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1

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7

1.I

7

2.I

12

3.I

14

4.I

16

1.4.I

16

2.4.I

17

5.I

19

1.5.I

19

2.5.I

19

3.5.I

22

6.I

: _____

24


1.II

24

2.II


27

3.II

33	.....	4.II
38	.....	1.4.II
		
39	.....	1.1.4.II
39	.....	2.1.4.II
40	.....	3.1.4.II
42	.....	2.4.II
44	.....	3.4.II
45	.....	4.4.II
48	.....	5.II

: _____

50	.....	1.III
51	.....	2.III
51	.....	1.2.III
55	.....	2.2.III
56	.....	3.2.III
59	..... :	3.III
		4.III
60	.....
66	.....	1.4.III
71	.....	2.4.III
73	.....	3.4.III
75	.....	4.4.III
76	.....	5.4.III
		6.4.III

77	
78	7.4.III
	
78	8.4.III
79	1.8.4.III
80	2.8.4.III
84 ..	9.4.III
84	1.9. 4.III
85	2.9.4.III
86	3.9.4.III
88	4.9.4.III
91	5.9.4.III
93	10.III

: _____

95	1.IV
95 :	2.IV
97	1.2.IV
	2.2.IV
97	
106	3.IV
109 :	4.IV
110	1.4.IV
111	2.4.IV
112 ..	3.4.IV

113 5.IV

115



117

124

137

145

38 : (1) الشكل

40 : (2) الشكل

: (3) الشكل

41

: (4) الشكل

42

81 : (5) الشكل

: (6) الشكل

83

31 ... : (1)

77 : (2)

99 : (3)

100 : **(4)**

101 : **(5)**



103 : **(6)**

104 : **(7)**

105 : **(8)**



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Artificial intelligence

1

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.(Informative translation)

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(2.4.I) (3.I) (2.I)
(1.4.I) (4.I)
(5.I)
(2.II)
(3.II) (4.II)

(1.4.II)

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NOAM CHOMSKY

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(2.4.II)

3

4.4.II 3.4.II

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(2.2.III)

(2.III)

(1.2 III)

.(3.2.III)

(3. III)

(4. III)

) (1.4. III)
(4.4.III) (3.4.III) (2.4.III
(5.4.III)
. (6.4.III)

(7.4.III)
(8.4.III)
) (1.8.4.III)
(9.4.III) (2.8.4.III
(1.9.4.III)
(3.9.4.III) (2.9.4.III)

) -

4

 (4.9.4.III)
(5.9.4.III

(2.IV)
) (1 .2.IV)
. (3 .IV) (2 .2.IV

4 . IV

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(.1.4.IV)

(2.4.IV)

(3.4.IV)

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6

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1.I

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(2.I)

(1.4.I)

(4.I)

(3.I

.(5.I)

(2.4.I)

2.I

7

8

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) ALAN TURING

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9

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10

.(1996)

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Logical Reasoning

(Perception) :

11

3.1

1940

1943

: (9 1997)

lisp

1958

lisp

1958

Taker Advica

12

...

Deductive)

.(Procedures

) Machine Evolution

(Genetic Algorithms

Machine Code Program

13

1984 1982

1988

1991 1989

1985

1986

4.1

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Free Web site hosting - Freeservers.com

Knowledge Engineering

2.4.I

[http://www.lri\(annaba.net/syst-](http://www.lri(annaba.net/syst-)

) Dendral

expert/s_expert_intro.htm -

1976

5.1

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1.5.I

:

IPL(Information Processing Language)

(ROSIE Language)

(RITA Language)

1958

(PROLOG)

(Stanford Artificial Intelligence Laboratory) SALIL TALK

2.5.I

3.5.I

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"

.Computational Linguistics "

6.1

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1.II

(4.II)
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(2.II)
(3.II)
(1.4.II)

.(2.4.II

4.4.II 3.4.II

2.II

" "

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.1

.2

.3

.4

(frequency)

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" " " "

(domain)

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.1

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.5

.6

.7

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-

:

- Morphology ●
- Syntax ●
- Semantics ●
- Pragmatics ●

(... (World Knowledge) (Domain) " ")

()

3.II

1987 Raskin)

: (55

“Linguistics should be able to contribute to MT in two ways. First within its general contribution to NLP... since MT is primarily, NLP albeit with its own specific problems not necessarily shared by other areas of NLP. Secondly, MT should profit from an application of linguistics to a general theory of translation, no matter whether human or automatic.”

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) (

(21 1999

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.1

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.4

.5

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.1	.1) (
: .2	: .2
.3	.3
.4	.4

" (1999) " (1)

.13

	:	
()	.	.1
()	.	.2
	.	.3
	.	.4
	.	.5
	.	.6
()	.	.7
	.	.8

" " " "

Machine Translation

:

" " " "

.IBM

" (Computer Science) " "(Linguistics) "

" "

:

“Making machines do things that would require intelligence if done by men”
(M.L .Minsky, 1968,p 28)

()

.()

1946

.1949

()

(-)

1964

Chomsky

1970 1960

:

- .(Augmented Transition Network) •
- .(Case of Grammar) •
- .(Conceptual Dependency Theory) •
- .(Semantic Procedures) •
- .(Semantic Network) •

(LUNAR)

"

"

.(SHRDLU)

1980 1970

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-
-

. (1996)

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(1)

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(2)

(3)

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(4)

(5)

()

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(1)

(2)

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()
()
()

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.1
.2
.3
.3

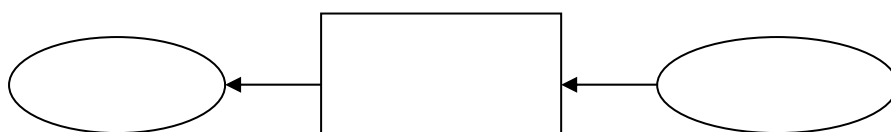
:

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()
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·

1
2
3

1.4.II

:



"

" (1999)
.15

.(1)

(19 1999)

:

1.1.4.II

:(Machine Aided Translation M A T)

:

(Human Assisted Machine Translation- HAMT) _____ -

.

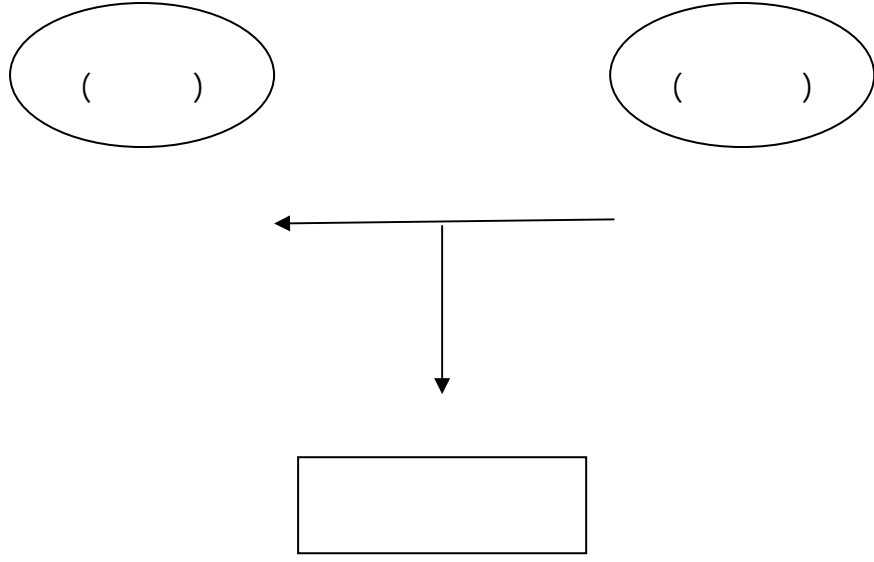
(Machine- Assisted Human Translation) _____ -

.

:

2.1.4.II

:



"

" (1999)
.16

.(2)

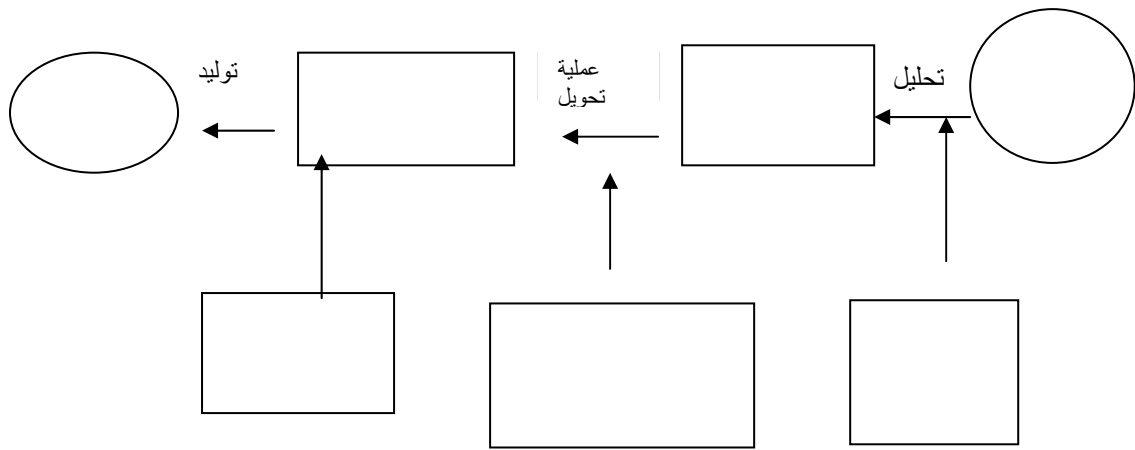
3.1.4.II

:

Transfer

-

()



"

" (1999)

.(3)

.17

Interlingual

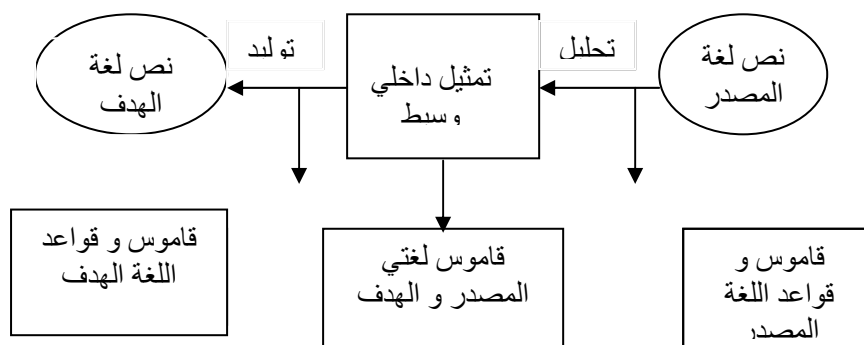
-

()

:

(Interlingual représentation)

:



"

" (1999)

.(4)

.17

2.4.II

(Pre and Post Editing)

.%100

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.()

_____ :

"

"

"

"

3.4.II

"

"

Toward a Science of Translation "

"

1964

: (Impossible)

"

FAHQMT (Fully Automated Human Quality Machine Translation)

: Raymond Kurzweil

The Kurzweil Scanning Method For Character Recognition by Software

The Age of Spiritual : 1998
(accuracy) Machines
(optical scanners)
digital units

: Steve Vlasta Vitek

Bible "

! "The New Testament "

) ESIT

(http://compteur.francite.com/i3dpro/go.exe/go.ouils_informatiques_d'aide_à_la_traduction)

4.4.II

...

(domains)

. " "

(repetitive texts)

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1998/9/ 30 ()

:

Machine Aided Human Translation "

“ ” .

:

Output Quality	.1
Cost	.2
Time	.3
System improvability	.4

5.II

Machine Aided Translation

:

“In the long run. MT and human translation will probably not be viewed in competition with each other: humans will tend to concentrate on the more "creative" translation tasks while machines will concentrate on the more routine, high- volume tasks . (Allen Tucker, 1987-p17)”

)

" "

:(

:

[]

(19 1999

...

.....

1.III

(2.III)

:

(2.2.III)

(1.2 III)

.(3.2.III)

(3. III)

(4. III)

(1.4. III)

(3.4.III)

(2.4.III)

(5.4.III)

(4.4.III)

. (6.4.III)

(7.4.III)

(8.4.III)

(1.8.4.III)

)

(2.8.4.III)

(1.9.4.III)

(9.4.III

(3.9.4.III)
) -

(2.9.4.III)
(4.9.4.III)

.(5.9.4.III

2.III

3.III

:

1.2.III

.2002/9/19-16

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(()
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: **2.2.III**

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)

(10 1999

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R. Dozy

(3775)

()

50,87%

(7421)

(-)

:

3.III

.

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1

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2

3

4.III

()

Line Printers

Belts

)

. () (

ASCII Code

(1996)

()

Dot Matrix Printers

. (1996)

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.
(

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1981

: _____

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1.4.III

7

300

Infoarab

:

.COLTEC

"

"

1993

"

"

1990

Application Program Interface API

Caere

Corporation

1992

6.0

2000

21

1980

Word identification

Markov Models HMM Hidden

Neural Networks

Associative Memory

SAKHR

Multi-Mode Morphological

Multi-mode Syntactic Processor

Processor

" :
"
.

" "

Automatic Diacritizer

" "

%80

12600

40000

160

Semantic Constraints

.%98

%97

Morpheme Unification

Natural Language

API

Processing Services

OS400

Win32

2.4.III

H&L

.Arabic Textware

Multi-mode Morphological Processor

Stem

" "

" "

" "

" "

HTML

Word

1993
1996
1998
1999
1995
1999
identification
3.4.III

ABM

1986

ABM Arabic

1998

ViaVoice Gold

‘ "sm"

"same" "sum" "some"

4.4.III

.1998

5.4.III

Coltec ATA L & H

.ArabicTextware

On-

line Translation

TranSphere

1990
1996

L & H Appteck

ATA

Coltec

"

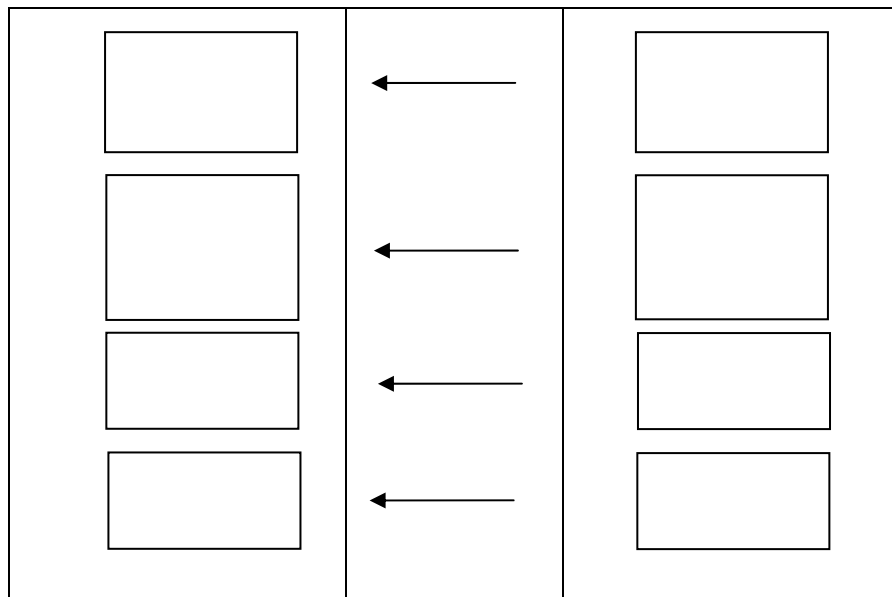
"

ArabicTextware

6.4.III

:
Graphology

()



"

"

(1999)

:(2)

.20

7.4.III

(3)	(2)	(1)	
8)			
:		(35 16	
			.1
	.		.2
	-		.3
		.	
:			
		.	.1
		.	.2
	.		.3
		.	.4

8.4.III

. -

(1)

1-Two intelligent physicians, who were present in The hospital saved my son's / life

(one- to - one) .1

.2

.3

.4

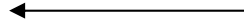
	.	.5
	.	.6
	.(topic- focus)	
.(illocution)		.7
	.(pragmatic)	.8

- **2.8.4.III**

	.	
:		
	.	(1)
		(2)
	.	
:		
:		

البنية السطحية

البنية السطحية



"

" (1999)

.(5)

.21

.

:

.

:

This book is difficult [to read].

//

:

.1

.2

" " " " .3

" " "to read" .4

) .5

.(

:

. . .

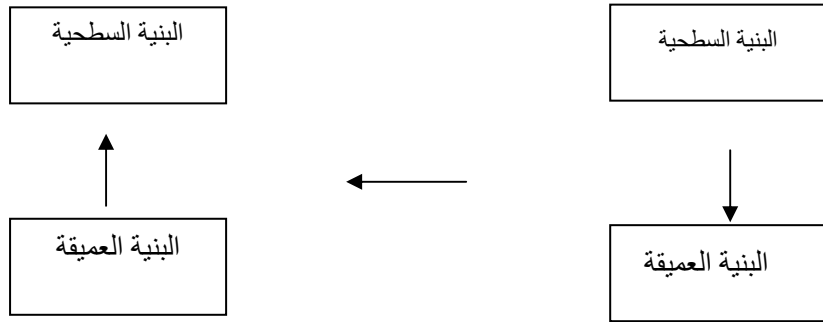
:

.1

.2

.3

:



" (1999) . : (6)

.22

)

:
:

sold the car

⇒

the car was sold

()

()

:

←.

()

()

9.4.III

-

:

1.9.4.III

:

.1

:

-

" "

Water

-

" "

Watch

-

" "

"Barefoot "

-

(one- to- many)

" " "Water"

" " " " "generation"

" // "

"generation"

"Water"

—

.

.

" "

"computer"

" " " " " " "

Word- formation

2.9.4.III

(derivation) (1)

(4) (compounding) (3) (superfixing) (2)

(6) (clipping) (5) (conversion)

(8) (acronymy and abbreviation) (7) (blending)

(semantic extension)

:

. (4) (3) (2) (1)

Possible → work → work //er : (affixes)

Im // possible

- - ← - (discontinuous morpheme)
 - - - :
 . // //

3.9.4.III

) (synthetic)
 : (:
 : (analytic) .

The man's house : (inflected genitive)

(sing.)
 ."Sang"

:

.1

"protection"

"protect//ion"

." "

) .2

.(

.3

(collocation)

(feature specification)

(+)

.(1,2,3...)

reception

"warm"

:_____)

"warm"

" "

: .()

blind → [+ Adj]

→ [+ Adj - Fem]

→ [+ Adj - Fem]

→ [+ Adj - Pl]

→ [+ Adj = Euphemistic]

:

"blind"

:_____

: "blind"

4.9.4.III

(bottom- up)

(top- down)



(!)

()

(.)

(categorical rules)

:

(generative)

(phrase structure rules)

(transformational rules)

: _____ .1

(

)

)

:

: _____ -2

:

it is impossible [to live without air]
subject

.

[to live without air] is impossible
Subject

"it"

"to live without"

:

.

:

:

.1

.2

5.9.4.III

(Small letters)

:

) (capital letters)

(bold face)

(italics)

:

.(

(

)

()

:

.()

.

:

-

"Write, believe"

"e"

:

"believing" "writing" : // "ing"

[x v ce] // ing → x cing
verb

.(

c

v

x)

ing

"see"

"be"

: //

"die"

"seeing, being"

[x ie] // ing → x ying
verb

:

-

[]

← // // ← // // ← //
: . //

[] //

.

:

← // // ← // // ← //
. // //

:

// -

[]

-

-

	:	-	
	:		
	:		.1
	.		
()	(Top- Down)		.2
)		
(bottom- up)	(
	.		
	:		.3
	
	.		.4

10.III

.....

1.IV

(2.IV)

(1 .2.IV)
. (3 .IV)

(2 .2.IV)

4 . IV

:
(.1.4.IV)

(2.4.IV)
(3.4.IV)

.

2.IV

- English/ French/ Arabic Power Translator Pro 40 Languages

2 English/ Arabic Text Translator **AL WAFI** -

ATA Software.

ATA

1.2.IV

:

()

2.2.IV

" "

)

:

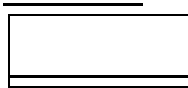
([http : //www/ exampleessays.com/categories/a.html](http://www/exampleessays.com/categories/a.html))

An Environmental History of the Twentieth-century world

Most of the time, we can hear bad or alarming news concerning the environment. The ozone hole is growing, global warming is worse than before; more and more species are threatened with extinction. However, sometimes, some people try to show us that 'environmental changes usually are good for some people and bad for others and that there might be a way out.

Indeed, we are not used to study the history of the twentieth century through its environmental aspect we most often tell the history of the twentieth century through its wars, its economic and political changes, and trying to explain this history with such a different point of view, could be a very challenging and interesting task.

" "





102 :			
8,82	102 من 9	26,47	102 من 27

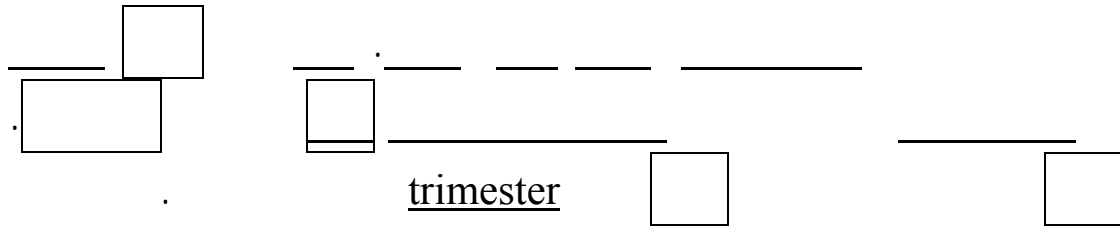
:(3)

ABORTION

Abortions are very common in China; a woman having her second or even third child is strongly encouraged to receive an abortion. Abortions in China, however, are often shocking and disturbing.

Unauthorized pregnancies are aborted during any stage of the pregnancy even when the fetus may be viable able to survive outside of the mother. There are an estimated half a million abortions within the third trimester per year in China.

" "



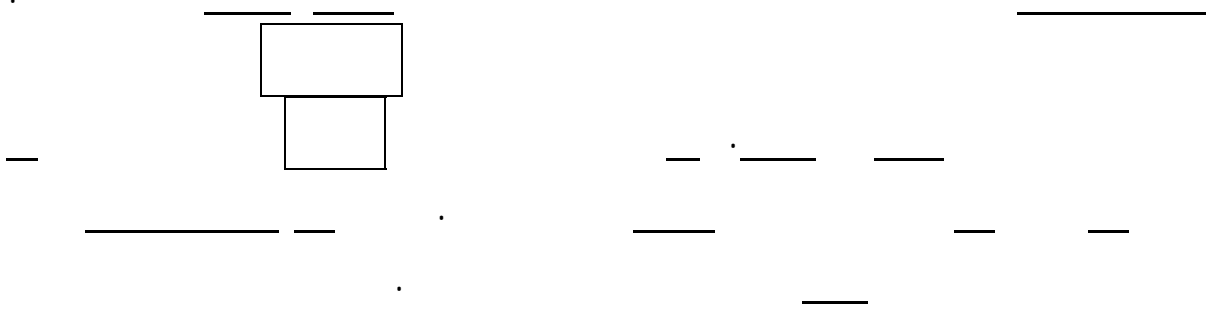
58 :			
13,79	58 من 8	32,75	58 من 19

:(4)

A career as a Psychiatrist

A psychiatrist is basically a Doctor of Medicine with a license to prescribe medications to his patients. He specializes in evaluating, diagnosing, and treating children and adolescents with psychiatric disorders which cause problems with feeling, thinking, and behaviour. They are specially trained and qualified to treat children adolescents, and adults as individuals, couples, families, and groups. They offer these patients the advantages of a medical education and information, as well as professional medical and emotional care.

” ”



68 :			
4,41	3 من 68	22,05	15 من 68

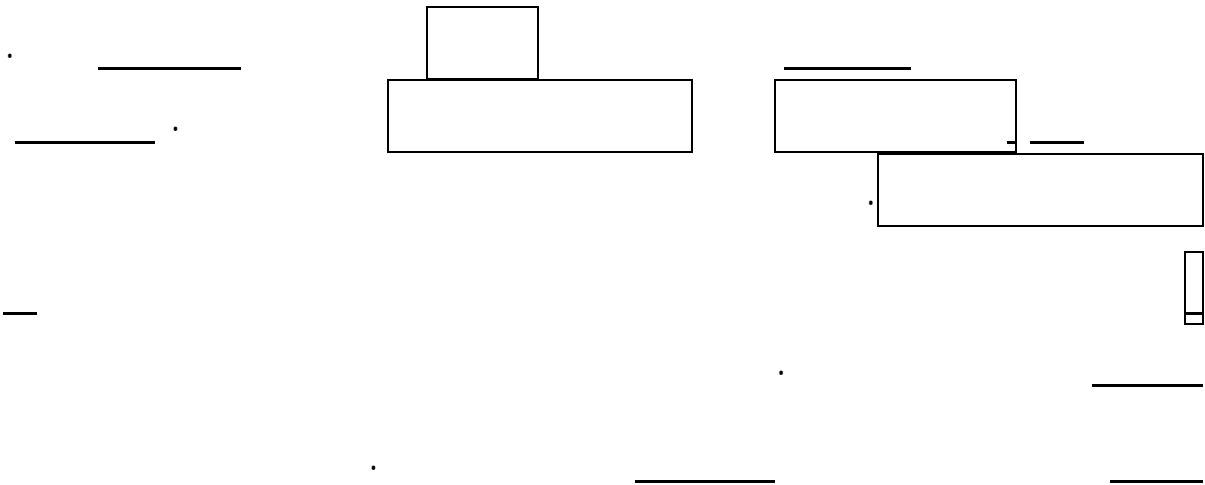
:(5)

A COMPUTERIZED WORLD

Since the first computer was made in the late fifties, technology has developed extremely. Computers which took the place of a room are now being made in credit card- formats. More and more areas are being taken over by the computer.

As computers are capable of handling large amounts of data in a very short time, they are well suited for word processing. A Compact Disc can contain much more data than a written page.

" "



61 :			
16,67	61 من 12	26,22	61 من 16

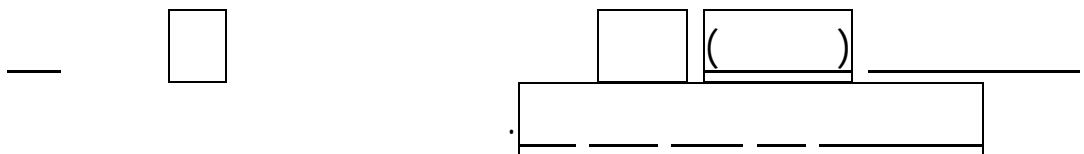
:(6)

Artificial Intelligence

Artificial Intelligence (AI) is the area of computer science focusing on creating machines that can engage on behaviors that humans consider intelligent.

The ability to create intelligent machines has intrigued humans since ancient times and today with the advent of the computer and 50 years of research into AI programming techniques, the dream of smart machines is becoming a reality.

" "



50

—

--	--

52 :			
26,92	52 من 14	28,84	52 من 15

:(7)

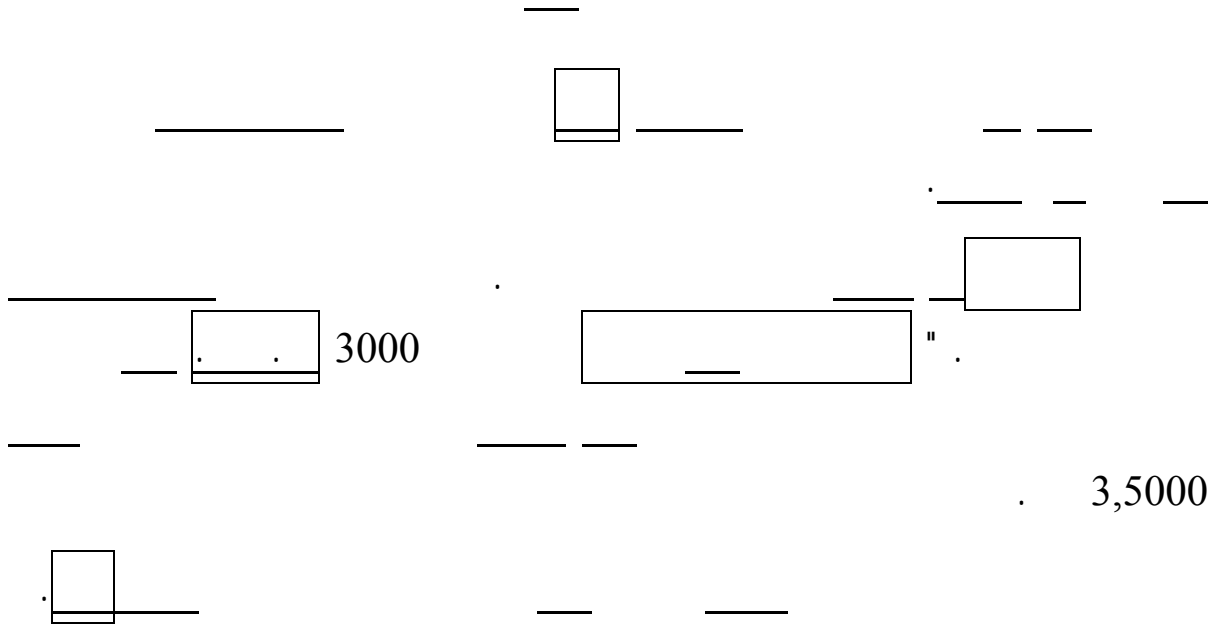
Acupuncture

Acupuncture is a method of treatment in which fine needles are inserted at specific points in the body to relieve pain and illness.

It can be used either alone or with current medical care. The use of acupuncture dates back many years ago. “Stone acupuncture needles dating back to 3000 B.C. have been found by archaeologists in Inner Mongolia, and acupuncture has been widely practiced in China for around 3,5000 years.

In the seventeenth century, doctors brought acupuncture to Europe, where it slowly began to progress.

” ”



85 :			
11,76	10 من 85	31,76	27 من 85

:(8)

3.IV

%80

. 3000

. 3.5000

4.IV

(*)

1.4.IV

: _____ **1**

Once bitten twice shy

[]

: _____

: _____

*Si on me trompe une fois, honte à eux
Si on me trompe deux fois, honte à moi*

3.4.IV

)

(...

Flag

:

...

...

5.IV

2.2.IV

(5 32)

% 32,75

% 19,23

% 1 5

%90

"

"

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قائمة المراجع باللغة العربية

- 1 (1998) _____
- 2 (1999) _____
- 3 (1975) _____
- 4 (1999) _____
- 5 (1995) _____
- 6 (1976) _____
- 7 (1998) _____
- 8 (1981) _____
- 9 (2000) _____
- 10 (1999) _____
- 11 (1996) " " _____
- 12 (1983) _____
- 13 (1982) _____

·	:	·	_____ (1998)	·	14		
_____	"	"	(1999)	·	15		
_____	"	"	(1999) ()		16		
"	"	"	(1997)		17		
	·	·	()	:	·		

		"	(1975)		1		
		·	·	:	·		
:	·	"	-	"	(1985)	2	
					·		
		"	(1992)		3		
		·	·	:	·		
"	(1982)				4		
		·	·	:	"		
		"	(1992)		5		
		·	·	:	·		
		"	(1996)		6		
		·	·	:	2		
·	·	·	(1984)	"	-	"	7
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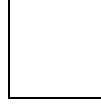
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الملحق (1) مسرد مصطلحاتي عربي - انجليزي



Automation, automatization

Library automation

Mono, uni, single

Monolingual

Enter

Enter a text into a computer

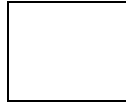
Parsing

Acquisition

Langage acquisition

Internet

Intranet



Pascal

Evidences

Program

Language program

Computarized programs

Mail

Electronic mail

Construction

Sentence construction

Data



Analysis

Sound analysis

Abstractor

Transfer

Storage

Storage capacity

Chek

Mathematical chek

Translation

Machine translation

Human translation

Diagnostic

Cipher, coding

Cryptography

Cipher key

Conception

Programme conception

Development

Expression

Idiomatic expressions

Recognition

Character recognition

Speech recognition

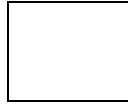
Cost

Representation

Edition, Editing

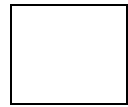
Post- Edition

Pre- Edition



Bi

Bilingual



Radical

Word radical

Stem

Word stem

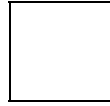
Sentence, phrase



Computer

Fifth generation computers

Ellipsis



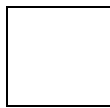
Memory

Machine memory

Intelligence

Artificial intelligence

Artificial intelligence applications



Symbol



Context



Screen

Computer screen

Network

Neural networks

Form

Geometrical forms

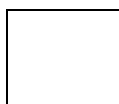


Morphology

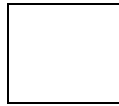
Page

Web page

Phonetics



Printing



Nerve

Artificial nerves

Science

Probabilities

Cognitive science

Computer science

Semantics

Psychology



Verb

Philosophy

Index

Alphabetical index

Fortran



Rule

Data base

Deductive rules

Dictionary

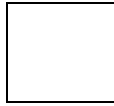
Electronic dictionary

Reading

Text reading

Pen

Light pen



Linguistics

Computational linguistics

Language

Artificial language

Semitic language

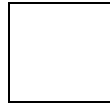
Natural language

Source language

Target language

Prefixes

Suffixes



Multi-

Multilingual

Domain

Motor, driver

Research driver

User, utilizer

Processing

Data processing

Natural language processing

Lexicon

Lexicology

Pragmatics

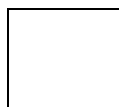
Automatization, automation

Libraries' automatization

Synthetiser

Automatic synthetiser

System



Grammar

Text

System

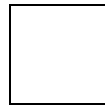
Phonetic system

Expert systems

Machine translation systems

Theory

Pattern



Structure

Language structure



Unit

A

Abbreviation

Acronyms (s)

Algorithms

- Genetic Algorithms

Analytic

- Analytic language

B

Belt

Blending

Bottom- up

C

Case

- Case of grammar

Clipping

Computer

Compounding

Concept

- Conceptual
- Conceptual dependency theory

Constraints

- Semantic constraints

Conversion

D

Derivation

Diacritizer

- Automatic diacritizer

E

Euphemistic

Extension

- Semantic extension

F

Feasible

Formation

تكوين، تشكيل

- Word formation

تكوين مفردة

Frequency

G

Graphology

I

Illocution

Improvability

- System improvability

Industry

- Information industry
- Knowledge industry

Italics

L

Letters

- Capital letters
- Small letters

Linguistics

M

Manuals

Memory

- Associative memory

Morphology

N

Network

- Augmented transition networks theory
- Neural networks
- Semantic networks

P

Perception

Pragmatics

Printer

- Dot Matrix printers
- Line printers

Procedure

- Interlingual procedure
- Deductive procedures
- Semantic procedures

Processor

- Multi- Mode Morphological Processor
- Multi- Mode Syntactic Processor

Proving

- Theorem proving

R

Reasoning

- Logical reasoning

Representation

- Interlingual representation

Rule

- Categorical rules
- Generative rules
- Phrase structure rules
- Transformational rules

S

Scanner

- Optical scanners
- Word scanning method

Science

- Cognitive science
- Computer science

Semantics

Strategy

- Direct strategy
- Indirect strategy

Syntax

T

Text

- Repetitive texts

Top- down

Transfer

Translation

- Informative translation
- Machine translation
- Machine- Assisted Translation
- Machine- Assisted Human Translation
- Human- Assisted Machine Translation

U

Unit

- Semantic unit

Famous names in the development of the computer

AIKEN HOWARD, HATHAWAY

(1973 -1900)

ATANASOFF, JOHN V

1942

(- 1903)

BABBAGE, CHARLES

(1871 -1796)

20

BALDWIN, FRANK, STEPHEN

1875

BOLLEE, LEON

1886

BOOLE, GEORGE

(1864 -1815)

1851

1847

«

»

BURROUGHS, WILLIAM, STEWARD

(1898- 1857)

BUSH, VANNEVAR

(1974 - 1890)

« »

ECKERT, PRESPER

1946

FELT, DORR

1885 (1930 – 1862)

FORESTER, JAY WRIGHT

هربرت، أ، سيايمزن

HERBERT, A. SIMON

1972

http://www.banlieues-media.com/template4.asp?con_id=24&menu_id1=4&menu_id2=21()

HOLLEIRTH, HERMAN

(1929 -1860)

IBM

HOPPER, GRACE

1

(- 1906)

JACQUARD, JOSEPH, MARIE

1672

(1716 -1646)

LAVELACE, ADA AUGUSTA

(1852 -1815)

MAHON, CHARLES

1777

(1816 -1753)

MAUCHLY, JOHN

(1980 -1907)

.

MONROE, JAY R

1911

.

MOLUND, SAMUEL

1666

(1695 -1625)

.

:

NAPIER, JOHN

(1617 -1550)

.

Abacus

OUGHTRED, WILLIAM

.1630

(1660 -1575)

PASCAL, BLAISE

(1662 - 1623)

.1643

SHEUTZ, GEORGE

1834

(1873 – 1785)

.

SHICKHARDT, WILLIAM

.1624

(1635-1593)

SHANNON, CLAUDE

.

STIBITS, GEORGE

1946

.

THOMAS, CHARLES, XAVIER

1820

TURING, ALAN

(1954 -1912)

VON, NEWMAN, JOHN

(1957 -1903)

WATSON, THOMAS

1952

IBM

(1956 -1874)

WIENER, NORBERT

Cybernetics

(1964-1894)

WILKES, MAURICE, VINCENT

Cambridge

(- 1913)

.1949

EDSAC

ZUSE, KONRAD

3

1941

.

(-1915)

1

: _____

.1996

