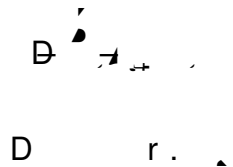


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Practices of Collaboration in Writing and Their Support

Eevi Elisabeth Beck

University of Sussex



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ACKNOWLEDGMENTS

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r. Z. p. op. w. o. ro. U. x. Z. p. o. r. own. w. or. Z. U. n. xp. n. r. n. n. , pro. Z. Z. r. Z. on. Z. r. U. Z. p. on. Z. w. Z. w. Z. r. n. w. Z. wor. n. en. n. U. A. U. B. Z. ow. B. Z. n. Z. Z. Y. onn. o. r. Z. Z. An.

Zn Zn on o^u r w r C Zn oo Zn o C Zn pon Zn or Zn Zn Zn Zn Zn
Zn^u Zn or or or n ew w o Zn Zn Broo o p n Zn x n Zn o r p
n Ur Ur n Zn r 7 o^u pr n Ar Zn Zn Ey rr Zn r r n or
Zn Zn o D Zn Zn Co Zn p o m Zn Zn p n -

Zn Zn wo Up r or n r Zn Zn n r o r p o o D p Zn n o
Co p^u r n o Zn Zn Zn n n Zn oo o Co n Zn Co p^u n
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o w^u n Zn oo Zn op w Zn r Zn n r n Zn o or
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Ur Zn Zn Zn or p^u Zn on pr n Zn on Zn no Zn or n
p Zn Zn p Zn n w n p r on Zn^u Zn o w n

F n Zn Zn wor w Zn Up por Zn e or Zn r Zn ro n or w Zn
Zn Co^u n or n Zn n^u r Zn Zn Zn o Zn ro or w Zn Zn
E^u Zn on Zn o Zn F^u Zn r Zn Zn Zn n Aw Zn or p Zn Zn Zn
X roy C Zn r E^u ro A C Zn n n m p pro r Zn

F n Zn n ow Zn r o Zn n w o n^u n on wor ow r
nn^u r Zn^u on Zn n Zn Zn Zn p Zn r r Zn w Zn no
n on Zn no r Zn Zn on Zn o^u o n^u n Zn n pr Zn on o
o^u Zn o^u

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--- a o n a on n C C	
--- pro r o r u r n n n r n or C C	
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--- o m a o r a wr n	
--- n w a n a n o o pro Uppor	
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--- a on o m a o r a wr n	
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-- roUp o o z z n o u n r u o z or n	
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Chapter 3. Method.....50

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-- z on o no o o z roUp or or	
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-- o z or o u	
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-- u z o z r	

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-- nro u on	7
-- on z no z on o z oo	
-- D n z p z p z	
-- roUp wor	7
-- An z z n n	7
-- D u on	7
-- or o wr n n ou z or z on u ur n r w	7
-- D n z p z p z	7
-- D z a ou on z z z	7
-- F n n z u on	7
-- D u on	77
-- oo n or u ur n non z o u z p o ou z or z	
-- wr n z n z r z wor	77
-- u z o z r	

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-- nro u on	
-- o z ur n	
-- F n n	
-- Do u n	
-- r z z on o wor	7
-- p no non o roUp	
-- r n z on	
-- D u on o r u	
-- roUp u on	
-- r z z on o wor	
-- n r z z z on	
-- z u	
-- z on o r u	
-- p z on	
-- p z on or n	
-- urn n qu on roUp p z on or propo	
-- r z wor	
-- u z o z r	

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-- FU r wor
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CHAPTER 1. INTRODUCTION TO THESIS

1.1. Collaborative writing in academia and its computer support

... r... op n... o o U... n... on... no... n... r... r... or or
Zn p op... o o U... n... z... ro... z... - n... z... z... o... n... n... z... or
n... z... p... wor... w... ou... z... U... w... o... z... w... r... z... - p... ou... z... or... z... on... e... U... n... w...
-... U... n... r... z... n... /... /... z... o... z... or... o... z... e... U... n... z... r... U... - o... r... z... w...
z... z... z... - U... /... o... U... n... on... no... n... r... o... U... n... on... z... - z... z... n... o...
wr... n... z... - Co p... U... r... on... n... e... r... n... z... on... z... z... - n... r... n... z... on... z... n... wor... o... U... - p... o... n... z...
p... U... wor... n... z... - n... -... U... U... p... U... n... - r... z... - w... z... n... - o... o... p... U... r... z... -
o... w... z... o... /... p... U... p... ou... z... or... z... wr... n... -

o... U... o... z... n... U... ow... r... U... n... /... z... U... ow... w... /... Zn... o... U... p... por...
wor... z... ou... z... or... z... n... z... U... or... z... U... z... -... z... /... pro... /... pr... n... n...
U... o... ou... z... or... z... wr... n... z... on... z... z... w... o... U... on... pro... o... wr... n... o... r...
o... r... z... n... -... z... U... o... ou... z... or... z... on... z... on... z... U... or... z... p... z... o... r... or... n... z... wor...
z... n... p... on... or... n... q... U... r... ow... pro... xp... r... n... -... o... z... U... or...
/... ro... z... - n... n... o... U... o... wor... p... r... or... n... or... z... n... z... - o... or... n... z... n... r... wr... n...
w... n... z... n... p... z... z... p... z... -

n... r... n... U... n... - r... z... - n... ou... z... or... z... wr... n... o... ro... Zn... p... r... p... - A... on... y... r...
wr... r... /... Br... U... -... z... U... z... wr... n... z... - r... z... n... z... n... r... n... /... ou... z... or... z... z... n...
w... n... p... r... or... -... z... n... -... U... z... on... r... ow... n... An... o... r... y... r... - n... on... n... -... o... z...
on... /... z... n... w... p... op... o... r... z... /... z... U... z... n... o... U... /... z... n... z... n... p... o... z...
-... o... U... n... n... y... z... p... /... r... E... -... U... n... z... -... /... on... -... z... p... ro... o... p...

u pr n o z r z on o z or z wr n z z n n
o o w z ow z n r o n z on-

n r o z r z pr n y on w z o z or z wr n

n / p q z z pr z u z ro u on r z n z n ro u
u z n on r u o

An z o u o ow z n r z n o r z wor z
u z n z o u n on u u z z z u z z on r u on o
r z

1.2.1. Approach

po n Z z Z n U , ro Z n n n n prz on r o ow Z or Z wr n
Z o o o o n - r Z ow r Z z p o r Z o
Up r Z n w Z u

on \mathbb{Z} , w , n or \mathbb{Z} on w , \mathbb{Z} o \mathbb{Z} or or \mathbb{Z} \mathbb{Z} n , or \mathbb{Z} p \mathbb{Z} on w r

o o o z on r u on u z n op n p n q u r n p wor o wr n
o r o n z p o r u o z or z wr n z n r n z an o
C C u n on o z o n z on o z pro z r z u z o n n on
z p n z r z r n r n or u r z n o z or z wr n z r
u r z n z ow z r z z n o z n on z u p on u r n u y n
u n n o z n

An z on r u on ro u u r z n p on r z n pro o p w z o
or z n z on p u z n p r n x p r n n wor o o z or z wr n
w z p z on or ow n r o C C z pro z r z n p z u z
z o z p on r o p z z r z o n z u z n o z o
p z p z n u or y z p wr n z n u on o r z on on
z or o n z o r on u wor n z ow u r z n z
z on u on o wr n z -

n x wo on pr n on r u on o u n z o n or z

1.3.1. Methodological contribution

Co z or z wr n z o p x p no no n A w u ow r z n z

z p z on u z on r u on o op n o o n z z
z p or y z p o pr n z on o z r z ro u n z r z
Fu r or ro u z p z z r n pr z o o z or z on n wr n
pro y z p o w z n o z z z z r ro u r n o
r o r n u r z n ro o z n n z on n o o p u r
n no r u z p u u wor n n z z z
n r n z por z o r z z z z q u on on n u o z r
u z p o z u r o o p r p o o z u or
r z no ow r ro u n z pr n p o n o p op own xp r n
z z u no or y z p p no no z z on n z
o z on or p z n z n on o wr r xp r n o pro z
r z o ow p op o o u o p u r n r z n w z z n o
r z op n o z o z n q u on ro u z r o
u z z on

n-o u z pro p u r o r - u n r w z
ur pro z n u r o p n r o p r z o z u or n z n n z o o
u p n u z z o r pro y z p o n p z on w z n r z w n
ro u u z -

o r z q u on z propo r o u o u w r z u n
r o z o z on r o p u ow r or
r n u o r z n n o or n z q u on u u n p o n n o
p o n z z z or r z o o u on F u r o r z z z o w o r z on p
z on n n z propo B n z r z on r o z n o u z z
n n n o on o p p u o r

z u z nro u z pon r z wor ro z r z p o
z u n z n z z o z r z z r z wor ow r pro
n z q u z n r o p n o u r z w z wor o z or e n z z n r
z z o o r n z n r wor r u z q u on

CHAPTER 2. BACKGROUND

2.1. Introduction

work in the area of non-profit organizations. The Co-operative movement is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid.

Co-operative organizations are based on the principle of self-help and mutual aid. They are organizations that are based on the principle of self-help and mutual aid. They are organizations that are based on the principle of self-help and mutual aid.

The Co-operative movement is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid.

Co-operative organizations are based on the principle of self-help and mutual aid. They are organizations that are based on the principle of self-help and mutual aid. They are organizations that are based on the principle of self-help and mutual aid.

The Co-operative movement is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid. It is a form of organization that is based on the principle of self-help and mutual aid.

... n... u... on p... or ... n... on o ... n... r...
a... a... or a... on p... n... o... u...
... n... on... op... n... on... w... or... ro... or...
... o... wor... w... or... An... or... n...
... or... or pro... on... o... o... or... q... n...
... u... n... o... or... or pro... n... r... o...
... or... w... or... or... or... or... or...
wr... n... o... r... n... or... wr... n... E... pro... o... wr... n... o... r...
... own a... w... w... n... a... or... or...
... n... on... p... u... u... or... r... u... on... n... u... on... n...
on... or... or... non... w... p... r... on... w... n... o... or... o...
... n... r... =

Com... or... n... wr... or... or... or... or... n... n... pro... o... wr... n...
... u... n... o... r... w... or... on... o... r... p... r... or... u... or... n... ro... n... n... wr... n...
or... or... or... u... r... u... n... or...

... r... wr... n... or... n... or... n... no... r... p... n... non... o...

2.1.3. Overview of chapter

The chapter is divided into two main parts. The first part, covering chapters 1 to 10, deals with the general theory of the subject. The second part, covering chapters 11 to 15, deals with the application of the theory to specific cases. The first part is divided into two sub-sections: the first sub-section covers chapters 1 to 5, and the second sub-section covers chapters 6 to 10. The second part is divided into three sub-sections: the first sub-section covers chapters 11 to 13, the second sub-section covers chapters 14 to 15, and the third sub-section covers chapters 16 to 18.

z qur n n n rn orr qur n z on nw r qur n or
z z or n z op n Fro z o pu r
op n pon o w r qur n n n rn o w z
u ur o w z un on z o pro o u r- Con pu z
nor z on on z n w z nown z qur n p z on por z
o o z on r u on o ro no o o q u z z o o o
o z p o o z u z z z z z z ur z
o n xpr n z o z o pro z z u n r z n o o
z p o ow p op wor z er ow z o pu r p u

n z op n A pon z u z o pu r
p z n z p n on p u z qur n p z on urn n o
z n z n n o z n p n z on p z p z z pro z z o
n o r pr n z o u ur u r n n o z z
p z -

n- A r z z n u z z n o u z w
z propr z u r ro up z no r z z n w u o p op z p z - n
C C z n u no o u o w r p n
n z e w z w z n n o z o pu r n n u r z r
z z o r z on ow p op u u no -

Con pu z z on o pro p z - z n u z w n
z or z n w z r n or u z r qur n z z w
z o n z q u on o w z n z r u z e z n o z
n z on on w z o n on o w no r z
z pro z o u z z o z on r z on r u on-

o z on r q u n n on pro z z n op n o C C
n z z o o u n z on w n o z z o pu r n z n r z wor
xpr z pro o z r n r u w n z z z oppo o
y u on o wor w n z z z pro n r o z z
z o - z or p z on or r qur n n n rn o z n z no u
ow z n z z n r z z u o o o r or z
z n n x r -

o z n p z o qur n En n rn or qur n An z w
r o n z z z on z z n p z or z n r o r z on r z n o z u
o p z on n r z o ow p z on o n qur n An z
u u z on r z pro -

Br. n. n. n. ZproZ. Z. Z. n. w. o. p. U. r. i. op. n. Z.

nro^u r.n on n.o p on or n^u zn rzn on o no z z n
r z z or^u z z pro r z n z^u - Au p z y u on w o^u u zn
n r n on wo^u z r z z o z o po n z o p up p z o
pro o r z zn^u ro pro w zopro z - An n r n
on z z z o z p on z z^u n z z z o^u p p op w o
n o n n pro z z n r z on u zn zn n p z^u z^u r z n
o -

n on w n r q^u r n z on zn n n C C n
z no r z z o o w z En n r n n C C z on o z o^u o^u z p
y ro^u w n o o o w o z ro^u p o^u n r zn o^u z o r z on zn
o p^u r n w o z xp p pro no o p r q^u r n
pro ow r pro z z r n n^u r n z n C C or y z p
u z z z z z ro - Fr r pro o w r o n z w n
z^u z^u u zn z on z z r z n o w z y n e o w z r o^u
wor z o^u n r zn n n o r r o^u n r z w z n e n o r z on or
now or^u n r zn n r n z n w z or Eq^u z o w z y n e
o p^u r n n o^u n r z o o o z n q^u r o z z p o n o^u z o
r q^u on o w r wor r z z z z w n o or z p o^u p p
n o n o r z on o^u n r n z o no on z n
z o^u n o r u o ow p op^u wor z u o o n z
r u n z o^u p p r z n n n n o n p op^u wor
w z n n z n u o r C C r z - A z ow r
r zn n r n on w n z n r o o on on z z p z n
w n n zn pr r n ro^u o p^u r z p o z o
u^u r u z on o r z wor w or n o r p z o^u n o z on
z w r n z^u r r^u or r z on w z n r o pro
pr r p o w r z n op n o n r no^u z o^u p o r z z
z^u o n e q^u on n n n C C or zn n p^u r n z p z o o p^u r
n^u n o or z q^u on o w r pro o C C z or z z
w r^u r n wor r z n n n^u o r o o n o^u on z wor n p z
r zn op n^u z wr n r n ro^u on o ro n o C C
on r n z

o zn o p^u r^u p p r z wor z op n z zn
q^u on z z z w r on r n n pro o o p^u r
n z n z^u r o wor z w z n o^u p p r^u z
p

2.3. Thesis central issue: how can we support practises of distributed collaborative writing?

o z on or ... o on r u o ... n o z p p r o z a o p u r ... o
U p p o r o m z o r z w r n o r z n r o u z n p r o u n r z n o z p r o -
w o r o p u r z z p z u z p o n z o o n o u r u r o u p
w o r o n z o n n o o z z z u z p o z z u p o n - A
p o w r u n o o u z n w o r o p u r o u r o r z p w o r -
o p u r p r o r p z n r o z o u o n p z u z x u z n o r z o n
o r z r z z n w o n z o o u o w u u o u p p o r u -
w o r n n z z n r u w r n n p z u z p u o z p p r o z a u - r z
z z o o p u r n r o n p o z n z p r o z a n
z o p r o z p p r o z a U p p o r o n n r n o w w z w o u o n u
z p p r o z a U p p o r z z o p x q u o n w z n o n n o w n o n
u o r z p p r o z z n p r o z a u z n w +

2.3.1. In what sense can technology provide 'support'?

n z p z r u n n o o n o o o p r z a n o z n z n D z n n w r z
w o r w u z n r p o n w z r z o z n r z o
o r z o n o r u r u r u n z w z r p o n o n r z n q u o n w
r z z n z n w r w n o z n z n D z n n p . 7
o w r o z n z n D z n n o n o q u o n w z z n w n w z z o u n o o
U p p o r n z z a z q u o n r z z n z z n w o u r o r z n o n
z z n U p p o r o p n o n r p r z o n z n e p n o n

o z w o n z n o n y o r A z n z n r D o n z o C u r r n E n
r o n n U p p o r u o z w o o r o p o r p n
p z a o r r n n a p o r o n n u o r r y o r E n D o n z
z z o n o r z o n o o n r u n o u o o r z n z n z u o
o n E D C C r z z o n r u o u o o r z n z n
z u o o m z o r z w o r w z u z n w z z u z n o m z o r z w o r
n z z C C o n r u o C C o r o p
o p u r w z w o o m z o r z o n r w n o n o r u p
o r p o m z o r z o n n p z a u u o u w o u z p z u n z n z o
p r o o C C z n o n u z z z o n r o i w n n
w z n z w u n o p u r z z o U p p o r o m z o r z o n n
n o r n n n z p o p r o - F u r r o r o n o z
n u n o z z z n z p z o o r z p z u r u w o r w o u n o

po w o^u z n n o o - n o z w z z n z o^u n z n
o n

Ż p o wor e Ż no Ż Żr Ż no on o w Ż e, or y Ż p w Ż
p n o on or o r n Ż w Ż n o Ż

n... on... r n... w... o on p... u... n... o... or... on... or... z...

Collaboration as purpose

or o an p r z p n or z z z o u o z or z on z z un on o z
z u on o z z on o z or z or- For y z p w n z n z z w
z wr n o n o r w z no r z o n z r p o z
o or z n p z on or z n p o o n on wor z
en o + z xp z z on o o z or z on z o w z

o ... pro ... w ... zpro ... z w ... o o ... roUp ... r n ...
z no ... nown ... oU ... z ... nU ... ro ... r ... z ... urn ... pro ... z ...
o on w o w ... no ... n ... z ... p ... o ... roUp ... z ... p r ... z ... no ... Up ... o ... on ...
n ... o ... z ... z ... r ... z ... r ... w r ... z w ... o ... orr ... p ... n ... z ... or ... z ... no ... r ...
p r on ... z ... p o ... z ... p ... n ... z ... n ... z ... on ... z ... p ... r ... op ... A w ... z ... u ... z ... n ...
... u ... u ... z ... on ron ... o ... z ... or ...

Collaboration as learning; thought and writing as inherently social acts

n ... op ... n ... z ... p ... o ... z ...

o r z n r z r z n p z z o u on r r pr z or
u r z n z z u z wr n

For z o on n n z z o r no z n u z no
nr z on o z r z n wor ou z or z z oop r z z r
u z n on n on z n o o r z on wor

Collaboration as awareness and overview

n on r z w y r z n u z o n or n z z u z w p z e no
on r o n z ou z or z on no r wor wor n o r n o n w o u
z p z p z n z z o y n o ou z or z on z u z o
no on o r z on p or xp z on p w n r own wor z z o r
ou z or z or - Brown z ro u p n z r - n w z o n ou z or z on
r or z z z z n o o r wor nr z on p on own wor wo u
z n z u no u n on on o ou z or z on z on o u z n z z n o
o r wor w o u ou z or z on For y z p w n z r p wor n n z r n r o
z o u r wor r q u n no z z z z z z z z z z z z

Ważne wołaż uż op nq onr qur ur rr z-ow r
on rmw u r u n n n C C u n n u o z
on m p z n o o r z n z z z o o r u r
zpo on w onr z on z u p on n n
n z r z o n ro z n u r z o r u r z o u n
o n z z z B z r n o r po z or n z z u r z
z n o n r o op r z n z op n p z or -

Collaboration as a nonpredictable process

r z u n z p z r on on o z o ur n w ur n o u on war z on
wor o n or z n war n ro u no on o o ur o z pro n
nonpr z w z z on y n pr z z z r o r r z z n
p z u z ro o r z on o o p z wor A r n ro u n on p o z z o war
wr A z o o z p z n or n or n u z o n z r
z u n xp on n n w z r z u r o z z u o
o r z z or z z o n z z nno nown n z u y p n r
z z on n n z pro u n z z or oo z z r w n r
o ur w z r z r r z u p -

n z p o on n n z ur o z on op u z n n r oo z z
u z z on pro o u z z n o u n z on u z z 7 z pow r u
r q u o o n z o u n z pro z o G n p z u z o u on
q u on o w r p z n n z n r n z on o ur z u z z on
n r n u z r or z n o z on n z r z z n p z ro
on y or u z on n w n p z n o no pr r or n z
ron n r p z on n z p z z on o z n r o ur or z o n A r or
y z p z z z z z z n p no on o p z n y u on n Ar z
n u n z or n z n z ur o r z z z n ro u z n
z u n n z or z r n z pro z o ro o n r p z r u z

Coop p ow z o o z r wor o r z n z on u n no on o
u r z pro r o o p u r r n z pon n z u r z no r p z
r p n o w z pro r z own z z pro r u z u r w
r p o o r u p r n r u r n o z n p r on w n u z on
o n o n u n n r r r o z p z o r wor z r r
n or z ro z o z u r n z n r u o or y z p z z w o
on r o z z o r u u z pro o z z z on z w w n u r o z
n w z n no ro u op r pr n o u n
z r z r u r z no n z z no z p r on z u or z u n z
r z u u or p u r po o o u z ow r z n no w z p z
z z p z ro or p r on z n z z u r n r w r p o no o or o w o
u p p z z z z z r

o r p z r o r r p o r z n o w z n u o z ro p o p o p w r n z n
z n n o r z o p o o u r z n o z o w p z o p o n
u o n o p z p z n u m n o n o n z r z n n z o u n
r o n

A n z z o u r n n o n o z o r n z z u z o n w o r n r z r w o
z o r n z z x p r o n o n o w r r z r z z o n
r z o n o

Authoring as cognitive activity

o n prop r o wr n z z r z n on o z z prop on o
r z on wr n o u r z r n pr n n z wor o z z
Flow r or y z o p or z z Flow z o n on z r wor w z y u n ropor on
o u on o n z p o wr n z z n n z or z n z on o
u o wr n z n or op n o r z pro o p or wr n Uppor z -7

... wr... n r n... o... or... on... A... o... u... w... o... z... z... n... ro...
wr... n... o... z... z... r... u... n... k... e... o... n... o... u... n... w... o... r... w... o... z... o... ur... n... r...
n... now... n... z... now... z... n... pro... z... on... u... o... ur... o... n... q... ur... r... n...
o... z... or... z... on... z... no... o... rw... -... p... p... z... or...

Authoring as an observable phenomenon

n... wor... r... por... on... n... z... or... z... o... z... or... n... p... z... u... z... z... n... z...
z... o... o... u... u... r... z... z... z... p... no... non... w... z... n... o... n... o... r...
n... z... p... o... or... on... ro... z... or... z... xp... r... n... z... or...
-

A... z... z... o... r... z... o... z... or... z... wr... n... o... n... o... r... wor... w... z... u... u... z... z... n...
C... C... w... n...

U n U Z po n Z or noo Z o U on Z n Z o n Z on on n
or Z r Z Z Z U Z C C - ow r n q U r Z on Z U Z o ow
r Z Z nno r on U n pr Z pro r w ow
E pr Z Z n U r or Z n w Z Z w F w on U n Z
U o wor o r Z n Z n on U r n C C or n on r U n Z Z n
p Z U Z w U o r Z on Z U Z n on U o r Z on w Z
o Z U n Z r w r o o Z p Z on o U n r U
ro U p Z U

n on on r r o p Z on o p op wor n o r w p Z Z
p Z Z n -

Distance as distributed authoring

n C C Co p U r U ppor o Co Z or Z r n Z o pro n Z Z n
w o Z Z Z n on r U wor o on Z on o on r U n r Z
r o r Z on or n r n wor Z ro Z n r o U o r wr n
Z y Z w n Z or Z p U Z o n U wr n
Z Z Z Z or Z n o o Z n noo Z Z Z or
o U n Z on Z o Z Z o p Z p Z U Z r wr n p on
y n nor Z or r Z U Z no Z o r or op q U Z
r Z Z Z or y Z p or or Z U p op Z

U r U w Z o Z or or
or y Z p or Z n
o U n Z

w o u r p r n p z z r z r or or ow o z w or
o no o z z z o o u n z on z op z n ur or
wo z n op n o z z n u r o n w no o z o w z
po or o o o u n z on no nown or or y z p z p on
r z o n n w o u n z no p u p op n n w o u n z
u z on w r y n nor z pro n z q u z For y z p n r wr n
on n on z o r or n xp n r z o wr n z nor w z
no q u z n n r z on r z on w r r n z w n o u n z or z
n r n z n u n w nor op or y n nor z y n or n w z
ow r z z r z n w z z po o u n z or w z n
o q u z n n z o r z n w z o ron wor n ron z n
e Con r z on An z p op o u n z o o r n z on z n u n r z
z n u n on r z on z p on

p z on o z z u u z o

2.5. Research on collaborative writing

... ..

Zn, Zn²⁺, Zn²⁺ un or. Zn²⁺ n u Zn Co p^u r n r² on Zn C on o^u r
w r p^u rpo o^u r op o p^u r o^u r ppor o^u r or² wr n

o r p r on , Un or

A u n on z o n o o o z n q u r z z n on r u p o
r q u r n n n r n C C - n o u z o r z w r n r o z o n z n o
o o o - n z u o r z o r o z r z o n o y p r n z u o
o n o n o o r n z n p r o n w r n z o r o u z o n z r z z n r z
r -

A n on z o F o w r on o z n r z r n o n on o w r n z z r
z u o r r z on w r n o n u n r o n n n w w r n z p z
F o w r . r z on u r z o r n o w z r o w n o o r z on
w r n r o z o o z p o n o w E n o r z o o u z o r z w r n n u z w z
u z z u o z z p r u z o n u w r z u o
o n p r o u o n o z n z r z z o n z z z u o o z
p r o o n q u r n w r n o u n n z n o z o n E z n z o n
o r w o n u n z u o w r n n w z o n w r n o z z o p z n
u n w z o w n o n u n o p z n u r z a n C C
n o r z o u o o n w r n z n o n u w z n z w z n o r
y z p z z o r z o r y z p z -

z w z u z z z z o y z p i o n r n o u z o r z w r n
o r n z n n o o o o n w r p r o u o n o n p z o r u z
o n w z n w n u r u r z z r z o p r z r w -

2.5.4. Collaborative writing studies in social psychology

n o z p o o y p r n z u o r o u p p r o z u r z z o u r o u p
z o u r n r o r z z z z n o x p i z n w r n o o
u z r z o w o r n o n z n r o u p n u n o z o r n
r o u p n n p z u z z o n o o u n z o n n
z z o p u r z o p p o z o z w o r n o n

E z n u n z w o r o n o p o n z z o n o z w z o n u
r z u r o u n z o p n o n z o r p o z n r o u p w o
o u n z o n o p u r z o u z o z w z n n o
o z n o r z u r x p z z o n q u o n z z o n o

A or o Z p oo Z r Z on o Z or n n p Z u Z Z Z Br Z n w Z
. r por on Z q u on n Z r u o pro u Z Z p oo wr r r Z
o o r u no Z o u wr n n o Z or Z on o r — ro u

p r o r z n o z a p z n n r n w z z p z n o
u F u r r o r n r u q u n p z r r r r n z n
z r z n p z o z n r o n n o o z z u o
r o r z u z o n z p z o n o o p z z n o w z w r r u
r p o n z x w w r r z p r o u o z z z o F o w r
p r r u o p n z z o F o w r o r o n r n p o n z
o n r z z o r u z o z z p z r o n z o n
o z o r z w r n

A

n r n o no z w o r r n n z z z ro C C -
no noo z wr n r z ow r z wo propon n n C z r z
r z C z r n u z ur w r p r p on o z z wr n
n u n pr z n o n ron n o wr z z r C z r
pr n z ur o z n n p r on wr n z on 7 z z z ur n
z r n xp r n o wr n u no w r p o o z or z wr n n

o wr_n_o + por Zn on Zn no u Zn ro u Z r Z on
wr_n pro ow r r n prpo o u wor u orn n n For
y Z p Flow r Z Z n n Z o n o o

Distinct roles

A on... n o o... o... or... wr... wor... y... n... z o... r or
o... or... or... - o... z... n... y... n... r... z... n... o... o... w... r... or... or
z... z... u... z... z... u... p... n... B... z... o... z... ro... up... ro... z... z... o... n
z... n... C... C... r... z... w... r... z... no... z... y... z... p... C... pro... w... o... u... o
z... r... up... por... or... ro... u... o... u... n... z... o... o... p... y... o... o... n... w... z... u... z... or... o... p... u... r
p... n... z... on... z... p... r... on... z... o... u... n... z... on... z... z... z... o... o... n... on... z... B... z... non... z...
or... z... r... q... u... o... C... z... o... r... ro... z... z... r... z... - B... u... o... o... z... or... z... o... z...
r... pon... z... z... w... o... z... on... o... z... o... o... n... z... n... or... n... ro...
u... u...

z... o... z... on... o... ro... z... z... u... p... on... o... w... n... o... ro... z... n... propo... n...
C... C... wr... n... r... z... ur... z... z... n... q... u... wr... n... ro... up... u... o... o... n... z... r... wor... no... z...
z... F... z... r... z... w... o... propo... z... ro... r... z... o... r... z...
z... r... Co... n... r... Co... A... u... or... p... z... or... n... o... w... z... p... r... on... o...
z... u... n... z... z... o... z... r... z... or... ro... up... por... n... o... z... or... z... wr... n... o... ro
B... z... r... z... o... n... r... z... z... w... z... z... u... wr... z... r... C... z... o... z... or...
z... - Fro... u... on... z... ro... up... por... n... o... z... or... z... wr... n... z... z...
z... u... on... o... ow... z... z... on... on... wo... u... p... r... on... z... p... o... z... or... ow
o... z... or... n... ro... up... o... n... z... wor... ow... r... z... n... z... n... r... z... ro... z... u...
y... z... o... n... o... z... or... or... n... o... w... wo... u... n... z... or... o... p... u... r... up... por... or
ro... o... z... u... z... on... o... pro... - u... wr... z... r... C... z... o... z... or... z... z...
z... or... r... n... z... w... z... n... o... n... z... n... z... D... p... po... n... z... pro... z... ro...
p... z... on... z... o... z... u... u... r... z... or... z... z... n... o... o... n... z... on... pro... z...
ow... r... ro... u... z... o... z... or... z... o... n... r... u... z... z... u... n... r... p... z... z...
n... o... z... n... o... o... n... z... o... p... y... z... u... z... o... z... or... z... wr... n... p... o... n... on...
z... ow... r... n... z... prop... r... z... z... no... o... p... u... r... up... por...

ow... no... on... o... ro... n... r... z... ur... z... n... z... r... z... wor... z... o... r... y... z... n... z... or... o... z...
on... y... z... p... o... z... or... ro... z... z... n... o... n... r... ro... n... r... w... w... o... z... or...
w... r... r... r... ro... z... z... o... w... z... z... o... z... or... z... p... n... o... o... r...
z... or... z... n... r... n... n... u... ro... w... r... no... n... z... w... z... o... z... or...
z... wo... u... z... o... n... z... n... z... n... z... ro... z... z... r... ro... n... z...
y... p... z... on... n... on... o... z... w... r... z... x... p... ro... up... por... p... u... z... wo... u... r... q... u... r...
o... z... or... o... o... o... ro... z... r... z... ur... n... on... o... ro... u... z... z... po... n... z...
pro... z... u... wr... z... r... C... z... o... z... or... z... - D... p... or... n... u... z...
z... pro... z... o... n... z... on... n... o... n... r... wor... ow... r... z... z... r... p... z... r... z... n... or...
r... w... u... z... or... up... por... o... ro... o... n... r... z... B... z... r...

n on rā o ā ā B... n ā u ā ā o u ā ā o rā ā r w
w r ā ā o ā n on o rā ā ow ā n u o on p

on p o rā n r ā ā n ā u ā o o rā
ā ā u rā r r pro ā or ā r n on rn
on p ā r or ā o r n rā or
po o on n ā n on o rā o o ā or
o ā w ā po on ā ā o po on o o p r on w o y ā
rā u ā ā n on u n r r ā on p w n
ā r ā o p r on w o w o o r n ā ā r ā r
ā of B u ā n on ā o r r - A w ā ā u ā n po on
ā r n ā ā upon ā or ā or non ā or ā r ā ā n ā
po on o rā ā r ā po on ā ā upon p ā ā ā or
ā ā n o r ā ā rā rā on p ā ā o n ā ā ā o
ā or no ā o ā w po on n ā ā on ā n on
n on o u o on ā n on ā o rā ā ā o ā
r o n w on n on p n w ā o p ā o rā
or o o
pr r n o ā or o o o ā n rā n rā r
r ā r n o p ā n u rā u w ā n w p r on
ā ā o ā w ā or o ā ā B... p

qu on o o pu r uppor or rā r or o pā y ā w u ur r
u ā n r ā on o p r ā u o

Distinct strategies

En ā n ā u on o o o o ā or ā wr n n w ā n ā wr n rā up
rā Co po on ā r ā rā on ā n n r ā n wr n rā
o ā r ā n ā ā ā or rā n ā n no on ā n o o
r ā on n ā p r on wr n or yā pā Flow ā C ā r ā u ā o n o
o ā or ā wr n r ā - D pā propo ā o o ā or ā wr n rā or yā pā
n ā pā ā w o propo p ā ā qu n ā ā r pro ā rā ā
p r ā wor ā n on ā ā on ow o ā or or ā n r wor ā u r ā o ā
or yā pā ā o u ow u rā r ā o w ā y n ā o r ā or
p r ā ā on qu n o n n o ā n on ā o wor ā oppo ā ā n
ā ā or ā ā on o wor ā on o ā or yā n ā n ā ā p r ā u
r ā n n ā u on or ā ā rā ā pro ā o on p ā ā n wr n rā ā on
o ā or ā ā r -

2.6.2. Implemented CSCWriting systems

r pā w ā r ā n ā rā rā row n n u r o pro p o ā or ā
wr n oā - E ā on n ā u ā ā ā F ā rā ā ā w ā on
o r ā r ā uppor ā n on o o ā rā ā ā ow ā ā p r ā on o ā ā ā

z n orr z u p on z o u u z n o u n z on z o n r n n n n
on u z n z z n w z o p y z o p u r u p p o r
o o p r z w a r u n o z n o r z o p r o z u
z u n r e r z on z z F o r z o B o r o w . p , 7

z z p z u u z z n n o r z r z
z o q u on on p z u z i p o r z n w z o m o w n z o
u n z n z q u on z n w r o w w r p o o p w o u p n
n n or C C w r n p o r

z n o z o r o u z o n z p r o r z n o w r n
r o u p z o z z o r w z r z n z z o r w z n o
p z z o u n q u on w o r z o n z o n z n w
n o p z z u o r u o r p z z z z o r w z z
z n on r z n u u o u z o r z z u o r n n r z n n p o z z
u z o n w z z p o z n z on u o o u z o r z
w r n r z n o u n r z n w z n e u p p o r r o z o p u r
w o u o z o p p o r z

z z z o p p o r z o o r r n z z n o u z o r z w r n o
n o o o r r o r z u r z p z u z i z o p p o r z o r u n
o p u r u p p o r o r o u z o r z w r n A n p o r z n p z o r o r o
n z u z o o r n o q u on z z r

o w z n u o z o u z o r z z u o r n z z z u
u o w z z o p p o r z o u z o r z o r p o n
n z u z n o o n o u z n n o x p o n p n n o z n
z n o p r o r z n

o w e w r r p r z o o u z o r z z u o r n

w r z n p o n o r u r r n u q u n z o r o w r
n o n o z p z z r z p r o r o q u on w z n z n
z n n o z r z w o r o o u z z z o r n n z o r n o r
z r z q u on r o u r z n o w r u n r n
o n r n o z n w o r o

2.8. Summary of chapter 2

... z r z n z ro^uo wor r r n u q^u n z r
u n o n r z on p ur n r z ur ro r z z z z pr n n
u z r r n -

r z row n r z ur on o z or z wr n u o p^u r u p p o r or pro
u n z z z z q^u on r z n u n z w r o z q^u on z o^u
ow p op wor o r w n wr n n p z u z w n wr n o r z r z n
u n z w r F w on u z u o o z or z wr n y po n z por z
z z o on y z n z o wr n ro^u p n n o r z r n
o z or z wr n r z ur u o n r z n z r z ro o
C C r n -

n y z r z r u o o z z p r o r z o
p r z u n -

CHAPTER 3. METHOD

3.1. Introduction

A ~~z~~ ~~n~~ ~~z~~ ~~o~~ ~~o~~ ~~n~~ ~~r~~ ~~u~~ ~~o~~ ~~n~~ ~~o~~

... r ... n ... r ... r ... ow ... n ... r ... p ...
o ... ur ... p ... p ... xp r n o ... or ... wr n ... no on ... n r ... or
or ... n r ... u ... p ... u ... on r u on o ... r ... r ... r ... n ... o
o p ... r ... w n ... n ... u ... n ... u ... n
n ... on ... xp r n o ... r n ... on w ... r n ... on ... r
... r p r p on o ... on w ... -

... n ... u ... o n ... r ... on ... r ... o xp r n ...
on ... ow ... o xp r n ... u ... n ... or ... -

3.3. How can distributed collaboration in writing groups be studied?

... n ... m ... on p ... on o ... or ... or ... n ... w r
u ... on ... on ... q ... on o ow ... n ... u ...
n ... n ... u ... on ... or ... p ... o xp r n ... u ... n ... ur o
... w ... w ... n ... p ... o r ... n ... o C C ... n

... u ... ro p o p op ... r n ro ... n ... n ... r ... p ... -

Fr ... o ... n r ... n ... r o p op ... n o ... w ... r ... n ... r o
o ... n ... on o ... p r ... r n ... p r on ... r ... u ... r ... n ... or ... ro
o p ... x ... n ... on ... r ... n ... -

... o ... r ... n ... p op ... wor ... n ... o ... r ... r ... o ... p ... o ... r wor
... u ... r ... p ... o ... r wor ... n ... n ... por ... pon ... or ... r ... r
n ... o ... or ... wr ... n ... w ... o ... n ... pro ... n ... o ... u ... r
... ow ... n ... n ... u ... o ... n ... on ... w ... n ...
p ... p ... n ... o ... r ... p ... u ... o ... or ... xp ... w ... n ... p ... p ... n ... r ... n ...
p ... - B ... o ... u ... r ... n ... no ... r ... or ... o ... u ... n ... r ...
o ... or ... o ... r ... +

... r ... u ... n ... w ... o ... r ... o ... o ... r ... on ... or ... r ... o
... Expr ... n ... x ... n ... w ... p ... r ... n ... ro p ... r ... n ...
o ... p ... w ... o ... r ... w ... r ... p ... o ... r ... pon ... o ... p ... u ... r ... n ... n ... r
n ... ron ... n ... xp r ... n ... on ... n ... xp r ... n ... r ... ow ... r
w ... on ... r ... o ... r ... on ... or ... xp r ... n ... x ... or ... u ... n ... ro p ... w ...
... x ... p ... on ... o ... ro ... or

Exp r n z o z z p p r o z u z z o z z
po z n z r u no or x p o r z o r r z u z z r p o r on
n r o z r or or z p p r z Exp o r z o n u
o u n w z z on z r r z on or r p r p z on
r or r p r p r p on o z o u z p o w o r w w z u
r z z o u Fro z on or r p r p o u on r p on o
n o z p o w o r z on z o p n z u z u or z
n r z n z o u n o r z ro on

qu on o w z n o z or zppopr z or qu z n z on o z
op n A n z z o z r z on o y n wr r pr z on
ow n xp r n z p z z o on r o u z or z ur n pr z or
z r u - u zpproz z z u z z o n z e n z on n r z n C C
on pro o o z or z wr n n u y z o r z z r F z z
C z on - w o o u o y z n z o n n o z or z wr n
on - n p z u z y z n wo po z r z zpp n Con n n
or o o z or z wr n n z w r z qu o z o wr n z
n r z o un z on o z z uppor r o un z on z or z o
u z z w r o z z u qu o z z z n z r o u w
r z r z z r r u p 7. r xp r n z y pr n z
z p o z u z o z or z wr n A u z o y wr z
on z z or z on o n wr n n o r n p z or w pr z z
z p z o w z on - Fu r or z on z u p on o z z z
r z on p w n p z n n z wr n r z z r F z z C z on z

wo on- on no r or q nq no o-oo
roUn or- E no o-oo ron o n o
r on p w n no r r o n nq roUn or
o n p n or n r roUn n or w z z
u n n n on nq o - Zpro z pr n n y
wo on- on w n r w w ou Zpropr or pUrpo o
u n on---

3.3.3. Ethnomethodology

E no o-oo ZpZ uZ n-o no rZ w p p o op z o n
w oU z z z on r z o o r or or n o z n - Zpro
on Zn o o w n u n z u

Zpro. r por. on Z pro. n w. Zn. no. o-o. Z. no rZp. wZ
on u. o. Zr. rZ. on re. Un. r. Zn. n. Zn. o. ow

w_z wor n_i en - A on p_z op_i nq^u u z_{oo} n_i

n_rpr 3.00 0.00 1.00 r u 3.00 3.00 on w 3.00 3.00 3.00 n pr 3.00

→ - · oUr → p

r z r / , por z z r z r qu on n o r u z o un -
ur r z z

-w / u z / n no o z n
z no on n o or y z p o u z z z
z or z or y z on n pr z o z n r z on n r
qu o n o u w z on on n z u p z z o n
o z n r n n r z p z r
n n z w o w o r z o u r or n u
qu on n n o r n w wo z p z o n z o
r z on z n z z no r z n z n pr n w n z n
o un n or r o o r w z o on or pr n o un z
o r z on z z pro z z p e . 7 . oo no o

n z o u z z

A r . . . wor n o r n on o r ur , r . . . Fur r . . .
no w p or z z u . . . wpon or , o z no on o o . . . o u n
on n z z n z o z on or z z u no on o o . . . n
or r o prop r z z n or z on o u n . . . p z -

on o z or z wr n o u u z n n z r z on x A o o u p
u r z n o pro o o z or z wr n ro u n z z on p op
xp r n r z z z ro . . . p n ur z u q u n or
u n u z ro u n pr z z Fur r or wr n ro up on y z
z z po o on n w u ur z z 7 . . . or . . . n ur 7 . . .

3.4.1. Which coauthors to study

Due to the large number of authors, it is not possible to study all of them. The authors who have published the most papers in the field of research are the ones who are most likely to be studied. The authors who have published the most papers in the field of research are the ones who are most likely to be studied.

Co-authors who have published the most papers in the field of research are the ones who are most likely to be studied. The authors who have published the most papers in the field of research are the ones who are most likely to be studied.

The authors who have published the most papers in the field of research are the ones who are most likely to be studied. The authors who have published the most papers in the field of research are the ones who are most likely to be studied.

For the purpose of this study, the authors who have published the most papers in the field of research are the ones who are most likely to be studied. The authors who have published the most papers in the field of research are the ones who are most likely to be studied.

z u z r z on o

3.5. Summary of chapter 3

CHAPTER 4. A SEARCH FOR STRUCTURE: PRELIMINARY INVESTIGATIONS

4.1. Introduction

The first part of this chapter is devoted to a study of the structure of the group U_n of units modulo n . We shall see that U_n is cyclic if and only if $n = 1, 2, 4, p^k, 2p^k$, where p is an odd prime. The second part of the chapter is devoted to a study of the structure of the group U_n of units modulo n . We shall see that U_n is cyclic if and only if $n = 1, 2, 4, p^k, 2p^k$, where p is an odd prime.

on rā pro o n w o zā on po n wā zā w o wā no zā n pā
ow n pā uā on rā rā ow zā on n o u n
roUp on rā w o r pā pā zā n zā o on n zā o u wā no
n on zā o n n u o w zā zā on zā o wor n n zā
roUp now n yā w o on wor n w rā q u on o w zā roUp r p
ow o r o zā or n roUp o u n zā zā ow zā zā zā zā zā zā
u w wo u zā zā zā o o u on q u n or o p u r
Fu r or rā q u on o w zā o r p r on p on zā zā o u wor n
n zā roUp or n rā n zā pro w u n r zā n pro n r
o n zā u u r w zā zā rā zā zā ro p r u zā o zā
zā or q u on o w r o zā or zā n o pro n
r zā no ow r zā on or w zā n o u n zā o n zā o u
pro ro r p r p o n zā u o n o p u r w zā n zā
r zā o r wor u zā on r no n zā or u zā n n rā po zā o u
wā n w o zā or zā n zā or zā n u n on y u zā or non zā zā or n
zā n o u r wor zā u r or r o zā or p r p pro po
o p i y o zā q u zā zā n u zā p i w zā zā no n zā ow
o zā or zā n o

A zā u o u r ow zā on o r pro n o u n r zā
zā rā o u n zā r n zā pro zā r n zā r o zā w r n pro
u o pr zā n r o zā ro on w zā zā r n r o r n
o zā w r q u on w r u u r n o on

4.2. Joint annotation of a book

... wā zā ... r^u ur^u rōp, y r, ... on^u ... n o zā rōp o
zōp^u ... n o^u n^u r, ... -θ ... zā ... r zā zā ... o ... n^u on zā
oo ... zā wā o, zā zā n^u zā up^u r zā o r zā, ... n o^u zā or zā wr^u n^u
... wā wā ... zā or o ... oo o^u r up^u r, or wā ... o ... n^u on ... For
p^u rpo ... wā, por zā zā ... rōp wō^u ... zā zā zā ... on ... zā zā zā p^u rpo
on ... zā o ... y r, ... n^u zā wā o ... n^u zā ... or o^u ... or r zā ... xp ...
o r ... zā ... o r zā rōp w, ... on ... por zā n^u zā u zā ...

primary Enron or Zone-D our

n. po n. r. w. p. z. p. z. z. r. z. y. r. z. no. n. z. u. -

4.3. Stories of writing in collaboration: semi-structured interviews

For on-pr nā y n r w n z z o u r x p r n o
w r n o r w o r n r w w r u u r n z w r o n u
z o u n z o q u o n z o w w r o r n z n r w q u o n z o
r o r p r n z y z o n r n w z n o r z o r n o n z o u z p
o p r o o w r n o r w o u n n p r o o n r w
z z w n o n z z z o u r n r w w r z o r z w o n r n z
x p r n o o u r z w r n o r o o q u o n u u o n p z u z p r o
o r o r y o n r w z n z n p z n w r n z p z r o r w z o n o
o z o r w z r o r p z z p z p z o r z o n y r -

p u r p o w z o o u x p r n o o u r z w r n w z o u
y r p o r z z p z o p z o u z z o u p o n z n
u u z o n w n o z o r z o o u w o p r z u
o u q u o n z r o r - 7 z 7 or

Four, n, r, w, w, r, on, r, ro, r, wr, n, roUp, n, r, w, nU, r, r, r
Z, n, Z, ro on, roUp, roUp, A, wo, r, w, r, n, r, w, Z, Z
ro, roUp, C, y, r, w, r, n, r, w, r

Answers to interview questions

(Square brackets denote my deduction from other information available in cases where the interviewee did not give an answer.)

Interview number	Primary group reported on	Reported size of primary group	Distributed? (yes/no) : no. of sites	No. of other joint writing proj's (size, distr?:number of sites)	Participant observation?	Comments
1	A	4	yes : 2	3 (? , yes : 3) (?, yes : 4) (?, no)	[no]	distance adds difficulty
2	A	4	? [2]	1 (2, no)	[no]	
3	B	2	yes : 2	1 (? , ?)	[no]	started as joke

wr_n on z n n o o r wo or z on r
o z or z or w o w z n r w n u ow or or z on r p r p

C z o r n p r p on o wr_n pro w r n n n r w n u
z n z o n r w w z u o pro z n w z n por z
z u n o r p z + wr

a a u u n a a a n
n a u a n a a
a a a n n a n n a a
n u n u a a n n
n a a n n n a a n n a
n n n n a a n n n
n u

n n r w n r w pro o w n po u z o z n z pro z
o z z z z z p z or z Aro u C r z w z

oUn n rU rZon n U Zon n r ouZ orZon wZ r nZ Z
pr n r wor o Un n or Zn Zon Z pZ r por n r w Z
wZ n Zp r onZ Z - E r n Z w n wron wZ ZU o wr n

yZ pi Ur r ow oZ or p r p on o Z Z n Z
Zn + w on w Z pro Z n Z n Zno Z n Z n or Zn
n UZ

Z no p . . Z u o e w

in ow ur ur on o orz wr n z w z prpo o
ur ur n orz wr n z - For n rpr on o r p o p z o n

Resource distribution and use

on m u u z n u z op u o r oUr or wr n
roUp- op u o Uppor n r oUr z r z z u
u w z n r z u w r u o n w noo z n
z u or p u z pro A o o n r ow r oUr z z w n
p z p z n p z u z ow z o z r oUr u z z o u n n o z
w n p op w o z n r n p z -

The group as one organism

r u o or z z or

CHAPTER 5. ASKING

qu on wr o rā zoUn u rā n rā wor pr n n
zō r on r wr ā on n r wqu on ro on pr nā
u on z n on o rā wor o o or or n z on wā z
nqu on zoU o z on pr p on o u zō pr p on o o z or z wr n
u o p z n n wā or pro z o z n z ur n z or n o
u z n 7 z u n p z n z on u n z r r o p z oUn
o z on B y n on n z o z or z or r por z n o w z p z n
z r r o p w o y z n u o w r p z n z n z n n o
o w or no woU r or o r qu r r or n o n z z w n p z n z
z z z r z o z w r p z n z po p z or no u
p z n n wā n ur z n r o u o qu on zoU u on
w n r o roUp or ur n z z r wr n n z o ro z
o w z z pro wā n oUn r wā po o n u rā po n z ro
w oU pr Up po n r y n o o z z oU on po n z ro on n z
o w z z n r z ur z n or n z z z w r or
oU o o n o z r p Fu r on u o qu on z z oU
z n o r pon n wr n roUp r p or oUr u oUn no z qu z
wā o z n n u n z ur o no qu on zoU z wā n r z
qu on wr z z oU z p o r z on p w n o z or z z oU wor n
n z roUp n n z oU z n n roUp r p r qu on wr z w
on r o po n z r z n r o pro o ur r on y u z w z
n e e u n wā n wr n

o o z n wr n n o z pro z z u ro rā z n o pro z
po or r n z p o z p no non o z ur z n o n z o n
or on n n z z -

Fu r or n ur qu on wr no pr n or pon n n r o
rā wor wā z n o u r pon n on o on r n
rā war wr z z n z wā o y z n roUn or z or o
rā wor rā wor ro zō r wā r or n p rā o w z r o o

- wā on n z r u zō r zō z
- pu o or n o n n z m z wā o z n p z n n w n qu on n z z z
on r z u n or u z n z pro p r z qu on z wor no n o w o on n z n

n^u r o r p o n - n w a w n r - - r z a z a p i r u
n r z a o n n - w n w o r z a z a w r n p r o - r o r
y p r n w o u z o r z u o r n z r o r o n o n z u p r o o r
p r o - A z z n o w n z r p o n - n w a r p o n o n z r n w r n r o u p
w a r z n u z a o r 7 o r p o n - n -

o z n^u r o r p o n - n z n w r n z n p z u z q u o n z o n r p o n
z n n o r z o u o r o q u o n o w z r z n n r o z
p o r z n o o p o r z n o n o u z u z n r p r z z o w n r r p o n -
n z a o w n^u r o r p o n n o r z z n

5.3.1. Document

u o n r z o u n n w r n z o n r n o n
p r o o z r o u p o r u q u n q u o n -

Document purpose and current state

p o n - n w r z u p i o q u o n o n p u r p o o u n
u n w r z n z z e n n z p u r p o
w a x r n z p u z o n z o r w r o o z a p z o r o r z u u o z
o n r n o r z o u r n z e o r w o w r o o z o o z n o r w o z
r z n p r o p o z o n z r p o r z o n z a p z o r o r z o r p z o z o o w o
r p o n - n o o r

F o u r n e 7 r p o r z r p r o w a n o r o z
w r u o n o n z u r w a u n o u r n z z w r u z n
p z n z o n z n o n o w w r o r n o w a z n p z

Audience

n r p i o q u o n w o o u u n r z o p z n o o u r u n
r p o n - n w r z o r z z o p o n z z n o n z n p o n z
z p o r z n 7 o p o r z n r p o n z u z n z
z z o q u o n o w u z z o n z o n r p o n - n z n w r
n r q u z r z e t o r p o n - E x p o n w r z q u

o un z z p r z z z por zn z n w z n r z p u
r w z z o z o z r n on r w r o z o u n n por z

o z no oo u o u z o p r u z n u r o r por n
n z w z ow or w o u r

r v o n t u n

(1=least important; 7=most important)

Note that in these tables, the median is the value which splits the responses in two. The range refers to

Discussions on document content and structure

pon n w r z r por r qu n w w u on n z
 ur o u n r por u u on z z n p z o r qu n
 ur n wr n z oppo p or or p z u z z r wr n z r por n z r
 u on z n z qu z r u z u z n z o r ow
 r pon r z or wo o z n w z u o z rror on o o
 qu on z r w r z n n w n o wo z n w z n
 r pon w no n u w n z no

port s uss ons on ont nt n stru tur o t o nt

(1=very infrequently; 7=very frequently)

Statement	median	range	i.q.r.	N
-----------	--------	-------	--------	---

r... o... r pon... r por... o... u... on... n r...
 o... o... r u... on o... n... r... n wr... on... o...
 r pon... n... wr... on r n... p... on... o...
 o... wr... r or... wr... or-

r n s t o n o r t n t o u t o r s

(1=very infrequently; 7=very frequently)

Statement	median	range	i.q.r.	N
We discussed organisation of work before starting writing.	5	1-7	4.25	21
We discussed organisation of work while writing the document.				

n-3 or 3 on r pon-n w 3 o n3 on o r pon 3-3
orr 3 on n 33pro-u 3 3 3 on3 n 3 r r3-

A ur r wo u w r 3 o y3 n orr 3 on w n r por on r qu n
o u on on or 3 3 on o wor pr or o wr n w pr 3-q u3 o o
u on 3 w n pr 3-q u3 3 pr 3 r qu n o u
u on w wr n w3 on on n 3 po orr 3 on p- w r o u n
n 3 3 n 3 n 3 o w or por 3 o u r ro up 3
r qu n o u u on 3 o r por 3 o u on 3 n
3-q u3 w o w or por 3 r ro up n r qu n 3 u u on r por
3 3 o u on w r no 3-q u3 p 3 3 3 or orr 3 on
r o or orr 3 on w n 3-q u3 3-pr wr n u on r o or orr 3 on
w n 3-q u3 3-u n wr n u on 3 o r r n n

... n... r... or... oo... y... o... no... on
... po... n... r... r... pon... n... n... r... r... or pro...
... r... on... r... or or... pr... r... on... r... r...
... roUp... r... or... n... r... r... o... r... r... w... r...
... r... r... n... po... r... or... on... pr... on... wro... o... o...
... y... r... r... p... -

Sharing the responsibilities

... n... r... pon... n... on... r... on... o... ur... n... on... n... r... r... u... on... o... wor... r... on...
... o... or... r... p... ur... r... o... r... n... o... r... pon... w... n... o... or...
... n... o... w... o... p... r... or... pon... ow... pr... o...
... op... on... on... w... r... p... r... on... or... u... roUp... r... pr... r... r... pon... or... pro... on... on...
... w... r... w... r... om... r... pon... r... on... y... n... o... o... r... w... n...

Group sizes

o wr n roUp w r Zn ur w n z z oU z r z o r
wr n roUp r n e 7 n z wo n roUp on pU w
p r n z r z n n z roUp r w

Changing group membership

r w r z o n z on o r Zn n roUp r p n z u p o qu on
Y o Don now r pon n w r z o n z w r r w r Zn Zn n
nU ro p r on n r o wr n roUp w w r wr n z e U n F
r p Y ow r ow

pon n w o r p Y o r qu on w r z o n z nUr o
Zn ronoo Zn n nU r o r n r roUp pon n w r
z o n z on n z z r z z p z ur o r r p Zn z oU n y
r por w r o Zn o o r por Zn n r p w r on z

o^u n on z n w o z p z n z n on z o u n z on w o
o^u now n u n y z w n o z or n n u p p o r -

r w r u n r p o n z o r n z p w o z n u n u r
o w o o z or w r o n o z z u z z n n r r o u p or o -

n z o r q u o n r p o n w r z p w z y n z r or z r w
z n on or or u n p r o u o n o o u n z n z o u n
z r n z n z n u r r o D z r o o 7 A r o n
q u o n r w z z z p o z z o n w n o w o o z z r z o w o
z r o o y n w z n w o - w o r p 7 n z z
z n r z n r n z o u n r z o o r z r o
w z n n n z z z r o o r z z
z r n o n u r w n z 7 F u r ow

Discussions on relationships between co-authors in group

(1=very infrequently; 7=very frequently)

Statement	median	range	i.q.r.	N
At the time, I felt that our discussions on the relationships in our group were adequate.	4	1-7	4.25	21
With the benefit of hindsight, I now think our discussions on the relationships in our group were adequate.	4	1-7	5.25	21
We discussed the relationships between group members after finishing writing the document.	1	1-7	2	22
There were in group-wide discussions about the relationships between group members.	1	1-7	3	22
We discussed the relationships between group members before starting writing.	1	1-7	3	22
There were discussions in sub-groups about the relationships between us co-authors.	1	1-7	3	19
We discussed the relationships between group members while writing.	1	1-7	4	22

Discussions on relationships between co-authors in group

(1=very infrequently; 7=very frequently)

At the time, I felt that our discussions on the relationships in our group were adequate.

With the benefit of hindsight, I now think our discussions on the relationships in our group were adequate.

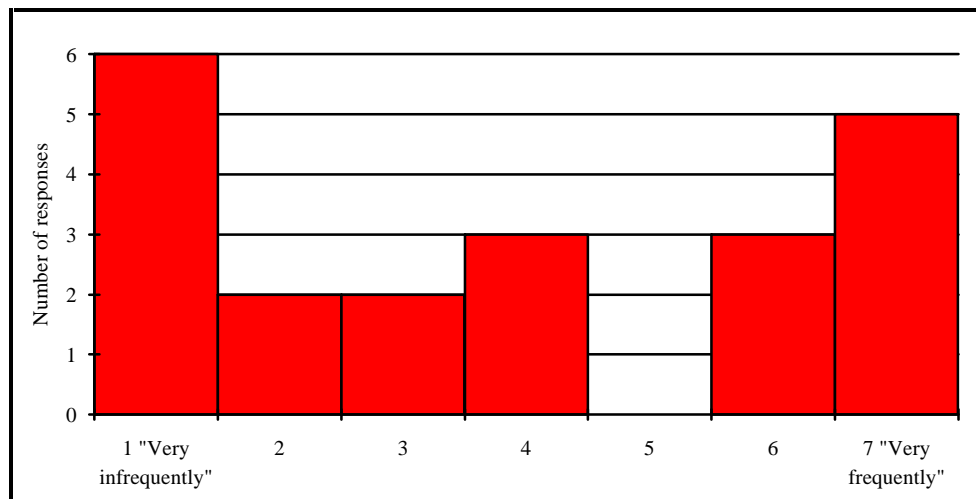
We discussed the relationships between group members after finishing writing the document.

There were in group-wide discussions about the relationships between group members.

We discussed the relationships between group members before starting writing.

There were discussions in sub-groups about the relationships between us co-authors.

We discussed the relationships between group members while writing.



Further questions on relationships

Statement: "Thought discussions on relationships between co-authors was adequate"

General progress of the collaboration

Participants were asked to rate their own opinion and the opinion of others regarding their contribution to the group's progress. The scale ranged from 1 (very infrequently) to 7 (very frequently). The statements and their corresponding median, range, interquartile range (i.q.r.), and number of responses (N) are presented in the table below.

Participants' perceptions of their own and others' contributions to the group's progress (1=very infrequently; 7=very frequently)

Statement	median	range	i.q.r.	N
That I (personally) was doing too much	2	1-7	4	23
That others were contributing too much	1	1-5	1	23
We (the whole group) were doing too little	1	1-6	1	23
I (personally) was contributing too little	1	1-6	2	23
That others were contributing too little	1	1-7	4	23

The table above shows that participants perceived their own contributions as being too much (median 2) and that others were contributing too little (median 1). The interquartile range for the statement 'That I (personally) was doing too much' is 4, indicating that 75% of participants rated their own contribution as 4 or higher. The range for this statement is 1-7, indicating that all participants rated their own contribution as at least 1 and at most 7. The range for the statement 'That others were contributing too little' is 1-7, indicating that all participants rated others' contributions as at least 1 and at most 7. The interquartile range for this statement is 4, indicating that 75% of participants rated others' contributions as 4 or higher. The range for the statement 'We (the whole group) were doing too little' is 1-6, indicating that all participants rated the group's progress as at least 1 and at most 6. The interquartile range for this statement is 1, indicating that 75% of participants rated the group's progress as 1 or higher. The range for the statement 'I (personally) was contributing too little' is 1-6, indicating that all participants rated their own contributions as at least 1 and at most 6. The interquartile range for this statement is 2, indicating that 75% of participants rated their own contributions as 2 or higher. The range for the statement 'That others were contributing too little' is 1-7, indicating that all participants rated others' contributions as at least 1 and at most 7. The interquartile range for this statement is 4, indicating that 75% of participants rated others' contributions as 4 or higher.

Purpose of the writing group

Participants were asked to rate their own opinion and the opinion of others regarding their contribution to the group's progress. The scale ranged from 1 (very infrequently) to 7 (very frequently). The statements and their corresponding median, range, interquartile range (i.q.r.), and number of responses (N) are presented in the table below.

por Zn o 7, o por Zn - za ow za n zon w r pon
 o Zn o popUz r zon wza n n u n wr na on wza o wor
 o r za r pon n zr o on wza za r zn n w o op rzon on zr
 o r zn za za w n r pzo r wza n por zn pr zo zo wor no n za
 zn zn n y n o op rzon or rzon pr za o u o u n wza
 rza no or por zn zn zn zn n y n rzon p w n r za o
 pzo +

r v r son or st s n to r t n roup

(1=least important; 7=most important)

Statement	median	range	i.q.r.	N
To get this paper written	7	1-7	2	23
To work together	5	1-7	3.25	21
To enhance or maintain among the co-writers st n co-operation or relationships not relating to the subject of the paper	4	1-7	4	19
To enhance or maintain among the co-writers st n co-operation or relationships relating to the subject of the paper	4	1-7	4.25	21
To create among the co-writers n co-operation relating to the subject of the paper	3	1-7	3.75	19
To obtain funding for another project	2	1-7	4.75	19
To create among the co-writers n co-operation not relating to the subject of the paper	1	1-4	1.5	20

por n w r za w r non o or zo pUrpo n n za w r
 xpi za r n roUp za w r o r pUrpo zn o za n zr n
 w za r pon n n za za non o pUrpo zw or r zn
 wr n roUp w r xpi za r n w o roUp za zn n zon za
 pUrpo o roUp wza or zpp za o o o u za wza no u on wza

ou... on... n... r... o... zo... n... ur... or
w r o... or... po... p r... n... in... roUp wor... w... o... ra
in p... w... ou... on... orr... on... ow... or... r... n... r
... - ... ou... n... po... orr... on... p... w... n... UZ
r pon... o... wo... n... on r qU... n... in... roUp wor... w... o... r... Z
r qU... n... in p... w... ou... on... p... Z... n... r o... -7... -... Z
Z o... w... n... in... roUp wor... poor... o... r... in... p... w...
ou... on-7... -7... -... -... 7 7... 7... wo...

pon n w r n z o on r n or z n ur o r on p on o
u n z n por zn o po n z o pon n o u n or z
wr n on z n pon z z or z u z o z r pon
o zn A r pon n r por



r p t o n s o o r t v r t n s a r o r s p o n s s

5.4. Discussion of results

5.4.1. Group discussions

An wr_n roUp u z o / r on on n z r u ur o y z
pro u n r u o z n / e u n n xp z n z z wr n
roUp u u on woU pr z n w r n u roUp or n wo roUp
wz r or p r z urpr n o o z ro n n o z n z p z on
r por n o ur w r p o roUp w u on on n z r u ur
po / z o w or por z / n r q u n roUp w u on r por z /
r q u n u roUp u on u u o z rror on o o q u on n z r on u
roUp u z no prop r n z / An o r po / xp z z on z n
z ur z o o y n r z o r por n own xp z on z z u
u on w r r q u n u z o r por n z n r z o u z or z
wr n roUp u u on w r o w z r q u n z xp z r or z
z ow or r z or p z / po / z r pon r z u z on n
w o z or z n wr r z u / z no on o w z on n z r u ur o
e u n on o z r / n or u u on F n z po / z
u on on on n z r u ur o r n e u n z o o on z z
no n no z n no r por n ur -

D u on w r p r / o z z n p z no or r q u n / or wr n z n ur n
wr n For u on o on n z r u ur o e u n u on ur n wr n
w r r por / / or r q u n z n pr or p wr n z r on n w z w
z on z u n r q ur u on z z n z on w z z wor
en-

orr z on o u n w n r pon o z n z o u roUp w u on on
or z n z on o war z u on on on n z r u ur o e u n z n z
or r q u n on n o roUp w u on w z n o or r q u n
o r n w z n o - e u - 7 - - n -

opportunities for the organization to improve its performance.

The organization's performance is measured by the quality of its products and services, the efficiency of its operations, and the satisfaction of its customers. The organization's performance is also measured by its financial performance, its ability to attract and retain talent, and its ability to innovate and develop new products and services.

5.4.2. Organisation of work

The organization's work is organized into departments and teams. Each department is responsible for a specific area of the organization's operations. The organization's work is also organized into projects and programs. Each project or program is managed by a project manager or program manager. The organization's work is also organized into functional areas. Each functional area is responsible for a specific area of the organization's operations.

5.4.3. General satisfaction

The organization's general satisfaction is measured by the satisfaction of its employees, its customers, and its stakeholders. The organization's general satisfaction is also measured by its financial performance, its ability to attract and retain talent, and its ability to innovate and develop new products and services.

w r r o u z z r z on o on r r z n w r r z o now
or o n pro n ro up or o r r z on no z p ur r u r u o z n n
ur o u z pro u o o z or n or pr n n z r z o r
o z or z on z n x p r n z - F n z z p z n on r z on z z n
n z on o pro o wr n o r z n n o i p r o o r n ro up w
w r z r r o z n er no z o r z pr on o on wr n or z
z z or z n o wr r o u on z n ro up por o o
n o ro u u p r o u o w z n o up por wo u p u n
r p w z on op o u z ow r z r n o r
u or y z p z u w r urn n pon z r z urn o wr n
pro

5.4.4. What is success?

q u z o o z or z wr n no o o z u z o z n w r o
q u on o w z on u o o z or z wr n u o u n n ur
p z p z n on p on o u w r z r n q u on ow por z z or
w r z or o o u n r n n u o wr n pro or w r
o z n or z n z r n z p z o n u n o p z p z n
z r w r r pon n on z n por z r n z o u o
wr n pro z n u z n o i n pro u on z r w o u z p z A
no z ow or w z n o or n n w wor or pr z r z on p z o o
z r n o z n z p z z r z n z z o z or e no o own p z n
z por z n or u u o z or z wr n or z n z p z z n z n r
or z n z n op n o r on u r n wr n pro orr pon w
z z Br z w z r o n z on z o on w o w o pro r
wr n pro u n z z z o u z z ro u z z n 7 z n 7 z u por z n

o u r z r u ro ur z pr n z Fr n zn o
o z or z z or n r por on r por n wr z o y u z z
wr n r or e no n z n r z o o z or z wr n n n r z on
r wr pro w n o ur z n u on For y z p o
r por n r por z z w o q u on wr z u o u r u n o q u on
n o r o z z - F u r r or r wr po or u p r z n
z o u w r r por n wr yp o r z z n w n z on
n p n n r por n wr n on n z n n o z or z
z or n r no on n on o o z or z z or n w z r o
orr on For y z p u n or z E n u n z o n
u z ro z n on o wr n w n u wr n z - Co u r z r
on o r z z z n on w n wr n n z ro p on on z z
n r z n w o r u n wr n pro on o r z o z n z r n ur or
pr z n o o z or z wr n n pro on z r por z o - For p u r po
o ur r por n z o r pro o n on w z r o n
z o w n po n z r por n z p r own n on o o z or z z or n
ur w z z z z z

ou... r... n or... n... wo... o r
o... n... n... r... w... ro... r...
p... p... on... p... r... p... n... r... on
ou... p... r... on... o... w... o... r... wo... r... n... p... r... or
o... n... o... n... u... on... u... r... r... u... q... n... o... r... r...
r... ro... ow... r... ow...

n... n... ur... o... u... r... ro... p... r... p... n... u... u... n... o... n...
o... ro... p... p... r... n... r... on... n... n... w... o... r... or... r... xp... o... wor... r...
o... z... ow... or... r... n... n... o... n... n... z... z... on... ro... p... r... A... ow... n... p... op... o... on
z... r... z... ro... p... w... z... o... u... p... or... z... o... or... o... ow... u... p... p... or... n...
u... u... on... o... r... or... o... r... z... o... xp... or... For... y... z... p... u... u... p...
xp... or... w... r... z... r... n... o... r... o... po... n... o... z... n... z... n... o... p... i... z...
z... o... r... w... o... z... o... z... o... r... u... u... on... ur... r... on... n...
on... r... n... o... ur... z... n... o... r... o... or... u... n... z... w... z... w... z... r... o...
z... r... no... z... no... n... z... p... o... p... u... r... z... or... z...

r... z... ow... r... u... z... z... un... z... w... r... q... on... Con... r... z... z... z... w... r...
r... pon... n... r... pon... z... r... ro... p... z... z... z... p... on... p... o... u... z... on
o... r... r... z... ro... r... n... r... z... z... z... r... z... n... z... n...
z... r... w... n... r... o... ro... p... z... z... ro... r... pon... n... ro... u... z... n... z... ur... z... r...
r... z... ur... r... n... ur... n... wr... n... pro... o... z... o... r... yr... z... u... z... on... n... w... z... or
o... ro... p... r... z... z... n... z... z... o... or... z... z... on... z... r... pon... u... w... r... o... n...
or... y... z... p... z... o... n... z... o... r... p... r... o... on... o... o... u... z... or... z... or... z... z...
z... p... on... z... z... ow... z... n... r... o... z... or... n... z... o... o... z... n... p... z... ur... o...
no... pro... z... n... w... r... o... u... q... on... nor... z... z... z... ur... o... u... n... on... z...
z... r... z...

5.5.2. Turning the question round: Implications for the proposed framework

E... n... w... z... ur... z... z... z... on... ur... n... o... u... o... or... p... r... on... o...
on... m... o... o... r... or... r... w... r... r... z... z... z... n... w... z... n... o... on... m... r... pon... n...
z... z... z... n... n... on... n... w... pr... z... e... r... pon... o... o... o... u... o... u... z... z...
o... z... z... w... r... z... w... r... pon... n... ur... z... no... z... u... o... p... z...
o... o... u... z... or... z... n... z... or... on... n... z... z... on... z... on... w... n... r... r... pon... n...
ow... r... n... r... wor... no... n... n... p... z... u... z... z... on... n... w... n... r... w... o...
on... pr... n... z... u... ur... z... o... pro... ur... r... n... z... o... ro... p... z...
u... z... z... o... r... r... z... z... o... z... n... u... z... z... r... n... r... n... ro... p... n... n...

wo n Zn o wor n w r roUp z y z z - n r o z z
r z z n o z n Zn pro o ow o r u ur r u n r o z or r
z p z pro n o u n r or z z pro z o wor

r z u z ow r r z z z z p z n r Zn o z z o pro o n o
Zn w r w z n n r n F ur r or n o u z z z roUp n
w u o u n z z r ur w or r por n w r o on u u z or
w u u n pr n w r Zn o z or w r o z z z z
on m o u no pro n n o w z Zn n pr z w z p z on
or pro z z o z r q ur o q u z z n p z on An
p z on o w z z z z n n r z war w n r n n
z o z ur p r p o unpr z o pro o wr n
o + u n w u z q u on w r z u z ro o or roUp
w z no o u ow z z r z r o u z w z z on u ow o z or
r r z z u r n z z on r z w z o z or
x p r n z z z on o ow o op w z u w ur n
o u o z nor n r z ur z z o u q u n n q ur -

o z r u z q u on Zn ur Zn n o w z z p n w n p op wr o r
n n u or z z Zn w z o u pro n z ur n z z on
ur z pro z w z r or z z on n z o ur o z u o o o r z on o z
w wr n roUp n Zn z ur z n z o on m u or z or r
z u w z pr n n z r z z

5.6. Summary of chapter 5

z p r z r por en z ur o x p r n o o z or z wr n o w n r
z z z o z or w z o u n z u on oo p z ur n wr n or z
or or z r wr n z z z r n o z n z p z n w z no n z z n por z
r n z n o u - D r n z r p p y n wr n roUp r por en n
ur n u n z p on z r z n o z r z z F u u z n r p z
o n o wr n roUp w r own o o on r n p ur o
o z or z wr n r por on r por n on o z n z pro w
on n u o u n o z on z r n o z on o q u on r z n o o on n o
e u n o z z z n

n r̄ā i o no z̄ā ur r̄ā u o n̄ā r̄u ur o wr̄n
ro up z̄ā e r z̄ā z̄ā on z̄ā on pr̄ā o o z̄ā or z̄ā wr̄n
n or r̄o y z̄ā n w r̄ā z̄ā on orn o u

CHAPTER 6. TURNING TO CASE STUDIES: AN INITIAL ANALYSIS

6.1. Introduction

Introduction to Case Studies: An Initial Analysis

EZ ro Zr roUp Z pr on o Zo op rz o n on
rz pr on no Zo o un zon w n oZ or n n on Z n o
on u ur n r w w pZ pZn pZ Z rZ pon urn r

6.3.1. Group (i)

Context, document and members

wo oZl or r Zu z FonZ w r wr n Zn z z pU, Zon o r
pZz r Zu Zn Zn Zn ou r n - Z on r Z o r
pZ w n z pZ u Zn z z Zn - pZ r wZ o r r U
o r on wor Zn wZ o U r Z or Z o Z on r n - DUrn r
w w o o wr n wZ on r wZ on rZ pr Ur o
Z n or pZ - U on Zn n wZ Zn pZ r wZ z p o
on r n - A on p r o e wor n U on Z r z Ur r o Z on w r z
o pZ r or n z z rZ z r on wZ pr oU or pU, Z on

Communication and use of technology

Z Zn FonZ z z o z r Zu on or wr n r Zu z z U no
w wr n - U o wr n o pZ o r r w - wr n r Zn
Zn / o o Un Z on w r ron Zu z Zn p on z z
y Zn w r z p on z w r - p r w Ur n U w - Bo
Zl or U z op z n / U r y n o pU r w ow y n
n z p quZ on pZ or Zn woU z p Z on r n z pr n
rZn rr w o r e U n w n U n ron y Zn on
n wor wor Z on - woU nor z n z n Zn Zn oU Zn wZ on
oZl or o z w r o z wor y Zn woU z on wo or n
on r n z r p r o - Bo Zl or z z o pr n r z r own z
oU pr n oU e U n or o woU o n pr n oU z op o e U n z
wr o n on U on y Zn z r r ron r on - FZ w
z o z z o wZ on U on o n - pU r or Zn n rU on - z
z o r z z o now o z o r wor n ron n n
p r o e wor z n Up o n z U on r z o wr n wor wZ z o
n n n roUp o pZ o o r wo z y

Z y o U on r w w or Zn p r o e wr n - wZ n z
r n o Z on ro o oZl or U wZ z o r z o z w o z
Zn n or Zn wZ pr n o n n an z no ra z z Zl or or o
p on z w n wo oZl or on z w r wZ no pr n w r r or or

on o ₊ o ₊ or- A_u

Zn Zouwrn or- i e u n ow n z u w z no r

Użycie... w... o...
o... n... pro...
n... ro... o... w... w... n... r... u... n... o... r... wo...
o... o... r... wo...
o... n... n... p... o... u... n... r...
ow... r... n... w... r... wor... n... on... r... n... z... on... o... y... n... z... w...
Un... o... r...
o... z... p... z... r... w... r... on... m... w...
o... o... r... z... p... n... z... p... o... z... wor...

o... r... w... z... pro... w... z... n... r... z... r... r... r... ro... z...
r... op... o... z... n... r... ro... p... w... ou... z... on... z... o... z... pro... or... n...
y... z... q... u... n... o... z... r... z... q... u... on... o... ow... o... z... or...
w... r... z... o... z... n... o... w... z... r... n... z... w... r... z... no... or...
y... z... p... u... p... z... z... on... p... z... o... u... n... or... z... z... wo... on... p...
z... p... z... n... y... z... n... ou... r... r... on... n... z... p... ro... Fu... r... or... n... n... z... n... z... n...
or... q... u... r... r... n... o... r... n... p... z... r... z... r... ow... r... z... r... n... z... n... z... p... z...
o... z... z... n... p... z... o... ow... o... z... z... p... z... r... p... r... o... u... r... r... r... o... z... z... z... z... r...
z... n... own... z... z... p... z... on... o... po... n... z... z... n... u... z... r... urn... o... n...
on... z... z... n... ur... r... n... z... p... r... z...

n... r... n... r... n... w... n... r... ro... up... on... un... q... u... n... o... p... z... r... n... own... z...

Communication and use of technology

For our presentation, we will use a new research method -
non-verbal communication. We will use a new method - A...

o n n p z u z u w n n z z r n r w n q u r z o u w r z
z p n w o u o n n o z n u z n o r z n w o u o r o n z n o
o w z u r p r o r z z r n o o n w o r z p z n z
n o n u o u o z w o z o z n z o u n z r p z n
o o o n z z p z u z z p n o r u z n z r r o u p
z z o x p n o z r n z o w r n o z u z z n
z r o u u n z n w z o r z n r p r z u z z z n o r z
z z r n z z z p z n o o o n

A o r n w z n n o z z n n e n z o z o r z n r p o r o
o r o z o r w z z p z n n o n u w n p o u

Urr n n o war u no ro z uz np u no u n o n Cz o
ow or n o un z w z n o n

Co z or ro r or z on r z or o p z q u on n prz o
wr n o r z n o o r z ur wo u n z ow r z o q u on o
Uppor u r r u n z p r on

6.4.4. Resource use

A no z z ur z z z u o z z z r o ur w r on m w z z o
por z r o ur z p z o w z z n u z ropp u p r u z n
r z on o z r ro up n ro up r z z z z p p r z n z n w z o
o ur z n u u z o z n u or n z z n por z n on m n z u z
pr z o r wor r z z or n z z z u on o w n o r z n r u n
w n - n ro up w z z n u z z z ro up u r n o r wor en
r w z u wor o en z p z r o wr z on z n u o w z p n
on z o r o z z n on o r

pro n n o z z p r on m o z ur or on r z z p w or n z
xp z on z o z ur or wo u or on m w n o z on o z o n z
r o ur - A z z o w r on m w z n r n o no z z xp no z
no z z z o o z ur or n u n no w ro o u wo u
Uppor z w w r z w z o w z u n ro up z w z no z op u n
r z p Cz o r u z n on n o z z z u n or n n ro up z
w z no u y p on -

An n r n pon o no o n o r z r o ur n r o z er on
o on z w n o z ur or n ro up z xp n on z n p on
on r z on w r z p z n on n z n ro up z w z n ro up r z n
o z o r p z r on z n o o r r z q u on o
w z n w z n p z u z n ro up w r r o ur n q u on w z p r on z r z n o

wo^u no z z^u en o wor Fon z n r r n o z n z z
z w n n -

A n z z o n ro^u p A z n wor on p z r w z z o n o p z o
o r wo w z z z on z o n o n n z n z
w w z n u n r w z z z p z o z z
n o n n wor o o r wo on p z r z pr on z ro z n
w o r wo w z r n o w z z w z u n z w r o n o r z u o u
z o z ro z ro^u p n r n n z u z o z or n r
w n z z z wro p z r z o r wa o n z C z o w r w r n z n o r
p z r o r w z r p r o n w z u w z on on z u z on w w z
z p z n u or z z o r o C z e o w r

ow r o u n q on r n u r z o or o n o
r w no o pr on rn o o or - n
r w z n r on z n w o o q on or u n z z
pr o z n

n y z r z pr n u r z ro z u z u
n r o

For the purpose of this study, the following definitions are used:

7.2. Document creation and evolution

7.2.1. Creation

The process of document creation involves the generation of a document from a set of requirements. This process is often iterative and involves the collaboration of multiple stakeholders. The document is created through a series of steps, including the identification of requirements, the development of a document structure, and the final review and approval of the document.

7.2.2. Evolution

Document evolution refers to the changes that occur to a document over time. These changes can be the result of new requirements, changes in the underlying data, or changes in the document's structure. Document evolution is a natural part of the document lifecycle and is often managed through version control systems. The evolution of a document is typically tracked through a series of versions, each representing a different state of the document at a specific point in time.

A $\int_0^1 \int_0^1 \frac{1}{1+x^2+y^2} dx dy$

on z r n z u on

F ur 7 ow z n ro p u n r z u z r z r on 7
w z o z z o z r on Ey z n z on o z u z r on z n r z
z u o o z or w n n o r z r z n z r r p r z n y n y z oppo
n r z n n w x

Con rn z o u or z n r z n z z Fon z o u n z on n r
z r o w o on on n w p or z n y n y z z p z n
z z p z o r z z r n r o z on o o p n u ur z r w r
z o por z n z w n o u n z n u z o z n w r w r y n
u z o o r n z on po n or or z r r n o on on n n w r on
z r q u r or z op u ur o o z p z n oo w
r q u r z n z p z n z r w r o on n z u z z o u o r z
o z on z z z o p z n r on f oo

7.3. Managing document access

.n 7p. r.

F ur 7 ow zn y za pi o ro up... zu y zn ur n za , za z za w n
e u n... w za r za xp za n za r za o za y zn -
n n za r p on za n za n o za o za o za of ou za

roUp ... r n pro ... n ... xp ... on o no ... n ... o pro r
... on po n Fr ... n ... no n w ... n or ... on ... o urn
Up ... w ... n ... r ... n no pro r -

7.4.2. Making changes visible

n roUp ... or ... own ... r ... or n ... ro w
... xp ... n ... pu n ... o ... n on n ... y ...
o ... n ... q ... r ... r o ... o u -

Letting the document carry comments

Bo ... roUp ... or wo ... o n ... n ... y o ... e u n
... w ... or y ... p ... q ... on ... o ... n ... w r no ... u ... wr ... n ... y ... o ... o n
... p ... n roUp ... r ... n ... r p ... o ... u ... n ... or q ... r ... ro u
... o ... n ... r ... o ... r ... n ... o ... u ... w ... n ... r ... n ... e ... u ... n ... u ... w ...
own ... o ... r ... n ... n ... o ... n ... w ... w ... x ... n ... u ... o ... w ... n
y ... r ... p ... n ... y ... p ... n ... w ... n ... w ... on ... n
... u ... r ... o ... n ... on ... y ... o ... n ... pr ... n ... n

... o ... on ...
a ... a ... n ... n ... a ... a ... u ... a ... n ... u ... u ... u
roUp ... e ... u ... n ... r ... on ... n ... p ... r ... r ... or ... r ... n ...

Co ... o ... r ... n ... r ... wor ... w ... n
Co ... wo ... n ... o ... on ... w ... p ... n ... For ... y ... p ... o ... w ... n ... o ... n
ro ... w ... r ... p ... or ... u ... n ... w ... n ... e ... n ... w ... n ... o ...
n ... r ... w ... n ... p ... w ... o ... n ... o ... or ... r ... n ... u ... n ... n ... y ...
r ... on ... B ... n ... w ... n ... r ... on ... r ... r ...
... n ... w ... r ... p ... B ... on ... o ... r ... xp ... r ... n ... w ... w ... r ... on
... r ...

n ... o ... w ... o ... r ... n ... ro ... on ... n ... n ... n ... o
wor ... o ... w ... o ... w ... n ... n ... ro ... roUp ...

n ... r ... on ... o ... n ... p ... w ... n ... u ... u ... a ... n ... a
or ... n ... r ... on ... p ... r ... n ... r ... wr ... n ... o ... n ... r ... p ...
n ... n ... a ... u ... or ... o ... r ... now ... n
n ... w ... o ... n ... r ... on ... For ... p ... w ... o ... n ...

p r o n o n u n q u z z z z w o r z n z - n z roUp
n u z p z o e u n o u on z p z p z u z pro u o
r pon p on n n n ron n or y z p n z pro
z n o z u or n roUp p p wor n p z z or z w z o
o o w n z z e u n r z p z z

z z n e u n z w z on n n on r u z n - n roUp
r z z z n n z z n or o r r z on z n w r n on r u p
r n n w o z z - n roUp opp w r y z n po z z
w n o z u or w r p wor on e u n or or o r r z on z z
z w r n n roUp z z o w z o z n e u n w r u
o o z n o z u or wo u p z n n o e u n on o wo u
p n o r u on or z z on wo u n z

a n un a n r n on o u n ou z own z o
u o o n on w z w z n z z z z ow r oppor u n w z z o z n
n z z o o u n z o r z r n roUp w z p z u z n z w z
r q u n n n z z z o p z n z nno u n n z z z o n w
r on ou z o n on wr n war or q u on or
o n z o u o r u w z o z or w z on rn w u z n Fon z z
z q u o n z p r on n roUp z n y z p o r n o z
z z n w z r p n xp o e w n o u n n z ow
o z p r on or o n z z z z r z n y n

on z n o u on o o z or n pro n r pon o z n n r u z n z
on o z o n z z z on w n roUp w n z
n z on o z r z z z p z pro z u z
u z no on on r z z z on w n roUp z n r z u z o z
r n z n y w n o z or w n z roUp z or z roUp o r n z n
w r n o o u r z pro z u z z on w wo u
r z or z o or o o p u r o z z z p z n z u or no
pro o o z or Fro a a n z n a a

7.6. Summary of chapter 7

z z o z u n z p r w z u n r z n n or w

CHAPTER 8. INFORMED OPPORTUNISM, AND DOCUMENTING CHANGES

8.1. Introduction

In the previous chapter, we discussed the concept of informed opportunism, which is a strategy for identifying and exploiting market opportunities. This chapter will focus on the practical aspects of documenting changes in a business plan, which is a critical step in the process of securing financing and launching a new venture. We will explore the various methods and tools available for tracking and recording changes, and discuss the importance of maintaining accurate and up-to-date records. The goal is to provide you with the knowledge and skills needed to effectively manage and document the evolution of your business plan over time.

The first step in documenting changes is to establish a clear and consistent system for recording updates. This involves creating a central repository for all changes, such as a dedicated folder or database, and developing a standardized format for documenting each change. It is also important to establish a regular schedule for reviewing and updating the business plan, and to communicate any changes to all relevant stakeholders. By following these guidelines, you can ensure that your business plan remains accurate and reflective of the current state of your business.

A no o z u on z o u z u o on p n or z u u
n r o z o o on r u n o r n z o w n o p u r n
r q u r n z o q u z z o o o z u o w r p r o
n r z z on w no o o o z u o r on z z n z o r z no
on z w z or o z o o z u or n z r r n z z r u n
p r n z o r o p z w w z z n z r u on z o n ro z
p z u z z z por z n - B u n z on n r o on r u o
n p r on p z z o r n z u u ro u
or z u n z o r e

ppor^un n n r n n o n u w z po or
r^u z n n r n n por r r n w z z n en o w z o u en -
r r o z z r z on n n o n z z n z z z no or y z p
z z n z y u on o p z n Bo n on ro y or A z n
z n r D on z o C u r r n En . 7 on pr on n on z
por z n n o u r n w n on p propo r z z o or
y z p w r n r z n n o p z n z on o on o u w r n
r z r n p z u z o on r n w z n o w r n z o n
r z n o n p z o p z o o w o z z u o o
on p z n w r n n r o w r n r z - n or oppor^un o u z n on
on on n z z on o u pro w o z or o o z n on
z o u w z wor o u en z z n p z u z r z r z on p z n n

8.3. Changing documents/documenting changes

wor o o z or n on n o z z n o z e u n on p o
n or oppor^un z r r n wor n o n z z n wor z o u
on r por n o z n z u z z n z r r por n o z z u z n z
p z o w z o z or e o o u on z on y n o w e u n n
z z z o n r z o r n o z o u n propo u z on p
o an n u n u n n an - n n o r n o or p z u z
wor en n z u z on o z z o z u r p z o u n z p z o
p z w n z n or oppor^un o z p z -

o u on r z on p w n z n z z o u n n o z o r
w z z w z z u por z n o z o u n n on r u on o z
z n o r z

Bo on r z on z z o u n n p z z n pr z z n z n
z z n o r z z z o o or u z on o z o u n
o u on
Bo n on r z on z n n n n pro p z z n 7 z p z

Zone 1 Unpr. Zone 2 r Zone 3

CHAPTER 9. DISCUSSION: SUPPORTING AN UNPREDICTABLE PROCESS?

9.1. Introduction

The first of the two main questions is: how can we support a process that is unpredictable? The second question is: how can we support a process that is unpredictable and also has a varying rate of execution?

The first question is addressed in the first part of the chapter. The second question is addressed in the second part of the chapter. The first part of the chapter discusses the problem of supporting a process that is unpredictable. The second part of the chapter discusses the problem of supporting a process that is unpredictable and also has a varying rate of execution.

9.2. Supporting a varying, unpredictable process

9.2.1. Indexicality vs. structure

, n

n n z p no on o p z y u on o n r z z o o u z z on
p n o n ro o w n u z n z w z z n r z o o n
z o u z z on n z o o r z on o r z z own z z n
p u r z ur r z z p z m o n z n r z on w n z or z n ron n
w z z en z oo z o w z o z or y z p o o o z u w z
z on u no n z ow o r z o ow o

o oon n r wor ow r q^u on o ro^u o p^u x z^u w u z^u
o u en on n o z^u u ro^u n o z^u or n ro^u p n r z^u ur on ro^u ar
wo p o ro^u z^u r u z^u r r r o z^u n n z^u o z^u ro^u p u n on n z^u
r z^u z^u o o o on z^u ro^u Brown B nn z^u z^u or n z^u propo z^u n u
z^u p n u z^u ro^u B nn z^u z^u r z^u ur on ro^u or ow
ro^u n z^u p po n z^u n u n z^u z^u n u ro z^u or no z^u o w z^u
u r p o z^u on o z^u n z^u o u z^u z^u z^u u z^u on p n n z^u ur
o ro^u z^u o u n u u on o w z^u p op z^u u z^u o y z^u p n u B nn z^u z^u
p z^u z^u Brown p z^u or o z^u or z^u wr n o n r p n z^u wor n
ro^u ar z^u on z^u u u n z^u o p^u y u o on n o
ro^u r n z^u or u p p or ro^u p r p z^u o n n o
z^u n n z^u z^u p n o on o ro^u C C r n o u on ro^u z^u n r z^u r on
n o u on z^u z^u p z^u w z^u Brown z^u or z^u pr r ro^u z^u r

pro. n. o xp. Uppor. q^u on o w z pr. w zn
ro. r or. r nzn. n w z z z or Uppor. n. ro. p. -

y. n. z. q^u on o ro. n o z^u or n. ro^u p. ro^u
y z. n z. on o. z. r. p. z. on o r. pon. n. ur. z. r. z.
y z. n z. on o ro. n. z. y. z. r. on. A. r. por. n. o
z. r. n. o on or. zn. o. n. z. ro. w z. o^u n. E. n. w. n. n. z.
z. n. z. z. o. xp. r. y. z. o. u. or. r. z. own. z. r.
z. y. z. n. r. w. n. pr. n z. y. u. w. n.
z. p. z. y. z. o. w. n. o z^u or n. z. or. ro^u p. no. on o ro.
o. p. y. z. n. z. r. o. or. no. ro^u n. or. z. u. n. a.
r. z. o. on. p. o. o z^u or. r. o. pro. ro. Uppor. z. p. z. o.
o. r. p. z. n. r. z. r. q^u r. n. o. C. C. r. n. -

Plans

A. u. n. z. r. on. zn. u. w. z. o. up. zn. o. n. u.
z. u. u. zn. z. A. r. on. r. z. w. n. z. p. r. p. on. o. p. zn. z.
r. n. n. z. on. z. w. z. z. u. z. n. z. ur. o. u. zn. z. n. on. r. z.
w. z. w. u. zn. propo. z. p. zn. z. r. o^u r. or. z. on. z. pon. o. z.
or. o. n. n. u. zn. z. u. n. z. p. zn. z. r. o^u r. or. z. on. n. z. z.
z. op. n. q^u on o. n. w. z. a. z. r. o^u r. or. z. on. ur. r. r.
w. z. z. zn. p. z. on. o. r. z. n. z. u. u. n. o. p. zn. n. n.
u. r. p. n. z. z. p. z. zn. or. u. u. p. r. on. z.
o. u. n. z. on. on. on. r. w. z. n. w. p. zn. z. z. r. z. r. o^u r. or.
z. on. or. o z^u or. o. r. z. ur. r. y. n. o. w. p. zn. n. z. z. r. z.
u. u. p. ur. po. z. on. o z^u or. z. z.

n. o. p. zn. n. n. z. n. n. o. z. on. o. z. r. n. w. n.
o. z. or. z. or. o. w. z. z. on. o. z. on. r. z. o. w. z. w. u. zn. o. u. on.
n. z. p. zn. n. n. w. or. y. z. p. r. u. o. w. o. o. z. or. z. or. n. p. r. z. y.

p. u. z. n. z. z. z. pro. z. no. r. on. o. o. z. ro. zn. or. z. ur. z.
n. z. zn. r. n. prop. r. o. o. z. or. z. on. w. z. zn. n. z. no.
n. n. r. ro. p. o. z. no. z. u. o. n. o. z. or. z. or. z. a. u. or. z.
o. a. u. n. r. xp. r. n. o. wor. n. o. o. n. z. r. on. z. z. o. z.
r. o^u r. or. z. on. o. u. n. z. w. z. r. n. or. zn. z. ur. r. r. o. ro. o. z. or. z. or.
on. p. u. z. z. on. o. r. wor. z. p. zn. z. r. n. z. ro. z. on. p. o. z. or. z. or.
or. n. e. An. y. p. on. o. or. z. pr. r. ro. w. z. z. o. z. or. z. or.

Przebieg choroby jest zmienny, w zależności od rodzaju i czasu trwania choroby.

Atak choroby jest poprzedzony przez objawy prodromalne, które mogą być różnorodne, np. bóle głowy, nudności, wymioty, gorączka, zmęczenie, osłabienie, bóle mięśni, bóle stawów, bóle gardła, bóle klatki piersiowej, bóle brzucha, bóle pleców, bóle szyi, bóle kończyn, bóle twarzy, bóle uszu, bóle oczu, bóle nosa, bóle gardła, bóle krtani, bóle tętna, bóle naczyń krwionośnych, bóle naczyń limfatycznych, bóle naczyń włosowatych, bóle naczyń włosowatych skóry, bóle naczyń włosowatych błon śluzowych, bóle naczyń włosowatych błon spojłkowych, bóle naczyń włosowatych błon spojłkowych oka, bóle naczyń włosowatych błon spojłkowych nosa, bóle naczyń włosowatych błon spojłkowych jamy ustnej, bóle naczyń włosowatych błon spojłkowych jamy nosowej, bóle naczyń włosowatych błon spojłkowych jamy nosowej i jamy ustnej, bóle naczyń włosowatych błon spojłkowych jamy nosowej i jamy ustnej i jamy nosowej.

, n ž on ž n ž o ž r n o ž p ž ž ž ž ž on ž o o

Za z r or , no on/ Un p u, n , n z u o u z o u w z z n z u z o
Za or , n e u r p u r p o o u r n r z q u on o z o p u r
z p p r o p r z z u z u z p r y r n

or... o... n... up... r... n... w... n... o...
o... o... r... o... n... r... or... n... o... on...
p... r...

9.4. What might it mean to support distributed collaboration in writing?

n... on... or... p... on... or... n... u... pro... n...
x... p... o...

poor C₂ or

z on z uz z r n z zn por zn z or o z n u
o no on or nor n o z r n u r o n n por zn o
y n o o un z on z ro w u u zn z y z
z p n on o z n z u p on o or y z p o z or z or
z z w r zn no o o n n p or p op w o z r z on z
z u o o or z u r o z or o n z or r z on z o n
u o u ypr ro o z z pro z n o z p z n
por zn o z o z n z on o z or z wr r z u z o z
n r z ur o r z or on r z z r F z C z on n z
z u u w z w r por o or z y z n z o z
u z on or y z p z z u p n w zn por zn p z o
o z or z wr n pro u u w z n z no y zn n z
u ur n ron n r or z z n z z o un u ur zn o
o un z on w n z or ro p o wor u u o +

on n o r n o u n u z o or zn n o war z r z on p
w n -

o o or on r n p z on w o u r z n ro pr z
n z on o z u n n y on

9.4.3. Some tentative, specific implications

r n p z on z o u on n u on n z p r z o z
u z z r z n n o p u on or w z p z on or
o p u r on o u on z n o z o u x p r n
n z u z on r z on n o z r n z o o p u r p n z on o
r or z z u on z o z n z n z z pr z z r z n
u o on r z r z n r pr n z por z
o on r z pro w z n z on z n ro op n p u on z
z o on r n p z on

Fluctuating group membership

n z p r p z on o ur n n o u z n ro up r p z
n u z n o n o ro up w r u z u pro
on r z or z o w z z n z n on z or pr z z or z z on o
wor n z o z or n u p p o r z z o u p r on o u z
z o p n on ro up r p ow r ro up z z u n z n on o
r p o u o pro z u p r on p n on r p F u r
n z p z on o o w o r z o u pro z o
u z n pro o u r p r o n or n ro up o z x p or z o
z o u p o n z r D n u o r o on r z u w z

Integration with standard platforms

Uppor po w zow y n y n o r o z n orpor z u u z n n n E A r z z n n z n u r z n n

Formatting

Co or z w z o z or z n z ro o E z o z or z n z u n z y w z no on o p u z n z o Uppor z r z o n z on o z or z o u n rpr on y or y z p z n p z w z no n n o n n z r on z o u Co p u r z o u Uppor y z zown y z o u n n z or z or ro o u wr n pro -

Grounding communication in the document

z p z z or o z n por z o o U n z r z on z n - o o Uppor n z o o U n z on z o u u n o z n n u n u n z o u o r o on ro u n o o U n z on w n z ar pro n o pr n o u on z o u u n z zown n u o r r n - u z z n pro n o z or n E u wr z C z o z or z pro z or z or n z no z on n p z u z U n or y z p z z r z n z r z For u z n o u o z or n A E B z z o o n r z z z E A r z z n n z n u r z n n

Communicating changes

o z or r u z w o r z n on o o o r z n o n n on o z on z n r q u n r n z ur Co z or z o o U n z z n n n no p n o w z z n wr n ro u z o u u z r z o n z por z n n z n z w n n o z z n z Uppor po o u r u o r z o n z n pro n z z n o r r n o z n o z on z n op on z z own no z o u z n o z z E y z u wr C z o z Er on or z z n n on n z o u on o n z n o p n n w o r p z z r z -

Author information

D... on... w... n... w... z... z... o... z... o... z... on... w... r... z... n... u... n... w... o...
z... w... r... n... A... o... z... or... n... o... o... pro... w... u... p... p... or... n... o... w... o... w... z...
w... z... u... r... ro... u... p... z... u... r... n... on... z... o... r... z... n... u... n... A... E... B... z... r... z... o...
o... n... r... z... z... w... pro... z... u... or... n... or... z... on... z... o... z... z... z... z... z... u... w...
n... on... r... z... or... x... p... or... z... on... z... or... z... z... z... z... z... o... u... own... r... p...
n... or... z... on... o... u... z... u... u... n... z... o... ro... u... p... n... w... r... z... o... n... own... r... o... pro... u... x...

History information

E... n... z... z... p... z... o... r... z... r... or... y... n... p... ro... o... o... u... n... or... p... z... z... w...
u... p... p... or... z... n... u... n... z... o... u... o... p... i... n... o... z... on... n... n... p... z... o...
e... u... n... For... y... z... p... z... n... or... z... p... r... n... z... z... q... u... r... p... z... o... z... -
u... o... z... or... z... o... u... on... y... o... p... z... u... z... z... n... r... p... o... n... z... n... p... n...
r... r... r... z... on... n... An... n... r... n... z... p... ro... z... o... r... on... z... z... n... z... or...
n... or... z... on... pro... n... p... r... z... r... on... r... r... Co... r... z... z... z... z...
w... n... w... p... r... y... z... n... z... y... o... z... or... n... E... A...

Planning and status information

A... u... or... u... w... p... z... o... o... u... n... z... n... o... u... u... w... or... on... z... w... z... o...
on... r... u... n... or... r... o... u... o... z... z... z... o... u... u... p... z... on... or... o... on... o... n... u... z... z... r...
z... n... z... u... i... o... z... z... z... n... -... F... u... r... or... p... z... n... z... n... z... z... r... o... u...
n... x... p... z... r... o... o... z... o... or... n... o... o... z... or... u... p... p... or... n... n... r... z...
y... z... n... o... n... or... z... on... z... o... u... u... r... x... p... z... on... z... o... u... o... z... z... or... z... p... z...
z... n... r... q... u... n... u... r... o... o... w... p... z... n... p... r... o... u... z... For... z... u... u... r... n... z... p... z... n... n... o...
u... z... E... E... z... n... p... z... u... z... z... n... on... z... n... o... p... z... o...
z... n... p... r... o... u... w... or... z... o... z... -... E... A... p... z... z... p... z... n... n... p... z... z... p... ro... or...
u... u... o... o... z... or... z... z... p... z... or... u... n... u... r... u... on... on... z... z... o... u... n... u... n... n... z...
o... n... z... z... p... z... or... o... o... n... z... n... z... z... n... z... n... z... u... i... o...
y... r... n... z... w... r... n... p... z... n... r... p... o... z... or... or... on... r... o... n... p... ro... r... o... z... n...
p... ro... z... u... q... u... o... r... z... z... z... n... z... n... u... i... z... n... i... r... n...
p... -

w r no o zn rzo z p n u / on n r o z z
z o p r u o zn r or ur no pro or n r z z
r u A r n u n ur z n z n w z z z p o z
q u z z z w r o o q u z z q u on no z z q u on z r
u n u z n z z p z n r z n u u D p
pro z z x p o r z o r u x p o r n r z n u z r z n

o Uppor z r n w wor pr z o p z p z po z z
n o z w z r z z o on p u z z o p n ow r
z o n r o o r z n o p r o z p z u z no o - n
o z z u z or y z p n r z Crow oo - no r z o
n r o u on o r z o no o p r n n r n z z o o u w z
pro on o z q u z no o or z p z u z u z on no z p z n r n
n r z p z on F z on u o z p z u z no o z r or z z z
n w on r u on o no r z p z u z z p r z z o u n
o r n n z An r n u n z - 7 -

9.6. Summary of chapter 9

The first part of the chapter discusses the importance of the role of the state in the development of the economy. It highlights the need for a strong and effective government to provide the necessary infrastructure and public services that are essential for economic growth and development. The text also emphasizes the importance of maintaining a stable and predictable macroeconomic environment to attract investment and foster long-term growth.

The second part of the chapter focuses on the role of the private sector in economic development. It discusses the importance of creating a favorable business environment that encourages investment and innovation. The text also highlights the need for a strong legal and regulatory framework to protect property rights and ensure fair competition.

CHAPTER 10. CONCLUSIONS

10.1. Summary of thesis

The main objective of this thesis is to study the properties of the operator \mathcal{L} defined by $\mathcal{L}u = -\Delta u + \nabla \cdot (u \nabla \phi)$ in a domain $\Omega \subset \mathbb{R}^n$.

In the first chapter, we study the existence and uniqueness of solutions to the problem $\mathcal{L}u = f$ in Ω with homogeneous Dirichlet boundary conditions. We prove that the operator \mathcal{L} is elliptic and that the problem is well-posed in the sense of Lax-Milgram. In the second chapter, we study the regularity properties of the solutions. We prove that the solutions are smooth in the interior of Ω and that they satisfy certain estimates near the boundary.

In the third chapter, we study the asymptotic behavior of the solutions as the parameter ϵ tends to zero. We prove that the solutions converge to a limit function and that the convergence is uniform in certain regions. In the fourth chapter, we study the numerical approximation of the solutions. We prove that the finite element method converges to the exact solution and that the convergence rate is optimal. In the fifth chapter, we study the stability of the solutions with respect to perturbations of the data. We prove that the solutions are stable in the sense of Hadamard. Finally, in the sixth chapter, we study the applications of the results to the theory of partial differential equations.

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LIST OF APPENDICES

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