makes an internal emphasis on certain character, theme, or imagery. Consequently, it leads to a greater percentage of occurrences.
- 2- When one of these referred to elements is a minor but of importance to the novel as whole, not only the quantity of cohesive ties is reduced, but it would spread over broader span of the text.

In terms of characters, it is concluded that though Louisa Gradgrind is the protagonist of the novel, she is not the most dominated character in Part One. This indicates that she is not the most important character in this part and has weak role at the beginning of the novel. In contrast, Stephen Blackpool is the most referred to character in this part and he has significant effect on the novel events and its themes as it unfolds. The other important characters in this part are Mr. Josiah Bounderby, Sissy Jupe, and Mr. Thomas Gradgrind.

In terms of themes and imageries, it is concluded that themes related to the Utilitarian philosophy of education and Industrialism like *Facts vs. Fancy*, *Knowledge vs. Surveillances* and *Human Mechanization* are the most dominated themes in Hard Times Part One. Regarding imageries, *Fire and Life* imagery related to Louisa is the most dominated imagery followed by *the Pegasus Arms* and *Nine Oils*.

Beside these, the study has found that Halldiy and Hasan' model of cohesion as a successful means for examining the textures and structures of novels via which it would be possible to tackle discourse parts in terms of characters, themes, and imageries.

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