



encounters
with **13** artists

parkinson's
creativity
dopamine

**GRENOBLE MUSEUM
OF MEDICAL SCIENCE**



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[Parkinson's]

Life sometimes holds unexpected delights in store for us. As a newly-qualified neurologist I marveled at the arrival of the first effective drug treatment for Parkinson's Disease. Today, forty years on, as a retired professor, and President of the Museum of Medical Science in Grenoble, I take great pleasure in welcoming this singular and exemplary exhibition.

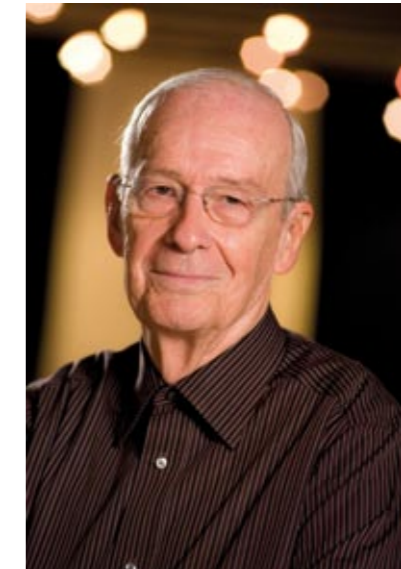
The delights of Dopamine... Dopamine was already working its spell at the end of the Sixties when this newly-discovered neurotransmitter was transformed into a drug whose spectacular effect on Parkinson's Disease initially blinded us to any drawbacks its use might entail. Seeing our hitherto rigidified patients regain freedom of movement, we neurologists fell under the spell of Dopamine long before our patients did. Several years previously, psychiatric patients who had also been excluded from society on account of their delirium, had been liberated in a similar fashion by neuroleptic medication. It took us several years to understand that the same Dopamine receptors could either be activated by L-Dopa, a dopamine precursor, thus transforming the lives of Parkinson's patients, or blocked by neuroleptics, thus banishing delirium.

From these findings, a new conception of neurology – that of neurobiology – has emerged. Today, neuropharmacology has been enriched by the new molecu-

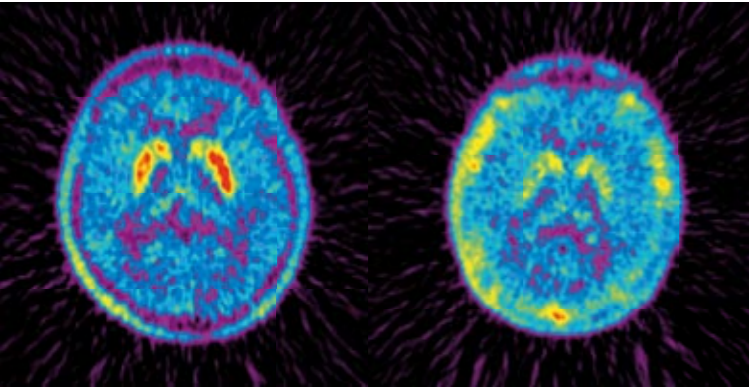
Under the spell of Dopamine

Jean Perret

Former Professor and Head of the Department of Neurology, Grenoble University Hospital



les exercising an agonist or antagonist action on dopamine receptors, which we now know to be multiple. We now know that the activity of these receptors, which are behind the automatic execution of learned motor programs, are also involved in controlling the onset of



Brain image.
Left: normal brain; in red, dopamine in the striatum.
Right: Parkinson's Disease, dopamine deficit.

Images Fluorodopa-PET, CERMEP-Lyon. Thanks to Emmanuel Broussolle.

both lactation and vomiting. We are also discovering that the dopaminergic systems play a role in our ability to think, in our behavior and motivation levels, by acting directly on the centre which controls the emotions, and on the most highly-developed structures in the brain, such as the pre frontal cortex. Knowing all this, no-one will be surprised to learn that I remain firmly under Dopamine's spell.

Through the creative works of Parkinson's patients on dopaminergic medication, this exhibition illustrates every aspect of the effects of these drugs:

- Their strictly motor effect, thanks to which the dexterity required to produce a painting or a work of

sculpture is restored to the numbed or trembling hand of the Parkinson's patient;

- Their effect on fluidity of thought, which allows patients to have the intellectual concentration necessary for the transformation of ideas into creative works;
- Their effect on the systems which control motivation, emotion and pleasure, by alleviating apathy and emotional indifference, and opening up channels of creativity.

Thus, while we should not ignore Dopamine's undesirable motor side effects such as abnormal movements, or the psychological ones such as addiction, it does allow us to share in the joy, the pleasure and the satisfaction of these artists who are, at last, able to communicate. Because, as Jean Didier Vincent writes: *"Art exists solely through the human brain towards which it is directed and which receives it. A work of art is the pure expression of its creator's psyche, and the fact that he or she is a Parkinson's patient taking effective medication changes nothing in the work, which is sufficient to itself."*

So let us leave our neurobiological approach to Dopamine on the threshold of this museum. Let us allow ourselves to be charmed and moved by these works of undeniable artistic merit. Let us enter this museum, which has become the place where these patients have been able, for the first time, to express their personalities.

[Creativity]

Where does creativity spring from? What role does it play in man's desire to construct something and in his quest for equilibrium? And what purpose does it serve for the man himself before becoming a message to be passed on to others?

The exhibition *"Parkinson's, Creativity, Dopamine"* asks these fundamental questions astutely, and perhaps even more appositely than is customary. Frédérique Ryboloviecz, art historian, deemed it appropriate to attempt not so much to answer these questions as to try to bring out the different elements which may have coalesced to give first form, then life to one of the creative processes recounted in this work.



The House of Parkinson
Photo by Guy Martin-Ravel

Un ciel gris aurolé

Mon corps cette maison

Architecture à l'ossature solide

Ancrée au sol

Pieds solidement posés sur cette terre

Corps immuable corps universel

Puis cet éclair la foudre

Tremblement de terre tremblement de corps

Continuer à regarder continuer à s'émerveiller ?

Déstabilisante réalité

Je m'éveille

Besoin éminent de créer

De s'engouffrer dans cette lumière noire incertaine

Improbable nuit paisible

C'est le temps de la matière de la couleur

Faire surgir l'instant le geste

Évoquer le presque rien l'immatériel

Faire surgir l'humain

Recréer l'animal

Profiter de ces quelques heures

Poésie et imaginaire s'invitent

Instants suspendus

Instants de création

Poem by Frédérique Ryboloviecz



Bird of Prey
Oil on canvas
2008
73 x 60 cm

“The diagnosis dates back to August 2003. To help ‘clear my head’ a friend suggested I accompany her to her drawing class. I had never picked up a paint brush before, and I was hopeless at drawing!

During that time, I learned how to look at a painting, a landscape or a still life. My first work was an orientalist painting, of which I was immensely proud, and which I immediately framed. My teacher is a staunch champion of figurative art, but after two years, I turned, on my own, to abstract art.

I paint using a knife, giving priority to movement, colour and effects of substance. The actual drawing takes a back seat. I live through my painting – it’s worse than a drug now. My canvasses are getting bigger all the time, and I find the composition of colours absolutely magical. They have to stand out, they have to move forward, the painting has to ‘shout.’

So during the day, I am Mr. Hyde, attending my academic classes, and then during the night, I turn into Dr. Jekyll, giving free rein to my imagination.

And while I am doing that, I am able to forget about the effects of Parkinson’s, although it’s never slow to remind me of its presence.”



Jacqueline Baillet

63

Lyon, Rhône

Former anesthetist

Parkinson’s patient for 7 years



Gélinotte IV
Wood and metal
2005
Height 86 cm

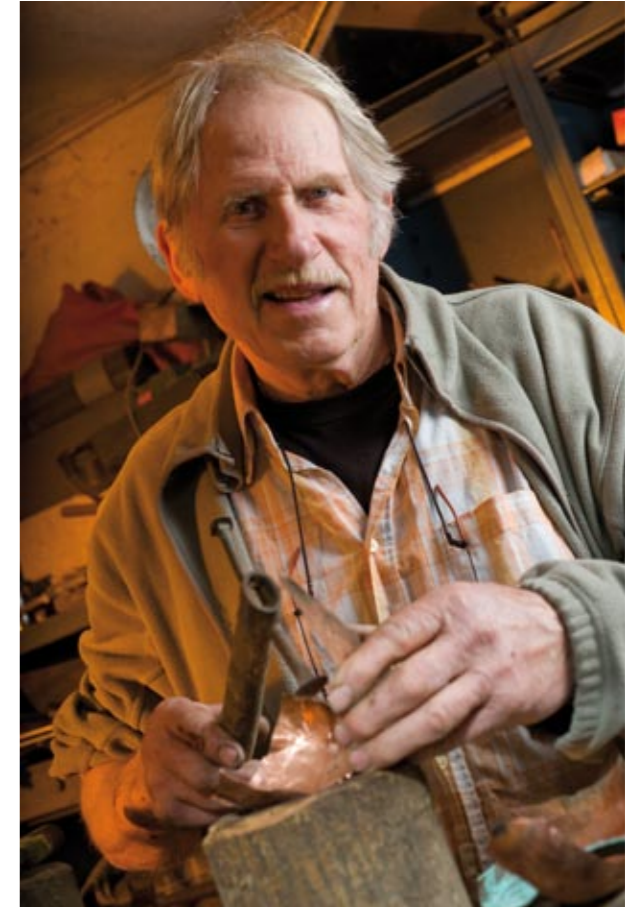


Taking flight
Wood and metal
2009
160 x 120 cm

“One morning, just one ordinary morning, a dark cloud came along and blackened my future: Parkinson’s Disease. I was 48. No big deal, and yet... I was sidelined from working life. I became a brilliant champion for the cause of invalids. As for my morale, well, don’t even go there...

Then one day, thanks to an advert promoting different types of iris, a new reason to struggle on was born. My instinct for manual craft regained the upper hand. More than ever before, I was filled with a crazy desire to strike metal, to fashion and create objects, maybe even irises... From that day on, my mind was possessed by this cult of handcraft, and I became ‘the artist’ the one people recognized in the street. My head was absolutely full of ideas. More than anything else, I wanted to create new subjects and to be able to overcome any difficulties, experimenting with colours, mixing metals, associating them with wood. I took part in numerous exhibitions. What a fabulous revenge on my illness!

Then later, I had surgery and began to be treated by brain stimulation. My urge to create... vanished. Art no longer brought me any pleasure. Admittedly, I did have one or two projects, but I just couldn’t get underway. Then a few months ago, my Parkinson’s medication was adjusted, and I felt good again, on form, driven to work in my studio all day long, and... an eagle took flight.”



Jean-Claude Blanc

68

Champagneux, Savoie

Former building site foreman, winner of France’s best worker in HVAC Engineering award.

Parkinson’s patient for 20 years



Head
Mixed technique
on craft paper
2003
36 x 45 cm

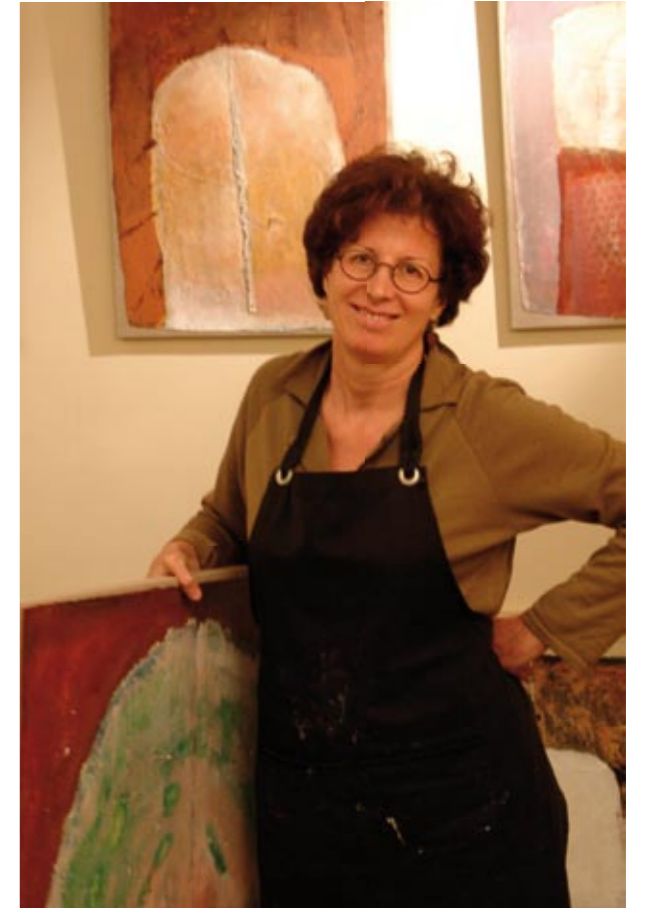
“I’ve had Parkinson’s since I was 43.

At the time, I had my own recruitment company. I had always been highly-committed professionally, but after 7 years of Parkinson’s, I had to give up work. One moment I was someone, I had status, and then, suddenly, I was nothing and no-one.

I had always had an interest in painting, and had even dabbled a little before I started out in recruiting. Now, I turned to it again naturally, and before long I was devoting all my spare time to it, painting every day and even, at times, during the night. As soon as my medication gave me back freedom of movement, I would head for the studio. Painting very quickly became much more than a passion – it became my reason for living. It was also very important for me to exhibit my work, because it brought me both recognition and the respect of others.

When I paint, I throw myself into my work completely. My mind empties of worries, and I think only about colours and composition. I am so lucky to have found an activity I am good at, and which above all allows me to fight this illness better.

In 2005, I had surgery in Grenoble, and thanks to the treatment by stimulation, I have regained an almost normal life, and while painting invades my life less, it remains a real passion.”



Laura Brodzki

58

Brussels, Belgium

Former recruitment manager

Parkinson’s patient for 15 years

“Welcome my friends, welcome to the world of story-telling. Once upon a time... This is the story of Sergio, a dreamy troubadour who lived, carefree and mocking, from day to day. Somewhere along the road of Chance, he encountered the fair Dopamine, oracle of the great Parkinson the Terrible. They talked, and Sergio the Storyteller was unable to resist whispering sweet nothings in her ear... Moved by his words, Dopamine allowed herself to be lulled into discovering his every secret.

Together they tried writing, and enjoyed instants of pure freedom, when imagination was king and the music of their words was queen. They were still together when they stepped on stage, where Malvina, Tiburce, Umberto and so many others shared in their happiness.

Then, from the depths of his lair, Parkinson roared, ‘Enough! I’ll set my dogs on you!’ And the birds of misfortune soared out from the shadows, and a distraught Sergio came to know misfortune, which came in the early hours of the morning to inflict pain. He was downhearted, and his companion Kakou was at a loss to know what to do for him. Then Lady Surgery pierced his skull, allowing only the wicked pleasures to escape. Sergio no longer tells his stories... perhaps one day he will... but once again he is mocking and carefree. He is happy. He will live happily ever after with Kakou, the love of his life.” *(Any resemblance to real people is completely accidental).*



Serge Brunet

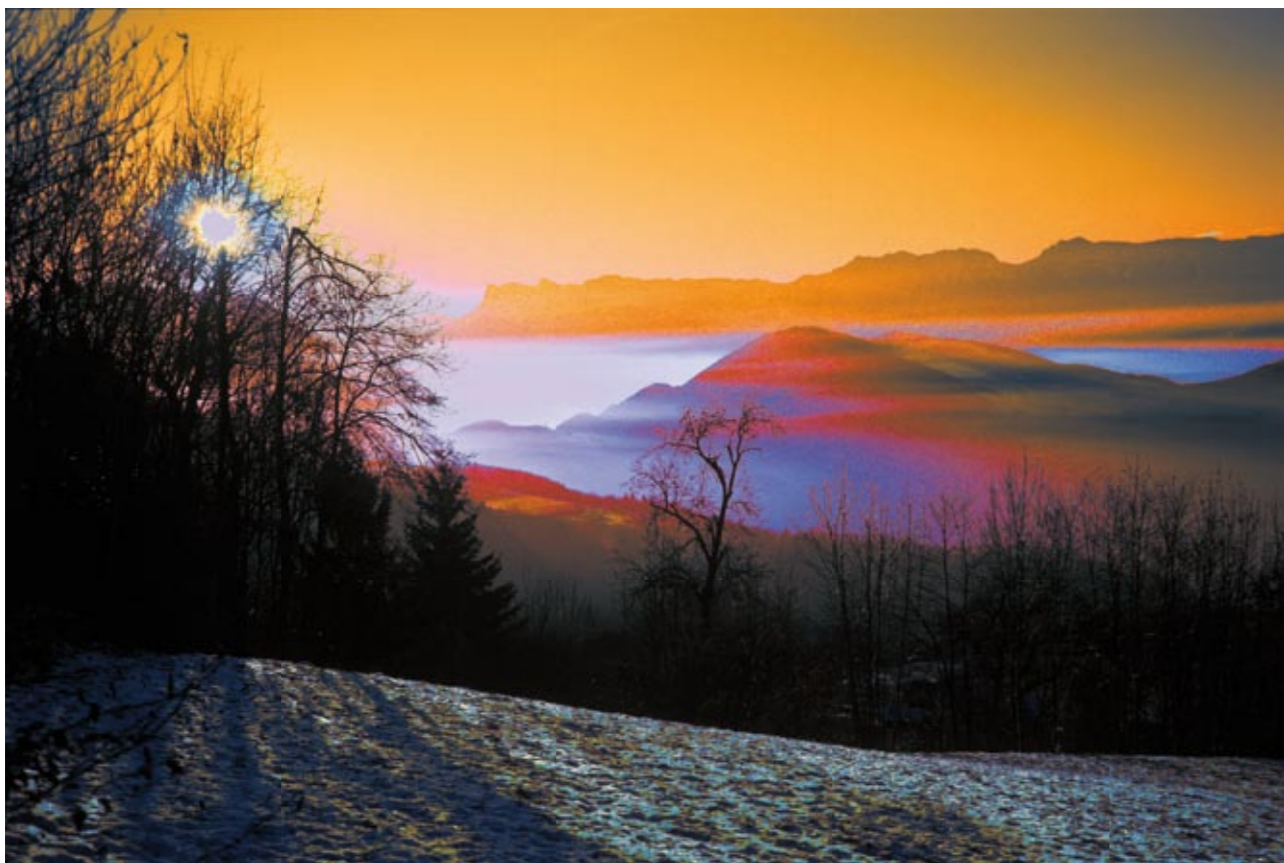
68

Aix-les-Bains, Savoie
Former Regional Director
of the department of Child Protection.
Parkinson’s patient for 17 years

C’est bien connu,
tout le monde le sait :
La route, elle même, avait eu beaucoup
un olivier et un lézard ça
de difficulté à trouver le village. En fait, quelques
ne se parle pas ! Un petit
maisons en ruine que la végétation s’était
matin, avec le premier
appropriée. Les randonneurs parfois y faisaient
soleil, le petit lézard
une halte. Il arrivait aussi que les plus
à peine réveillé, encore
fatigués, faisant fi des rumeurs,
tout frileux et peut-être
s’installent pour la nuit.
aussi — et surtout — un
peu trop seul, s’enhardit :
— Bonjour l’olivier !

Fairy tale extracts:
Joseph and Josepha
Malvina
Crouton the Lizard
Tiburce

La doyenne des souris avait passé la
nuît — on s’en serait douté — à chercher
dans l’alcool les remèdes miracle, ceux
Je suis Malvina...
qui font oublier tristesse et désespoir.
La mouette sur qui tes
C’est au fond de son trou qu’elle passait
caprices et colères, tes
le jour, fuyant toute rencontre.
mouvements d’humeur
Elle ne voulait plus lire dans le regard de
sont restés sans effet.
l’autre toute sa déchéance.
J’ai été le témoin de tes
folies guerrières, celles
où tu te déchaînes,
où la corne de brume
sonne aussi le glas.



**First snows
in Uriage**
Digital photo,
reworked with
Photoshop
2004
70 x 50 cm

“Sound and vision... The day I bought my first camera and my first tape-recorder was an important date in my life. I turned, naturally, to professions involving photography and sound. Out of a sense of modesty, or perhaps out of a fear of facing up to reality, I always preferred selling equipment and doing soundtracks for other musicians to selling my own works. I am particularly keen on landscape photography, and have amassed literally thousands of shots, some of which have been sold for post-cards.

A sudden deafness in one ear and Parkinson’s Disease got in the way of my passions. I was forced to give up sound-related activity. When the trembling becomes too pronounced to be able to take a photo, you can still use a stand to steady the camera, but when you cannot hear in stereo, there is not really a lot you can do. I devoted part of my spare time to photography. It was such a pleasure to go off on a photo-trip on my motor-bike. Then with the arrival of digital photography and new software, I began to ‘tinker’ with my photos during the nights when I was unable to sleep.

I try to ignore my Parkinson’s whenever possible. I’ve had surgery for it, and I no longer need to use a stand to take photos. I have rediscovered, and continue to enjoy, the pleasure of doing something I love with the means available to me.”

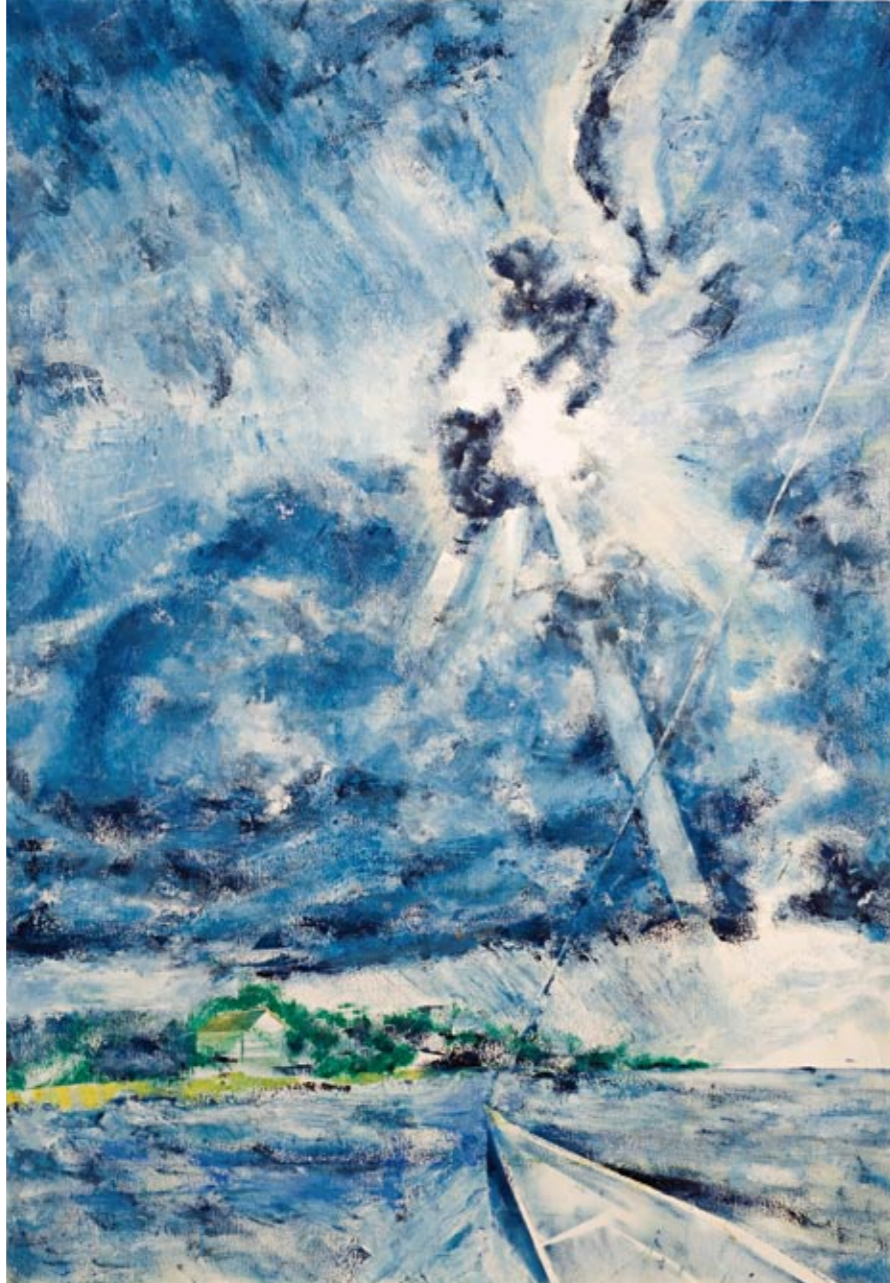


Claude Collet

62

Grenoble, Isère

**Former photographer and sound technician
Parkinson’s patient for 9 years**



**Costa del Pacifico
en el Choco,
Colombia**
Mixed technique on
watercolour paper
1999
100 x 70 cm

“I can recall my first day as an ‘artist’ perfectly clearly. It was the 28th of December, 1992. I was alone in my car, driving along, when I caught sight of a landscape, and, even though I had driven past it hundreds of times before, I experienced a sudden urge to stop and sketch it. That’s how, on the back of a town planning map spread out on the bonnet of my car, my first ‘archi-scape’ was born.

I look at the world through the eyes of an architect, not those of a painter. I do not paint pictures – I make architectural interpretations of landscapes, which explains why I chose to call my works ‘archi-scapes.’ However, unlike in architecture, when I paint, I take more liberties regarding lines, and play around with them. I get so much pleasure from it that my symptoms can just disappear for eight hours or even more, without any help from medication. I’ve done a lot of painting, using bigger and bigger surfaces.

I have also developed an extremely heterodox technique to allow myself to paint during the long, sleepless nights. I get down on all fours on the paper, spread my arms, and place my hands on the floor to alleviate the trembling. I paint using the pads of my fingers, because the trembling prevents me from holding a brush.”



Antonio Cortina

59

Barcelona, Spain and Lyon, Rhône
Former architect
Parkinson’s patient for 32 years



Morning
Terra cotta
2005
Height 60 cm approx.

Madness
Watercolour
with gold frame
2004
15 x 20 cm approx.



“I’ve always drawn and painted.

As an adolescent, I would paint on the walls of my attic. But in 1992, I embraced painting totally. I transformed my home into a studio, with tables and canvases everywhere. Apart from that, all I had was a bed. I was so happy.

My illness got worse in 2004: I stopped working and went on new medication. At that point, I started painting from morning till night, and often all through the night until morning. I was obsessed with painting. I bought huge amounts of materials, and used countless numbers of brushes at a time. I used knives, forks, sponges... I would gouge open tubes of paint – it was everywhere... But I was still in control at that point.

Then the urge to paint became uncontrollable. I started painting on the walls, the furniture, even the washing machine. I would paint any surface I came across. I also had an ‘expression wall’ and I couldn’t stop myself from painting and repainting this wall every night in a trance-like state. My uncontrollable creativity had turned into something destructive. My partner could no longer bear it. People close to me realized that I had crossed some kind of line into the pathological, and in 2006, at their instigation, I was hospitalized. Today, my doctors have succeeded in getting my medication under control, and my creativity has become more tranquil and structured. It has once again become a pleasure, which upsets no-one.”



Michèle Cousin

61
Seynod, Haute-Savoie
Former special needs teacher
Parkinson’s patient for 10 years



Tanguy the Heron
Zinc, iron and glass
2009
Height 1,60 m
Weight 9 kg

“I have always worked with my hands. I spent my working life in the car industry. So when I retired, a little early on account of my illness, I threw myself into a whirlwind of work. I tried all sorts of things – jeeps, motorbikes, sewing machines, household appliances, lawn-mowers, chain-saws, anything... I became the ‘handyman.’ Unpaid, naturally.

Then, two or three years ago, I began to assemble and weld together all sorts of old parts from cars and agricultural machinery – camshafts, crankshafts, tractor seats... I call what I do ‘mechanical sculpture.’ I make animals, some of which I motorize. They are a little bit like the weird creatures from *Star Wars*, it’s a kind of creative delirium. I’ve always been a bit of an odd job man, but this creativity was new. I just never stop. During the night, since I don’t really sleep, I get up at 3 a.m. and work – but only on things that don’t make any noise. For instance, I put the engine from an electric toothbrush on a model plane to make its propeller turn.

When I’m working like this, I feel good. My imagination works at a crazy speed, and I tackle several things at a time... It’s amazing. I’ve been told that this is a kind of hyperactivity linked to my Parkinson’s medication. The illness is causing me to suffer more and more, but I am always ready to create new objects. It helps me to forget for a while.”



Alain Escuyer

65
Rosnay, Marne
Former car mechanic
Parkinson’s patient for 10 years



**Woman
with Eagle's Head**
Waxed woods
(body in linden,
head in cedar)
2007
Height 90 cm



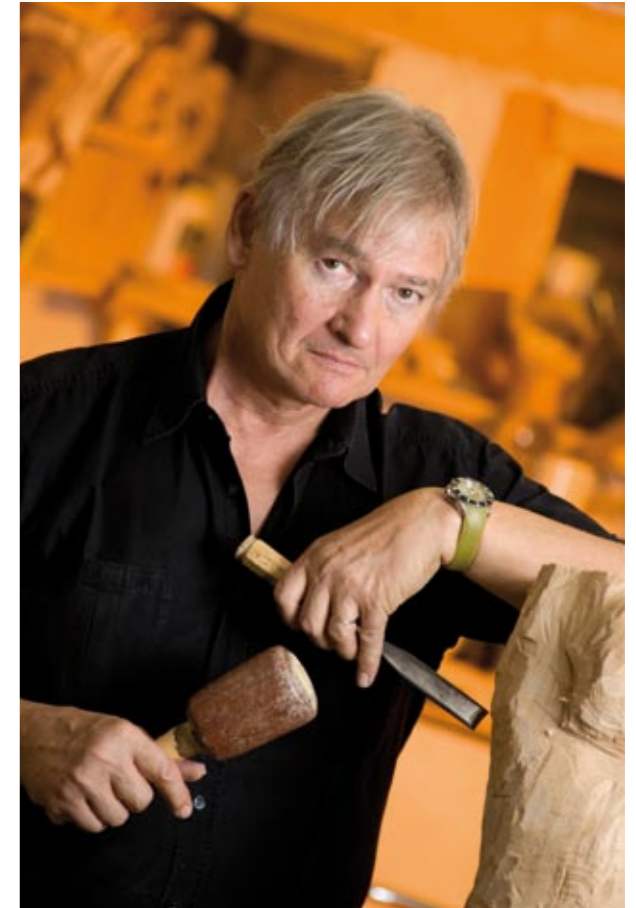
**Man Leaning
on Nothing**
Polished terra cotta
2008
Height 13 cm

“This filthy illness started in 1993 I think. It’s difficult to put an exact date on it. My daughter gave me some sculptor’s clay and one or two basic tools for Christmas in 2000. It was the first time I had ever attempted sculpture, and it was a complete revelation.

I’m really not very good at drawing, but I have always enjoyed it. I immediately found in sculpture something I never had in drawing – a new dimension incorporating space, movement, emotion, in a word, life itself. My illness had perhaps taken some life from me, but it had not taken any of my thirst for, or my joy in, life. After my surgery, I began to sculpt wood. Earth and wood have brought me serenity.

I have always been lucky (yes, really!) because my family has always encouraged my sculpting activity. I think this is important, because as my physical aspect deteriorated, thanks to sculpture, I have been able to continue to occupy a special place.

I don’t know if there is a direct connection with my illness, but what I do know is that you get used to exhibiting what you do to the scrutiny of other people. And when you freeze, and can’t walk, you really have to be able not to worry about how other people see you. It is certainly one aspect of this disease, and it is something which helps us to take risks and surpass ourselves.”



Cyril Landrot de Rogalski

62

Montbrison, Loire
Former doctor
Parkinson’s patient for 16 years



**Sun behind
Cornafion bifid
peak**
Digital photo
2008
54 x 42 cm



**Chamonix
(thanks to the gust
of wind!)**
Silver emulsion
photo
1987

“These photos were taken by the same photographer, but not by the same man.

The images in shades of grey were taken by a still-sprightly fifty-year-old, who was still a virgin to suffering (to borrow an expression from Céline) who was, in other words, as yet untouched by any painful and incurable physical or mental illness.

The digital colour photos were taken after four years of photographic abstinence by an old man worn out beyond endurance. This old man decided to start taking photos of what he saw and more to the point, of what he could not see from the window of his bedroom, in order to take his mind off his stupid body. Photo-therapy, in other words. Thus, during crisp alpine winter nights, the old man discovered that nothing in the world could remain hidden. The digital lens detected everything, even when the human eye saw nothing.

While black and white enabled him to capture a street theatre scene, a human drama made up of laughter and tears, using colour enabled him to venture into a different universe, one of torment, and even of anguish, which reflected the suffering inflicted on the old man over the years by his illness.

This illness does not lie. It keeps its promises. It gets worse.”



Guy Martin-Ravel

78

**Villard-de-Lans, Isère
Former English teacher, mountain guide,
photographer and reporter
Parkinson's patient for 14 years**



Digitalis on the Web
Watercolour
on black paper
2008
73 x 86 cm

“I have been attracted to the graphic arts since I was a child.

My first exhibition was held in 1988. From 1991, because of my work, I no longer had enough time to paint watercolours. Then, in 2002, when I retired, I discovered that the symptoms I had been experiencing were linked to Parkinson's. I started taking dopaminergic medication. At first, I found the treatment rather difficult, but it did give me back my self confidence. I started painting again. Then, gradually, I began to use both larger and larger formats and stronger and stronger contrasts in my watercolours. My choice of frames has evolved too. Initially classic and discreet, they are now modern with broad, coloured borders.

Since I've been on this medication, I have been able to control my anxiety better, and I can undertake things fearlessly. I feel more sure of myself, both in my artistic choices and in my work. Water-colour painting is a passion and an escape. It helps me to accept the unpleasant effects of this illness. I have accepted my medication, and it is perfectly tailored to my needs, because it also enables me to be fulfilled in my passion for water-colour. It energizes me, and makes me want to do things in general, but more than anything else, it allows me the freedom to express myself through water-colour.”



Claudine Naville

70
Charnècles, Isère
Former dental technician
Parkinson's patient for 7 years



**Tranquility
over Léman,
Thonon-les-Bains**
Superposition
of stones
26th June 2009,
8:41 p.m.
Ephemeral
structure

“2003. The diagnosis fell on me like a ton of bricks. My life fell apart. Then, in the summer of 2004, on the banks of Lake Lemán, I rediscovered a passion for one of my old passtimes – that of taking off for hours on end on the lookout for things to photograph, snapping shots anytime, anywhere, until, gradually, it turned into a compulsion. Dawn, dusk and night-time were all opportune moments for forages into the countryside with my camera relentlessly capturing images.

Then came the stones, with their ageless beauty, polished by time and nature. I was seized by a bulimic urge to collect them, under the burning sun, in the cold, in driving rain, outside of time. And ‘my’ stones piled up. I would spend hours varnishing them before offering them, like flowers, for the eye’s delight.

Next, for fun, I began to make figurines, once again in a very bulimic way, fixing four patiently-selected stones to a base. One of my most intense pleasures is combining photography and stones. I spend hours on the shore, creating on the spot, superposing these constructions which are of necessity, fragile and fleeting, in order to capture an image of this delicate balancing act.

Perhaps freezing these ephemeral compositions for all time is my way of taking back some power from the Demon Time which has dealt me so many nasty blows.”



Gilles Pellegrin

58
Wittenheim, Haut-Rhin
Former teacher of economics and social science
Parkinson’s patient for 6 years



Isabella
Born in October, 2006



César
Born in April, 2007

Assorted colocynths,
lime, shells, artificial
petals, pebbles and
bark, painted and
assembled.
Height 8-17 cm



Coquette
Born in January, 2007



Vénus
Born in March, 2007

“I have always been both active and creative. When I was diagnosed with Parkinson’s, I decided to get on with my life and change nothing... Then, following a change in my medication, I found that my creativity was on the increase, to the extent that I wanted to paint on all sorts of things... and I had the idea of painting on colocynths.

My passion for these cucurbitaceous plants dates back to 2006. I work on the plants, following their natural shapes, rubbing their surface before painting and dressing them. I bring them to life as dolls, animals, nice monsters and other creatures. I would spend days, and especially nights, trying to satisfy this at times overwhelming passion, watched – often in astonishment – by those close to me. I grew, bought and stocked industrial quantities of the plants so that I would never run out. It was a kind of madness: even I didn’t think it was normal, but my head was full of it. As soon as I started on one object, I just had to finish it. And as soon as I had finished that one, I had to start on another... I was unable to stop myself.

This ‘colocynth’ period lasted a year and a half, until another change was made in my medication. I have held two exhibitions, and have now moved on to other creative activities, but never with the same degree of passion as before.”



Monique Tuosto

58
Châbons, Isère
Former hairdresser
Parkinson’s patient for 7 years

Did you say Parkinson's?

Paul Krack • Claire Ardouin • Pierre Pollak • Eugénie Lhommée • Valérie Fraix • Emmanuelle Schmitt
Movement Disorder Clinic, University Hospital, Grenoble



(1) "Parkinson's Disease in Everyday Life". Pierre Pollak, published by Odile Jacob, 1994.

Parkinson's Sufferer
sculpture in bronze, by Paul Richer, circa 1930. Charcot Library, Pierre & Marie Curie University, Salpêtrière Hospital, Paris.

[Medical Presentation]

In this disease "movement becomes rare and slow, requiring considerable willpower and energy. Rigidity tends to cause the trunk to become hunched, as do the four limbs, which are also affected by a tremor which is at its most intense when the patient is at rest."⁽¹⁾

The above characteristic Parkinsons Disease symptoms are partially reversed by dopaminergic medication, which stimulates activity in the brain of a chemical substance known as Dopamine. This substance, which is produced naturally by the neurons of a small structure in the brain called the substantia nigra, enables communication between neurons. The gradual loss of dopaminergic neurons interferes with harmony of movement.

While the relationship between a shortage of dopamine and motor function disorders is well-established, too little is as yet known about patients' psychological state. For this disease also affects – to a lesser degree – the dopaminergic neurons of another small structure in the brain: the ventral tegmental area. This constitutes the hub of the 'reward system' which controls both motivation and the emotions. A shortage of dopamine in this system causes mental fatigue, feelings of sadness and anxiety, loss of motivation, desire and pleasure, and of the very desire

to feel pleasure. As is the case for motor symptoms, these psychological symptoms are greatly alleviated by dopaminergic medication.

Effective treatments

In the early stages of the disease, dopaminergic medication can improve both motor and psychological symptoms. However, with time, their beneficial effect becomes irregular. This accounts for the onset of fluctuations in mood and motor function. Patients' mood and motor function can thus oscillate rapidly between two opposing states. These are commonly referred to as 'off' and 'on' periods, borrowing the image of switch turning a light off or on:

Off period

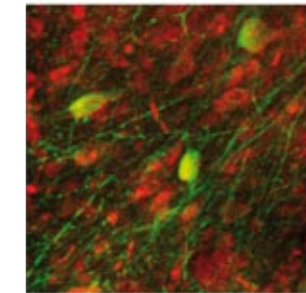
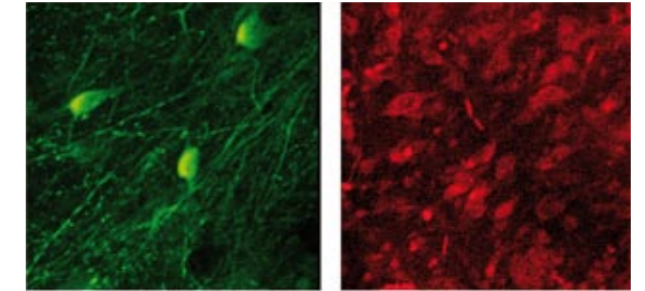
Absence of any effect from medication, typical symptoms of the disease:

- Slowness of movement / tremor
- Sluggishness of thought
- Sadness, anxiety
- Lack of motivation

On period

Medication produces an effect, with improvement of symptoms:

- Absence of tremor / fluidity of movement
- Quickening of thought processes
- Happiness / serenity
- Normalization of motivation



Dopaminergic neurons
(coloured in green) in the substantia nigra.
Images S. Boisseau, C. Carcenac, M. Savasta, GIN - INSERM U 836.

These fluctuations require an extremely painstaking adjustment of patients' medication, taking into account effects on both motor and psychological function in the choice of drugs and dosages. When fluctuations become too severe, uncomfortable or unpredictable, some patients may be offered surgery (which involves stimulation of the subthalamic nucleus).

Dopamine, aka 'the pleasure hormone': its effects and excesses

Thanks to this medication, patients regain motivation and desire, and return to activities which bring them the same pleasure as before they became ill. This period can even be referred to as a 'honeymoon', since

patients feel really well, need less sleep and get involved in various activities whose only common denominator is that they bring pleasure. Time once again becomes precious. Depending on individuals' personality and past experience, this perfectly reasonable quest for pleasure may be expressed through work, gardening, cooking, internet, sex, shopping, gambling or through creative art. Patients are able to forget about their illness and feel fulfilled.

In some cases, this appetite for pleasure can go beyond what might be considered reasonable and become a genuine behavioural addiction. This indicates that the effect of dopaminergic medication on motivation levels can no longer be termed replacement therapy: the effect is due to its excess. At this point, the patient, his relationship with his partner and his family may be in danger, because behavioural addictions such as pathological gambling, compulsive shopping and hyper-sexuality can have grave consequences, and can completely upset the equilibrium of both the patient and those close to him.

Caring for the psyche

The presence of behavioural and mood disorders related to the disease itself, to patients' personal experience and to medication, all serve to highlight the necessity of taking into account the psychological aspects of Parkinson's Disease in the management of patients' care.

Patients will no doubt be surprised by the highly personal nature of questions asked by neuropsychologists and neurologists during in-depth interviews. The opinion of those close to the patient, who are a vital source of information, may also be sought. In doing so, the neuropsychologist is attempting to bring to light any behavioural changes suggesting that drug dosages might be either too low or too high. And working on this information, the doctor can adjust the patient's medication, his goal being the best possible balance between benefits and negative side effects on motor function and behaviour.

Every aspect of the patient's care is therefore taken into account. A number of health professionals contribute, thus ensuring that no aspect of the disease is neglected.

[Dopamine]

In the world of art, creativity is a question of revealing the beauty which lies hidden behind the apparently trivial exterior of people and things, even if, as is common in contemporary art, that beauty sometimes takes on the guise of ugliness or of a provocative gesture. Beauty has no inner life of its own: it resides in the human brain, in man's relationship with the world. It is, in other words, the expression of the human soul. This latter is however powerless without the supreme stronghold of desire. And that is where Dopamine comes in.

Like language, art is a specific product of the human brain. It is an act directed towards others, or at least towards those sensitive enough to receive it. That which transpires through the senses appears in the opposing guises of pleasure and suffering. Art is a way of exercising a hold on the world. It springs forth from the well of desire, amidst a host of sensations, all laden with meaning. The intensity of this process is thought to depend on the creativity of a given individual. This creativity is none other than the individual's power to act on the world, and it involves the dopaminergic structures.

Systems of hedonism and desire

These systems are remarkably similar from one species to another, whether it is in rats, monkeys or humans.

Beauty, beautiful source of my disquiet...

Jean-Didier Vincent

Neurobiologist, Honorary Director of the Alfred Fresnard Institute, Member of the Institute of France (Academy of Science) and the National Academy of Medicine



The heart of these systems, situated in the base of the brain, is the point of convergence of structures whose role is to modulate and regulate, under the influence of the various neurotransmitters. And Dopamine constitutes the final common pathway of these structures. Desire is univocal, as is pleasure, but desire can diversify, depending on the objects and acts by which it is specified. The innovative and creative nature of an act or figurative representation in a work of art is above all the result of a whole host of sensations made action under the impetus of desire.

Art therefore bears witness to a sensorimotor collusion. As Ernest Gombrich reminds us, the Greeks had only one word for both art and skill: 'techné'. We speak of the eye and the hand, and of the collaboration of the two, but in actual fact it is in the brain that, from the very first glance, the fusion of vision and movement takes place, taking root in the fertile breeding ground of sensitivity. The couple, formed by desire and pleasure (or suffering) which finds expression in the release of Dopamine, is largely responsible for the joining of representation to action in the brain. The Parkinson's patient finds himself exposed to a therapeutically-induced overload of Dopamine which targets not only his motor systems, but also causes a near-swamping of the systems of desire and hedonism. Under the influence of L-Dopa, Parkinson's patients treated by the drug find their systems of desire laid wide open to the sensorimotor universe all around them. Like an in-

nocent facing an unknown world, he finds awakened in himself sensations which may go on to become works of art. The world which is born of the senses is our world of origin. The cry which emerges from pleasure and from the depths of an unfathomable reality takes on its neural 'consistency' from the hesitant accomplishment of gestures which gradually become organized under the guidance of the hand.

The hand

The hand is the primary instrument of creativity. It is the hand which brings about the fusion of the representations within which man internalizes his personal world (the Germans speak of 'Umwelt'), and the gestures by which the hand appropriates the object's existence. The act becomes creative when the objectal ensemble becomes an autonomous entity, a bearer of meaning. This meaning addresses the artist in return, but it is also destined to be shared with others. In *"In Praise of Hands"*, Focillon writes: *"The 'creative' gesture exercises a continuous influence on the inner life. The hand wrenches touch from its position of receptive passivity, and prepares it for action and experience. It teaches man how to take possession of space, weight, density and number. Creating a hitherto undiscovered world, the hand confronts the matter it metamorphoses and the shapes it transfigures. The hand educates man, multiplying him in space and in time."* We should bear in mind the handprints in the form of frescoes on the walls of caves made by early Paleolithic artists.

The instrument became a work of art: creation became foundation. The hand intervenes to restore order to the inner turmoil. Art also marks the birth of man 'who knows'. It is made and done by the hands. They are the instrument of creation, but they are first and foremost the organ of knowledge. Every one of us is an artist even if it is sometimes only through someone else's hands, creating for us in a gesture of giving in a community founded on beauty. While we feel contact in a passive way, the creative artist seeks it out and experiences it actively. Goethe wrote: *"What I have not drawn I have not seen."* Nor should we forget that speech came first through the hands, and only afterwards the mouth. Human protolanguage is one of gestures. Recognition occurs through the imitation of other peoples' gestures, as Rizzolatti demonstrated with the discovery of mirror neurons. This is also clear from Faust's monologue. After refuting the affirmation that "In the beginning there was word", he goes on to acknowledge the pre-eminence of the gesture: "am Anfang war die Tat!"

The artist painting a woman's breast caresses it and looks on it through his hands. Its curve, the pearl-like transparency of the skin, and the vivid vermillion of the areola are all passed on to the hand of the observer. The hands of the artist and those of the observer beat together like wings of desire. Let us turn once again to Focillon: *"Watch the hands as they move, unfettered, without regard for function, unburdened*

by mystery. At rest, they curl gently, as if surrendering to a dream. Or they move with vivacious elegance of the pure gesture, of gesture with no real purpose... In these moments they appear to sketch a multiplicity of possibilities in the air, playing with one another, readying themselves for some future, effective action."

For Parkinson's patients, a tremor which is the very negation of action and gesture troubles the hands' rest. With no regard for beginnings, their hands appear to be crumbling time. Then medication restores the creative impetus to their restless hands.

The engines of creativity

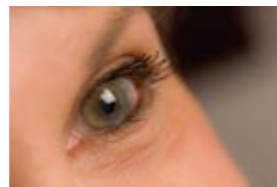
Parkinson's patients frequently present a state qualified as dulling of the affect. The patient is plunged into a state of indifference towards everything around him, of intellectual inertia leading to a withdrawal from the world, accompanied in some cases by the impression that time is slowing down or even stopping. They do not however experience feelings of boredom. The cause for this appears to reside in a disafferentiation within the systems of desire, in this particular case the basal activating system (still known as the mesolimbic system). This failure is a result of patients' poor motor function, which is at the very heart of this disease. Treatment with L-Dopa will go some way towards reawakening the mesolimbic system from the state of enforced rest brought on by the disease. The patient becomes susceptible to feelings of bore-

dom once more, and throws himself into a quest for stimulation, desperately seeking diversity. Creativity responds to this demand for novelty, which is a quest for both sensation and emotional exaltation, for, therefore, life. Creativity is not the only response to treatment. Appetite and sexuality are other possible expressions of this rebirth of desire. While talent, and even genius, have nothing to do with dopamine, it is nonetheless true that curiosity and the need for diversity can open the door to artistic expression, for people who are in no way prepared for it. An aesthetic of diversity does indeed exist, and is described by Montesquieu in his essay on taste: *"It is through variety, and in diversity that existence is exalted. Everything which has until now been termed strange, out of the ordinary, surprising, mysterious, amorous, superhuman, heroic and even divine, comes under the cloak of variety"*, everything that is 'otherly', with *"the essential element of variety that each of these terms harbours."*

Conclusion

To conclude, I would like to emphasize one thing. A work of art is, first and foremost, a gift which the artist offers to others. It is in some ways an act of love. It is one of the primary modalities of existing in the world. Art itself exists solely through the brain towards which it is directed and which receives it. Painting in particular illustrates this. Every painting is the materialization of a representation which takes shape

in the artist's brain, before finding its destiny in being shared with others. A work of art is the pure expression of its creator's psyche. The fact that the artist is a patient taking effective medication changes nothing of the intrinsic nature of the work itself, which suffices to itself and, by its very existence, lays claim to its autonomy. Finally, thanks to the treatment provided, this disease serves the cause of self knowledge: and the works themselves, in turn, contribute to the artists' fulfillment.



Acknowledgements

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Artists
 Jacqueline Baillet
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 Michèle Cousin
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The idea for this exhibition first germinated in the magic of human encounters. It then grew, to reveal the creative abilities of some of our Parkinson's patients. It began in the privacy of consultations between neuropsychologist and patient, during which all the patient's suffering, hopes, and desires, even the craziest, are revealed. It continued with the empathetic pursuit of the best approach for each patient and his or her treatment, by the team involved in his or her care. Parkinson's Disease is wrongly associated with motor degeneration only, never with pleasure and even less so with creativity. It is this hidden side of the illness that we wish to reveal to the public.

**Musée grenoblois des Sciences médicales
 CHU de Grenoble • site Nord**

*Grenoble Museum of Medical Science
 Grenoble University Hospital (North)
 Tram B, stop Grand Sablon*

38 700 La Tronche • France • Tel. +33 (0)4 76 76 51 44

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