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# The Butterfly Effect in Alice Munro's "Day of the Butterfly". Chaos, Empathy and the End of Certainty

When Literary Discourse Analysis Meets Chaos Theory

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**The Butterfly Effect in Alice Munro's  
"Day of the Butterfly"  
Chaos, Empathy and the End of Certainty  
- When Literary Discourse Analysis  
Meets Chaos Theory**

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"There are more things in heaven and earth, Horatio,  
Than are dreamt of in your philosophy."  
*Hamlet*, I, 5, 174-5

It started as a joke. Edward N. Lorenz, Professor of Meteorology at the M.I.T. was late giving the title of his communication; the organizer of the 139<sup>th</sup> meeting of the American Association for the Advancement of Science invented one: "Predictability: Does the Flap of a Butterfly's Wings in Brazil Set Off a Tornado in Texas?", which Lorenz humorously accepted. On December 29, 1972, at 10:00 a.m in the Wilmington Room of the Sheraton Park Hotel, the "Butterfly Effect", one of the most popular features of chaos theory, was born. To some, connecting chaos theory with literary discourse analysis and reading theory might look like a joke too.

This paper nevertheless aims at opening some privileged space where science and literature can be reconciled for a while, following an intimate belief that, in Siri Hustvedt's words, "no single theoretical model

can contain the complexities of human realities" (2012, X) nor provide a satisfactory way of interpreting a work of art.

First, a brief presentation of chaos theory<sup>1</sup> will reveal surprising and meaningful correspondences with the ways literary discourse is created and interpreted. And, although it was written a few years before "the Butterfly Effect" was given its name, a story called "Day of the Butterfly" seems a privileged object of focus. Furthermore, all Alice Munro's stories are intricately complex systems, and this early work is no exception. It is therefore my hope to offer useful if slightly unusual instruments to help the reader become more aware of reading trajectories, to decipher the mysteries of a writer who reveals complexity as part of her most intimate being, and who once described herself as "a friendly person who is not very sociable"<sup>2</sup>, and powerfully asserted, when questioned by Paula Todd: "writing seems to be the best thing you can do with your life – telling the truth as near as you can do it – tackling the experience of being alive as best you can", before modestly adding, "I don't know".

### **A glimpse of chaos theory, butterflies and attractors**

In *Chaos, Making a New Science*, James Gleick tells of how Lorenz, methodically studying weather prediction in his office at the M.I.T, for once entered rounded-off numbers in his computer. Instead of the six decimals (.506127), he entered three (.506), assuming that in his modelling of the earth's weather, the difference would be negligible. He let his enormous Royal McBee computer do its work, got himself a cup of coffee to get away from the noise of the gigantic machines, and came back some time later to read the results – which were astonishingly different from those expected. "That first day, he decided that long range weather forecasting must be doomed" (Gleick, 2008, 17). But Lorenz was also a mathematician; he therefore pursued his studies of what he described as dynamical aperiodic systems<sup>3</sup>, simplifying his weather model to a system of

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<sup>1</sup> Inevitably entailing simplifications which I hope the physicists coming across this article will forgive; my only defence being that Lorenz himself used simplified models of the weather to theorize his findings.

<sup>2</sup> *Paris Review*, The Art of Fiction N°137

<sup>3</sup> i.e. "systems that almost repeated themselves but never quite succeeded" (Gleick, 2008, 22)

three non-linear equations<sup>4</sup>. And, in spite of the fact that, as Gleick pursues, “analyzing the behaviour of a non-linear equation [...] is like walking in a maze whose walls rearrange themselves with each step you take” (22-24), he nevertheless established a link between aperiodicity and unpredictability and was able to evidence “Sensitive Dependence on Initial Conditions” (SDIC) the more serious-looking – though much less poetic – name for “the Butterfly Effect” and a defining feature of “unstable aperiodic behaviour in non-linear dynamical systems”, to take up the concise definition of chaos given in the *Stanford Encyclopaedia of Philosophy*.

“But Lorenz saw more than randomness embedded in his weather model. He saw a fine geometrical structure, order masquerading as randomness” (Gleick, 2008, 22). Seemingly random and unpredictable behaviour does follow precise rules. And it is a major feature of chaotic dynamics to be confined to what is known as an attractor, revealing and structuring folding and stretching of trajectories. In a seminal paper published in 1963, “Deterministic Nonperiodic Flow”, Edward Lorenz drew a fragment of the trajectory of a point to illustrate the chaotic behaviour of a fluid as modelled by his three equations for convection:

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<sup>4</sup> “Meaning that they expressed relationships that were not strictly proportional”. (Gleick, 2008, 23)

THE BUTTERFLY EFFECT IN ALICE MUNRO'S "DAY OF THE BUTTERFLY".  
 CHAOS, EMPATHY AND THE END OF CERTAINTY  
 WHEN LITERARY DISCOURSE ANALYSIS MEETS CHAOS THEORY

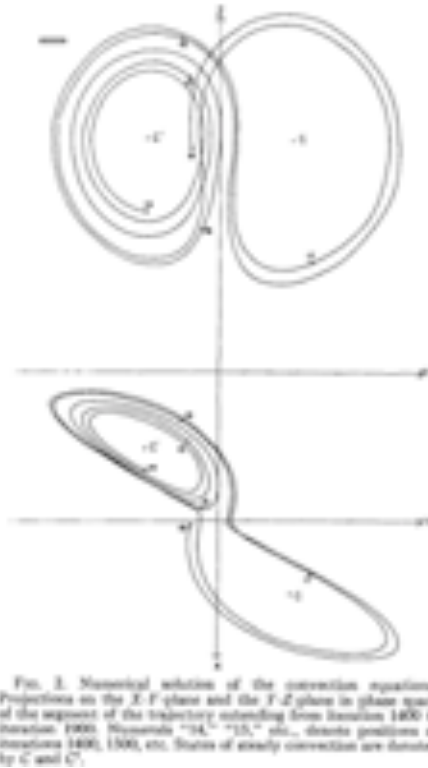


Fig. 3. Numerical solution of the Lorenz equations. Projections on the  $XZ$ -plane and the  $YZ$ -plane in phase space of the segment of the trajectory extending from iteration 1400 to iteration 1900. Iterations "14," "15," etc., denote positions at iterations 1400, 1500, etc. Series of steady convection are denoted by  $C'$  and  $C$ .

“To plot just these seven loops required 500 successive calculations on the computer” Gleick explains, pursuing “because the system had three independent variables, this attractor lay in three-dimensional phase space. Although Lorenz drew only a fragment of it, he could see more than he drew: a sort of double spiral, like a pair of butterfly wings interwoven with infinite dexterity [...] those loops and spirals were infinitely deep, never quite joining, never intersecting. Yet, they stayed inside a finite space” (2008, 139-41). Eventually, Lorenz’s strange attractor would look somewhat like the following image<sup>5</sup>

<sup>5</sup> To be found in Larry Bradley’s site, Department of Physics and Astronomy at Johns Hopkins University: <http://www.stsci.edu/~lbradley/seminar/attractors.html>



It thus appears that chaotic systems are dynamical, non linear systems which exhibit Sensitive Dependence on Initial Conditions and whose apparently erratic behaviours in fact trace precise trajectories that fold and stretch along underlying structures known as strange attractors<sup>6</sup>.

### **Literary chaotic systems: dynamism, non-linearity and SDIC**

In *Prospecting, From Reader Response to Literary Anthropology*, Wolfgang Iser asked two essential questions that seem to echo Lorenz's concerns: "how shall we then describe the **dynamic** character of a text? Can one, in fact, assess the **keen disturbance** so often experienced in reading serious literature?" (1989, 3, emphasis mine). Should we pay close attention to words, it naturally follows that literary texts in general, and short stories in particular, are complex<sup>7</sup> chaotic systems.

First and foremost, they are dynamic, non linear systems. To exist, they combine writing and reading, two intensely dynamic processes.

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<sup>6</sup> Some attractors are called "strange attractors" when they have a fractal structure, which is very often the case in chaotic systems. Although this probably opens innumerable interpretative possibilities, it would require more than the limits of this paper to develop them in an intellectually honest way.

<sup>7</sup> Edgar Morin also reminds us that "la complexité est un tissu (complexus: ce qui est tissé ensemble) de constituants hétérogènes inséparablement associés: elle pose le paradoxe de l'un et du multiple." (2005, 21). Therefore, text and complex share the same Latin etymology of *textus*, woven; by nature, texts are complex systems.

Michael Toolan, in *Narrative Progression in the Short Story* calls readers "prospectors", trying to understand

how it is that great writers fashion stories in ways that lead us on, sometimes leads us astray, draw us in, take up all our powers of attention and concentration, and induce in us that whole gamut of reactions and emotions- including desire, revulsion, inspiration, grief and fear." (2009, 12)

Although at first sight, it might seem slightly provocative to describe a piece of writing as non-linear, we only need to consider the eye movements on the page to see horizontality and verticality combine to draw serpentine lines – and that in most languages, albeit not from the same starting point. Furthermore, reading itineraries are known to imply tracing cohesion networks that involve jumping over bits of text, making anaphoric or cataphoric moves, drawing oblique lines to make connections inside a textual space turned chess-board. They might also possibly even entail exophoric excursions to the real world to make better sense of words on a page, identifying potentially enlightening referents in the case of autobiography or symbolism for instance. We trace "chaotic lines" over the text, reminiscent of Deleuze's "lignes d'erre" (1996, 155), following some strange and intimate design which yet remains to be identified.

Sensitive Dependence on Initial Conditions is another essential feature of reading literature. In a short story, the first "initial condition" a reader encounters is the title; Munro's initial title to "Day of the Butterfly" was "Good-by Myra". In terms of framing and raising expectations, the difference is radical. "Good-by Myra" merely leads the reader to expect a linear story about separation, possibly death. "Day of the Butterfly" is more demanding in terms of interpretation. We have to make hypotheses and multiply prospecting directions. "Day of" suggests it is a special day, possibly a birthday, or else, because of the collocation, Day of Judgement, Doomsday, Day of Wrath. "Butterfly" evokes metamorphosis and ephemerality because of our knowledge of the world and butterflies. To poetry lovers, it might evoke Robert Frost's poem "Blue-Butterfly Day"<sup>8</sup>:

It is blue-butterfly day here in spring,  
And with these sky-flakes down in flurry on flurry  
There is more unmixed color on the wing

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<sup>8</sup> Originally published in *The New Republic*, March 16, 1921.

Than flowers will show for days unless they hurry.

But these are flowers that fly and all but sing:  
And now from having ridden out desire  
They lie closed over in the wind and cling  
Where wheels have freshly sliced the April mire

Or indeed any butterfly poem that they might know, like Emily Dickinson's

From cocoon forth a butterfly  
As lady from her door  
Emerged- a Summer Afternoon- Repairing Everywhere –

Without Design - that I could trace"<sup>9</sup>

Symbolically, the butterfly is often associated with the soul, the Other World, death and resurrection. As is often the case with intertextuality and symbolism, although definite connections with the author's intentionality are impossible to make, the richness of echoes and associations is complex and dynamic – possibly chaotic. The title might indeed, as it did for me, evoke the "Butterfly Effect"; how a tiny detail might have unfathomed consequences. Initial enigma creates defamiliarization that inevitably generates a profusion of meanings and defines the reading pact as interpretative quest. It places the reader in the position of co-creator of sense, and because we stand on the textual threshold of the paratext, in a privileged relationship with the author herself, tightly secured by Paul Grice's Cooperative Principle. There is meaning in that title, and it is our role to let it resonate.

The readers' relative autonomy in this non-linear and dynamic deciphering process eventually also signs a difference in literary category. Barthes, in *S/Z*, opposes "readerly texts" to "writerly texts". "Readerly" texts are linear, unidirectional, relatively simple to understand, they make easy, pleasurable reading; "Good-by Myra", originally published in July 1956, in a Canadian woman's magazine *Chatelaine*, in columns framed by advertisements for "Viceroy Household Gloves", "Pink Ice" washing up liquid, "Princess Pat Hair Nets", next to the detailed answer to a Reader's Question about how "to remove machine oil from a man's white shirt?"

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<sup>9</sup> See Emily Dickinson, *Complete Poems*, Faber and Faber, 1970, n°354



would belong to that category<sup>10</sup>. A "writerly" text is more complex; it requires dynamic understanding and interpretation which, in Barthes's words, means "apprécier de quel pluriel il est fait" (1970, 10); as such, it is potentially chaotic and is defined as *texte de jouissance*.<sup>11</sup> "Day of the Butterfly", revised to be part of *Dance of the Happy Shades* in 1968, would belong to that last category, as a comparison between the two versions of the last paragraphs shows. The first version reads:

"You take it" said Myra, in such a soft voice that I could hardly hear her. But I still felt her touch, not with my mind but with the nerves of my skin. I understood the demand that made. And it was too much.  
The nurse came back, carrying a glass of chocolate milk, and she said: "What's the matter, didn't you hear the buzzer?"  
"All right" I said. I said to Myra, "Well, thank you for the -thing. Thank you". I hesitated, trying to think what else I could say. "Thank you. Good-by".  
At the door I had to pause some more and look back at her sitting in the high hospital bed. I thought that soon I would be outside. So I called back quickly, treacherously *in fact* [corrected in Munro's hand - the original can't be read]. 'Good-by'.

The final one:

"You take it". She put it into my hand. Our fingers touched again.  
[...]  
The nurse came back, carrying a glass of chocolate milk.  
"What's the matter, didn't you hear the buzzer?"  
So I was released, set free by the barriers which now closed about Myra, her unknown, exalted, ether-smelling hospital world, and by the treachery of my own heart. "Well thank you," I said. "Thank you for the thing. Goodbye."  
Did Myra ever say goodbye? Not likely. She sat in her high bed, her delicate brown neck, rising out of a hospital gown too big for her, her brown carved face immune to treachery, her offering perhaps already forgotten, prepared to be set apart for legendary uses, as she was even in the back porch at school. (110)

The disappearance of all the *inquits* and the slipping into Free Indirect Style foreground interiority and offer unmediated blurred clear-sightedness to the reader. The interweaving of viewpoints -- Myra's

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<sup>10</sup> A facsimile of the original publication is to be found in JoAnn McCaig, 1997, 252.

<sup>11</sup> For a synthetic vision of the opposition between *texte de plaisir* and *texte de jouissance*, see the brief interview of Roland Barthes: <http://www.ina.fr/video/CPF10005880>

interpreted viewpoint embedded in Helen's, "her offering **perhaps** already forgotten", Helen's remembering "as she was even in the back porch at school" interweaving with the adult's enigmatic wording of the child's perspective "prepared to be set apart for legendary uses" – all these create a complexity and a demand for interpretation that is totally absent from the first, much more explicitly descriptive, version. In "Good-by Myra", we are told by the retrospective narrator about the character's ambivalence: "I understood the demand that made. And it was too much", "I thought that soon I would be outside", "treacherously in fact". In "Day of the Butterfly" we experience ambivalence, we feel it. It leaves us perplexed rather than evaluative; it remains interpretatively unsolved. Munro's revised story, like all "writerly texts" whose meaning is not immediately given, can thus be described as a non-linear dynamic system sensitive to initial conditions; as a chaotic system.

### **Strange textual attractors?**

One of Lorenz's major discoveries was that chaotic dynamics is characterized by folding and stretching of trajectories that are confined to some strange attractor. If the complex dynamics constituted by "Day of the Butterfly" and its reader qualifies as chaotic, it necessarily supposes the existence of such an attractor.

In the context of literary discourse analysis, reader-response theory focuses energies around a multi-tiered system that is deeply sensitive to initial conditions too, the empathy system<sup>12</sup>. At reader level, we have already seen how Munro's final title triggers a chaotic reading process. Yet, initial conditions are not limited to the paratext; they also concern the *incipit* of the short story<sup>13</sup>, the initial paragraph, and might even be thought of as part of the thematic structure at paragraph and sentence level.

The initial paragraph of Munro's story reads as follows:

I do not remember when Myra Sayla came to town, though she must have been in our class at school for two or three years. I start remembering

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<sup>12</sup> Empathy in literary discourse analysis exclusively concerns the capacity to adopt a point of view and must clearly be dissociated from the more subjective notion of sympathy.

<sup>13</sup> For a precise definition and classification of *incipits*, see Bonheim, 1982.

her in the last year, when her little brother Jimmy Sayla was in Grade One. Jimmy Sayla was not used to going to the bathroom by himself and he would have to come to the Grade Six door and ask for Myra and she would take him downstairs. Quite often he would not get to Myra in time and there would be a big dark stain on his little button-on cotton pants. Then Myra had to come and ask the teacher: "Please may I take my brother home, he has wet himself?" (100)

The opening, "I do not remember", creates tension based on paradox and reveals complexity; the narrative is established as retrospective while memory is said to fail. What then follows is a name "Myra Sayla", which might stop the reader because of its phonetics. The first name is unusual; we are not quite sure about the pronunciation of the second: /sai/ for assonance reasons, or /sei/. We are not now, nor will we later be, given any information about the geographical origins of the girl. Her name poetically chimes, ra / la, Myra rimes with "admire"<sup>14</sup>, but also, potentially ominously with "mire", the final word in Robert Frost's Blue-Butterfly Day. Sayla, depending on the pronunciation chosen might evoke "saying" or "sighing". We might also be sensitive to vocalic echoes between Myra and butterfly and possibly between Sayla and day, initiating a privileged network between Myra and the butterfly<sup>15</sup>. Once more, the puzzled, meditative reader wanders on interpretative uncertain pathways. Although it might seem futile, this has major consequences on our positioning with respect to the narrator and a character we presume is going to be central in the story.

Kuno and Kaburaki (1977, 627-672) were the first to systematize an empathy hierarchy in interaction, stating three major rules<sup>16</sup>:

- Surface Structure Empathy Hierarchy

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<sup>14</sup> And as we shall see later meaningfully with "sapphire" in the epiphanic scene

<sup>15</sup> Which will indeed be pursued in the course of the story, in particular through the colour blue, associated to the butterfly and Myra's dresses: "she glimmered sadly in sky-blue taffeta" (106)

<sup>16</sup> And 3 main principles :

- The Ban on Conflicting Empathy Foci

A single sentence cannot contain logical conflicts in empathy relationships

- Word Order Principle

If you are going to introduce anew into the discourse an object A (e.g. John) and another object that is defined with respect to its relationship with A (e.g. John's brother) introduce them in that order.

- Syntactic Prominence Principle

Of the people whom you are describing, give prominence to the one you are empathizing with.

It is easiest for the speaker to empathize with the referent of the subject ; it is next easiest for him to empathize with the referent of the object [...] it is next to impossible for the speaker to empathize with the referent of the by passive agentive.

- Speech Act Participant Empathy Hierarchy

It is easiest for the speaker to empathize with himself; it is next easiest for him to empathize with the hearer; it is more difficult for him to express more empathy with third persons than with himself or with the hearer.

- Topic Empathy Hierarchy

It is easier for the speaker to empathize with an object (e.g.person) that he has been talking about than with an object that he has just introduced in the discourse for the first time.

In a literary narrative, it therefore follows that the speaker/narrator primarily empathizes with herself, then possibly with the referent of the subject, all the more so if it corresponds to a person/character she has been talking about, in other words, that she knows well. A rather easy translation to the other side of the interaction relation enables us to postulate that for the reader, empathy is easiest with the subject of the speech act, i.e. with the speaker/narrator, then possible with the referent of the subject, i.e. possibly a character – all the more so if the character is well known, due to narratorial choices of foregrounding. In our story *incipit*, empathy with the narrator is problematic since she “do[es] not remember”; Myra Sayla, whose name is doubly foregrounded, and who is the next “subject” we meet, is the most immediate next candidate, but she is a third person. The epistemic modality “she must have been” nevertheless seems to elicit double empathy from the start: with the narrator who is interpreting, and indirectly with the character whose unexplained transparent presence implicitly becomes a problematic object of focus<sup>17</sup>. The next sentence starts with the same theme: “I start remembering her”, tilting the empathy balance back on the side of a narrator resuming her full narrative power. The themes of sentences four and five are temporal: “Quite often” and “Then”, the latter being tinged with a sense of inevitability, confirmed by the deontic modality “Myra had to come and ask”, the result of Helen’s deciphering of the situation.

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<sup>17</sup> There are many, more explicit, occurrences of this phenomenon of embedded perspective: “Perhaps they watched the baseball games, the tag and skipping and building of leaf houses in the fall and snow forts in the winter; perhaps they did not watch at all.” (101), or “Perhaps she thought I was playing a trick on her” (104)

At the end of the first paragraph, the reader is therefore faced with three variables that define the three dimensions of the complex textual attractor:

- a retrospective self-conscious narrator who is reporting fragmented memories while trying to make sense of her position,
- a central object of focus, Myra, who, at the outset of the text, is defined by her role as her little brother Jimmy's helper, sees herself and is seen as marginal, inevitably trapped in embarrassing situations because of him,
- and another character who emerges as a textual watermark, the narrator's younger self, a witness of Myra's predicament whose degree of emotional involvement is rather difficult to identify (whom we shall, for the sake of clarity, call Helen, although we do not learn her name until quite late in the story).

This snapshot of initial conditions makes it rather easy to predict that the short story is going to be about relating; relating with the other as individual and with the others as group (I/ Myra/ our class), relating with the self, but also relating as telling, logically developing into the problematics of reading as relating. Yet, what is much more difficult to predict, although it is clearly dependent on those initial conditions, is the evolution of the reader's position in this relational interlace – which supposes a closer investigation into the structure of what can now be defined as a multidimensional "empathy attractor".

### **Folding and stretching trajectories**

The major consequence of the ambivalence of the narrator's position, which mimetically reflects and articulates the complexity of the characters' relations and predicaments, is the complexity of the folding and stretching of reading trajectories; the reader inevitably finds themselves looking for elements that concentrate and momentarily stabilize meaning.

Miss Darling, the teacher, can be thought of as a possible *origo* for the empathy attractor. Although she is not a major anchor for empathy in the story - she is caricatured at the beginning, described by a narrator who chooses to remain close to the perspective that was hers at the time of the story - she remains a figure of reference for the reader, a stable point, albeit a complex one. She is an oxymoronic character, "a cold, gentle girl",

displaying “stiff solicitude” (101). She focuses on the importance of formulation, offering as an alternative to the embarrassing “Please may I take my brother home, he has wet himself?” the euphemistic “My brother has had an accident, please, teacher” which is obviously more ‘politically correct’, but primarily meant to work as a strategy against mockery. This thereby clearly signs her positioning on Myra’s side, in keeping with the semantics of her name, and foregrounds what will be a major thematic of the short story, the articulation between feeling and telling<sup>18</sup>. She becomes a main actor, a main helper, in the narration, structuring the narrative plot around key moments. First, she draws attention to Myra, and on her problematic exclusion from the group:

“Well, why is she never playing with the rest of you? Every day I see her standing in the back porch, never playing. Do you think she looks very happy standing back there? Do you think you would be very happy if *you* were left back there?” (102)

Interestingly, Miss Darling uses empathy and mirror situations as argument; although, as the narrator recalls, it is cruelly counterproductive at the beginning, giving an ironically condescending tinge to her name: “We had not paid much attention to Myra before this. But now a game was developed; it started with saying, ‘Let’s be nice to Myra!’” (102), it creates awareness conditions for the privileged encounter between Helen and Myra.

The “complicating action” of the story<sup>19</sup> constitutes another major complex space of the attractor:

One morning in the winter I was walking up the school hill very early; a neighbour had given me a ride into town. I lived about half a mile out of town, on a farm and **I should not** have been going to the town school at all [...] I was **the only one** in the class who carried a lunch pail and ate peanut butter sandwiches in the high, bare, mustard-coloured cloakroom, **the only one** who **had to** wear rubber boots in the spring, when the roads were heavy with mud. I felt a little danger, on account of this; but I could not tell exactly what it was.

I saw Myra and Jimmy ahead of me on the hill; they always went to school very early- sometimes so early that they had to stand outside waiting

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<sup>18</sup> Which also concerns Helen; see for example “I felt a little danger,[...]; but I could not tell exactly what it was.” (103)

<sup>19</sup> This refers to Labov (1972) defining six stages in oral narratives: abstract, orientation, complicating action, evaluation, resolution, coda.

for the janitor to open the door. They were walking slowly, and now and then Myra half turned around. **I had often loitered in that way**, wanting to walk with some important girl who was behind me, and not quite daring to stop and wait. Now it occurred to me that **Myra might be doing this with me**. I did not know what to do. (103-4)

Helen and Myra have their difference to share, parallel constraints to bear, and discover they have the same reading references; although the encounter is strangely dissonant at the beginning: "Have some more Cracker Jack', I said. 'I used to eat Cracker Jack all the time but I don't anymore. I think it's bad for your complexion.'" (104), it develops into a privileged instant of intimacy crystallizing around the discovery of the butterfly:

Myra looked into the box. "There's a prize in there", she said. She pulled it out. It was a brooch, a little tin butterfly, painted gold with bits of coloured glass stuck onto it to look like jewels. She held it in her brown hand, smiling slightly.

I said, "Do you like that?"

Myra said, "I like them blue stones, Blue stones are sapphires".

"I know. My birthstone is sapphire. What is your birthstone?"

"I don't know."

"When is your birthday?"

"July."

"Then yours is ruby."

"I like sapphire better," said Myra. "I like yours." She handed me the brooch.

"You keep it," I said. "Finders keepers".

Myra kept holding it out, as if she did not know what I meant.

"Finders keepers," I said.

"It was your Cracker Jack," said Myra, scared and solemn. "You bought it."

"Well you found it."

"No –" said Myra

"Go on!" I said. "Here, I'll *give* it to you." I took the brooch from her and pushed it back into her hand.

We were both surprised. We looked at each other; I flushed but Myra did not. I realized the pledge as our fingers touched; I was panicky, but *all right*. I thought I can come early and walk with her other mornings. I can go and talk to her at recess. Why not? *Why not?* (105-6; italics are in the original)

The power of the scene rests in tiny details. Myra and Helen have an equal share in the description of the butterfly. Myra discovers it, reveals it as a

treasure in her “brown hand” - the darkness<sup>20</sup> of her skin, mentioned here for the first time, possibly giving an odious reason for her being ostracized at school. The narrator partly describes the brooch, but it falls to Myra to add the touch of colour, expressing a liking for blue sapphire<sup>21</sup> that subtly metamorphoses into a deep longing for the Other: “I like them blue stones”- “I like yours”. Paradoxically, though very realistically, her desire manifests itself through stupefaction (“Myra kept holding it out, as if she did not know what I meant”) and awe (“scared and solemn”). The emotional interlace reaches a climax when the two girls’ fingers (the first person plural appearing for the first time in the story: “**our** fingers”) touch in a gesture interpreted by Helen as sacred<sup>22</sup>. Fear is another feeling they share, though “scared” and “panicky” are differently connoted. But the full epiphanic dimension of the scene is reached in the repetition of the “Why not?”, whose first instance could be attributed to the character’s Free (in)Direct Thought<sup>23</sup> and the second to the retrospective narrator’s, the italics being a written, therefore also potentially an authorial manifestation of subjectivity and emotional involvement<sup>24</sup>. Why not indeed, the reader might wonderingly echo.

Even if they eventually clearly structure around the gift of the butterfly, which could also be identified as the “magnet” Munro refers to in the interview with Geoff Hancock<sup>25</sup>, empathy trajectories become increasingly complex. They can be seen as folding, without ever exactly corresponding, recalling Deleuze’s analyses of Baroque aesthetics, “le pli qui va à l’infini” (1988, 5), “le pli du monde et de l’âme” (37). Helen and Myra first appear to be enclosed in the same narrative perspective; the use of Direct Style with minimal framing of speech ensures transparency and V+ing forms, observability. We are clearly in the “showing” mode. They are close to each other, though not exactly in unison, and we follow their perspectives on the butterfly. When the narrative voice does transmit interpretative positioning, it concerns Helen’s reading of the situation and is presented in a consonant way, without any evaluative distancing. The

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<sup>20</sup> Dark hair is also mentioned in the story.

<sup>21</sup> Sound indeed enhancing some mysterious correspondence with Myra.

<sup>22</sup> Which, interestingly, is an anagram of scared.

<sup>23</sup> There being no conjugated verbal forms, opting for Free Direct Style or Free Indirect Style is here impossible.

<sup>24</sup> The same analysis could be made of the other phrase in italics, “*all right*”

<sup>25</sup> Quoted in Bigot and Lanone (2014, 19) “I have this picture. It generates some other images and attracts them like a magnet. Things stick to it, anecdotes and details”.



reader is therefore led to empathize with all three instances without any clear guiding hierarchy, which makes the position slightly unstable and might consequently account for a stretching impulse out of the three folding trajectories, out of the empathy entanglement.

It is one of the mysteries of intertextuality to have narrative elements reverberate over time and memory, back to another short story by another writer, which presents a very similar narrative situation: Katherine Mansfield's "The Doll's House". In a small, closed New Zealand community, the Burnell girls have been given as a present a beautiful doll's house and they invite all their school friends to come and see it<sup>26</sup>. Two young girls, Lil Kelvey and her little sister, "Our Else"<sup>27</sup>, are excluded from the group. The younger Burnell daughter, Kezia, who is particularly fascinated by a little lamp in the doll's house, feels uncomfortable about the situation:

'Mother', said Kezia, "can't I ask the Kelveys just once?"  
'Certainly not, Kezia'  
'But **why not?**'  
'Run away, Kezia; you know quite well **why not.**'(341)

The little girl will get no further explanation. One afternoon, as Kezia identifies the Kelveys walking past their house<sup>28</sup>, she decides to invite them in:

'Hullo', she said to the passing Kelveys.  
They were so astounded that they stopped. Lil gave her silly smile. Our Else stared.  
'You can come in and see our doll's house if you want to,' said Kezia, and she dragged one toe on the ground. But at that Lil turned red and shook her head quickly.  
'**Why not?**' asked Kezia.  
Lil gasped, then she said, 'Your ma told our ma you wasn't to speak to us'  
'Oh well,' said Kezia. She didn't know what to reply. 'It doesn't matter. You can come and see our doll's house all the same. Come on. Nobody's looking.'

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<sup>26</sup> Katherine Mansfield (1953, 337-344); all page references are to this edition; emphasis is mine.

<sup>27</sup> A rather unusual name, though an extremely meaningful one in the economy of the story. Our Else indeed is the figure of the Other.

<sup>28</sup> The description is like a mirror scene to the encounter scene in Munro's story. "Presently looking along the road, she saw two little dots. They grew bigger, they were coming towards her. Now she could see that one was in front and one close behind. Now she would see that they were the Kelveys."(342)

But Lil shook her head still harder.

‘Don’t you want to?’ asked Kezia

Suddenly there was a twitch, a tug at Lil’s skirt. She turned round. Our Else was looking at her with big imploring eyes; she was frowning; she wanted to go. For a moment Lil looked at our Else very doubtfully. But then Our Else twitched her skirt again. She started forward. Kezia led the way. Like two little stray cats they followed across the courtyard to where the doll’s house stood.

‘There it is’, said Kezia.

There was a pause. Lil breathed loudly, almost snorted; our Else was still as a stone.(342-3)

They are suddenly chased away by Kezia’s aunt, but the story ends with the two sisters and the shared mystery of revelation:

Presently our Else nudged up close to her sister. But now she had forgotten the cross lady. She put out a finger and stroked her sister’s quill; she smiled her rare smile.

‘I seen the little lamp’, she said softly.

Then both were silent once more.(344)

Mansfield’s “The Doll’s House”, like Munro’s “Day of the Butterfly”, unites young girls that are poles apart socially, having them share a central epiphanic experience which revolves around a tiny detail, a little tin blue butterfly, a tiny lamp in a doll’s house. The subversive question is the same: “Why not?”; the moment of communion, preceded by a moment of stupefaction results in the same smile. Kezia is more determined, more openly transgressive and less ambivalent than Helen, and the reader’s position in “The Doll’s House” is clearly on the side of the children, and more particularly Kezia and our Else, against the prejudiced world of adults.<sup>29</sup>

Another “stretching trajectory” might extend to autobiographical reference and partly explain the complexity of the narratorial positioning. In her talk with Paula Todd (2010) Munro tells about her dreams: “I would go to England and meet Laurence Olivier [...], and I would have a wonderful blue velvet ball gown “, and recalls:

“I had a long walk home from school and it was quite a brutal walk but I made up stories all the way and did that every day, and I would be very annoyed if anybody picked me up and gave me a ride and took away that

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<sup>29</sup> There is a teacher in Mansfield’s story, but, unlike Miss Darling, she is as prejudiced against the Kelveys as the rest of the adult community.

time. Because I wasn't brought up in a community that thought what we now call creativity was sort of normal".

The blue gown connects her with Myra; the long walk to and from school and the sense of difference, to Helen. In "Dear Life", she recalls her brief "friendship" with a girl she calls Diane, which seems a distant echo of Helen and Myra's relationship:

"A girl whom I'll call Diane arrived partway through my second year [...] We went to her place after school [...] my mother [...] discovered my whereabouts. On the way home, I was told that I was never to enter that house again. (This proved not to be a difficulty, because Diane stopped appearing at school a few days later – she had been sent away somewhere)"(301).

She later learns "that Diane's mother had been a prostitute and had died of some ailment it seemed that prostitutes caught" (303). The metamorphosis of reality also is a dynamic, multifarious and mysterious process indeed, involving endless stretchings and foldings of empathy trajectories too. Far from simplifying the picture, the sequel of the narrative questions to the very end the possibility of resolution.

### **The unsolved question of homeostasis**

The emotionally intense and complex experience of the gift of the butterfly is followed by Myra's absence from school. She is ill. Miss Darling decides to go with some of her pupils to visit her in the hospital and organize a birthday party, on the 20<sup>th</sup> of March, although her birthday is in July, "Because she's sick" she insists "with a warning shrillness", paralinguistically foregrounding deficiency in intuitive understanding of the implicit. The relationship between the two girls is a secret they share with the reader, who is sensitive to echoes that take us back to the butterfly episode: "I said, 'Her birthday is in July'" (107), "Myra said 'My birthday is in July'" (108). Helen, whose name is revealed by Myra to us for the first time in this second half of the story seems to understand her friend; the epistemic modality has disappeared: "Myra did not look at us, but at the ribbons, pink and blue and speckled with silver, and the miniature bouquets; **they pleased her, as the butterfly had done.** An innocent look came into her face, a partial, private smile" (109). Myra is now in the same position as Helen was when she insists on her taking

accessories that are symbolic of womanhood and a clear object of desire for Helen:

“You take something” [...]

“Well you take something,” Myra said. She picked up a leatherette case with a mirror in it, a comb and a nail file and a natural lipstick and a small handkerchief edged with gold thread. I had noticed it before. “You take that,” she said.(110)

The same gesture is repeated, with the same consequence: “She put it into my hand. Our fingers touched again.” Some kind of equilibrium – homeostasis, seems to be reached through the interlacing of echoing and the acceptance of an invitation that resonates for the reader, who deciphers “Akemia”(107) as leukaemia, as a way of conjuring death:

“When I come back from London” Myra said, “you can come and play at my place after school.”

“Okay,” I said. (110)

Yet, dissonance wins over:

Outside the hospital window there was a clear carrying sound of somebody playing in the street, may be chasing the last snowballs of the year. This sound made Myra, her triumph and her bounty, and most of all her future in which she had found this place for me, turn shadowy, turn dark. All the presents on the bed, the folded paper and ribbons, those guilt-tinged offerings had passed into this shadow, they were no longer innocent objects to be touched, exchanged, accepted without danger. I didn’t want to take the case now but I could not think how to get out of it, what lie to tell. **I’ll give it away, I thought. I won’t ever play with it. I would let my little brother pull it apart.** (110, emphasis added)

The reader is left puzzled and unsettled by the violence of Helen’s feelings, once more truthfully transmitted by the narrator, while acknowledging that indeed the offerings qualify as “guilt-tinged” and accepting the impossibility of objects being touched, exchanged or accepted without inciting danger. But Helen’s clear-sightedness and unmitigated self-indictment, implied by the slipping into Free Direct/Indirect Thought<sup>30</sup> remains highly disturbing; it is both jarring and inevitably stretches out to “the treachery of [our] own heart[s]”. Ending

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<sup>30</sup> The first person points to FDT whereas the use of “would” points to indirectness.

the short story on Helen's enigmatic final sight of Myra, intimately interlacing this with the narrator's no less enigmatic retrospective interpretation, leads the reader on the path of remembrance too in an ultimate quest for equilibrium; the text almost folds back on itself, but not quite. "[Her] brown carved face immune to treachery"(110) evokes "They were like children **in a medieval painting**, they were like small figures carved of wood, for worship or magic, with faces smooth and aged, and meekly, cryptically uncommunicative" (101, emphasis mine) while "as she was even in the back porch at school"(110) takes us back to "So Myra and Jimmy spent every recess standing in the little back porch between the two sides"(101). The interpretative process is pertinently close to what Guillemette Bolens described as reading a medieval interlace:

La répétition des signifiants et de leurs synonymes dessine des lignes qui s'entrecroisent pour ensuite disparaître et refaire surface plus loin, semblables aux entrelacs picturaux des enluminures médiévales [...] Lire un entrelacs consiste à porter attention à des signifiants dont la réitération indique qu'ils jouent un rôle distinctif dans la construction de la narration (2008, 36-7).

There is a tiny difference between now and then, which, once more, has immense consequences: Myra is all alone now. Emotion is intense and one more time, closure refused. The ultimate question to be solved then is why narrative framing and stylistic near-symmetry are here unable to secure a cathartic sense of equilibrium in the reader, why the story remains to the very end "cryptically uncommunicative".

### **Concluding trajectories: Mirror Neurons, Far-From-Equilibrium Systems and the end of certainty**

Using Lorenz's weather model as a toy-model for understanding "Day of the Butterfly" revealed that literary text reading means tracing empathy trajectories in a chaotic system, deterministic, dynamic and non-linear. As readers we strongly depend on initial conditions that embark us on multidirectional trajectories that are eventually revealed as following and tracing complex interlacing patterns intricately structured around some central, seminal moment of experience. In Munro's story, reading trajectories, as is to be expected in an autodiegetic narrative, follow the double empathic threads of Helen the narrator and Helen, her former self, a character in the diegesis. Yet, the ambivalence that characterizes their

interaction with the surrounding textual world further complexifies the position of a reader who, in his quest for equilibrium (and hence understanding), develops an intertextual and symbolical trajectory around the episode of the little tin blue butterfly. The insistent uneasiness the story creates in us leads us to question a positioning we cannot doubt is voluntary on the author's part. In the case of an autodiegetic narrator, because of commonly accepted empathy rules such as the ones developed by Kuno and Kaburaki, we tend to think that empathy naturally is with the first person, including in the complex although frequent case of a split between younger and older self. It is more difficult to imagine that empathy could in fact also be organized around a third person, whose point of view we might intuitively follow. In "Day of the Butterfly", the character of Myra, although she is clearly not a reflector, seems to attract and concentrate empathy in a way that almost overpowers the empathic compound of the narrator-character. But to evidence that, we need to turn to what might be the most fascinating discovery of neurosciences for stylisticians with a special interest in reader-response theory, the existence of Mirror Neurons.

In the 1990s, a team of scientists working at the University of Parma, discovered the existence of Mirror Neurons in the cortical motor system of macaque monkeys: the same neurons fire when a monkey grasps a peanut as when it watches another monkey (or a human) grasp another peanut<sup>31</sup>! Hence their name. The research team then went on to evidence the presence of those Mirror Neurons in humans before addressing the question of emotions and discovering another "Mirror Mechanism embedded inside our emotional centres", which, in Rizzolatti's words, "is extremely interesting because it is another way in which we communicate, given that communication is understanding the others from the inside"<sup>32</sup>. Other scientists then chose to investigate the question of mirror mechanisms in art, the question of what happens when we are watching a character in a painting doing something, feeling an emotion, or when we are reading about such events. Wojciehowski, Associate Professor of English at the University of Texas, and Gallese, Professor of Physiology in the University of Parma Department of Neuroscience, and a member of

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<sup>31</sup> Rizzolatti explains the discovery of mirror neurons in the following video: <http://www.gocognitive.net/interviews/discovery-mirror-neurons-1>

<sup>32</sup> The same on Mirror Mechanisms; <http://www.gocognitive.net/interviews/emotional-mirror-mechanism>

Rizzolatti's team, set out from their different backgrounds to trace "one important level of our relationships with narrative – namely, our empathic co-feeling with others activated by writings and registered within our bodies" (Wojciehowski and Gallese, 2011). The study, they claim, takes us beyond intentionality and what is traditionally known as Theory of Mind (ToM) to what they call "Feeling of Body (FoB)"<sup>33</sup>. When we read a text, scientists tell us, we experience in our body what we are reading about, and this, independently of any empathy hierarchy, and also irrespectively of the sacred frontier erected by generations of narratologists between reality and fiction.

Unlike Helen, who mostly observes and describes, Myra often acts. The narrative of the discovery of the little tin butterfly follows her actions: she looks into the box, pulls the prize out, she holds it in her hand, she smiles. Given Mirror Mechanisms and Embodied Simulation, **we** look, **we** pull it out, **we** hold it in **our** hands, **we** smile; Myra's actions find an echo in **our** brains without any intermediary (while obviously physical action remains inhibited – except maybe the smile, which might find its way on our lips). This contributes to the building of a privileged, quasi autonomous relationship with the character that develops independently from the narrator's mimetic reporting of Helen's ambivalent relation with Myra; we are therefore able to disengage momentarily from what we feel to be an uncomfortable narrative mode and reading position. The major problem raised by Mirror Mechanisms in literature is that they potentially concern all characters, irrespectively of their role in the story. Far from simplifying the picture, they add a multiplicity of possible empathic reading trajectories to the already complex interlacing in textual strange attractors. This might ultimately take us beyond chaos, to Far From Equilibrium Systems, powerfully eschewing all form of resolution, irremediably marking the end of certainty.

As Siri Hustvedt notes:

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<sup>33</sup> "Frequently...[...] cognitive literary theory draws on so-called ToM, the notion that we can reconstruct the minds and intentions of other people through our own mental meta-representational processes[...] what we shall ultimately propose, then, as a complement to ToM, is the **Feeling of Body (FoB)**, its possible links to the experience of narrative[...] We will argue that FoB is the outcome of a basic functional mechanism instantiated by our brain-body system, **Embodied Simulation**, enabling a more direct and less cognitively-mediated access to the world of others.[...] According to this hypothesis, intersubjectivity should be viewed first and foremost as intercorporeity". Wojciehowski and Gallese, 2011. Emphasis is mine.

It isn't easy to make forays out of one's own discipline. The experts lie in wait and often attack the interlopers who dare move onto their sacred ground [...] To my mind conversations among people working in different areas can only benefit everyone involved, but the intellectual windows that belong to one discipline do not necessarily belong to another. The result is a scrambling of terms and beliefs, and often a mess is made. The optimistic view is that out of the chaos come interesting questions, if not answers. (2012, 124).

This modest excursion into scientific fields which were, until recently, thought of as irrelevant to literary analysis might hopefully offer a replicable method to address in any short story Iser's compelling question of how to account for the dynamic character of a literary text, and how we "can assess the keen disturbance" one feels when reading serious literature. Myra was a lover of **Art** and **Arithmetic**; this tiny detail might be invitation enough to multiply perspectives with the hope of elaborating a clearer mental representation of the mystery of "Day of the Butterfly", and beyond it, of our world and our relation to it, a mystery that, Iser says, fiction endlessly and inevitably probes:

If the borderlines of knowledge give rise to fictionalizing activity, we might perceive an economy principle at work: namely what can be known need not to be staged again, and so fictionality always subsidizes the unknowable (1997, 5).

What might therefore forever remain untouched is the ultimate mystery of being moved by words. In her Nobel Interview, Alice Munro, when asked about the impact she hoped to have on her readers, made the following answer:

I want my stories to move people [...] to be something about life that causes people to feel some kind of reward from the writing [...] everything the story tells moves **the writer**<sup>34</sup> in such a way that you feel you're a different person when you finish.

What strange attraction phenomenon makes her say "writer" where we expect to hear "reader"? What infinite respect for readers, invited to be the creative writers of the stories they read...

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<sup>34</sup> Emphasis mine.



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### Diagram of empathy attractor in “Day of the Butterfly”

Below is a *possible* simplified representation of what a strange attractor in “Day of the Butterfly” might eventually look like; you have to imagine all arrows as developing into folding and stretching trajectories.

