Introduction: Aims of the Study

This study sets out to evaluate and analyse the purpose and value of the Medicine Now exhibition in relation to the Wellcome Collection’s interests and objectives, while making a parallel with other cultural and media spaces. The aim is to understand and reflect on the benefits of using exhibition design as a vehicle to explore and disseminate the complexity of biomedical science in an accessible and engaging manner.

The first part of the study examines the context in which the Medicine Now exhibition was created. What position does it hold within the Wellcome Collection? The second part investigates the space and its content from the point of view of visitors, curators, designers and artists. Does it signal a new direction for exhibition curation and design? The third part explores communication and experiential strategies in more depth. How do visitors experience this innovative environment and its content?

The objective is to establish whether the approach taken by the Wellcome Collection in its curation and design of the Medicine Now exhibition space unlocks new synergies for the dissemination of scientific knowledge to a wider audience. Does it fulfill its aspirations as a cultural and learning space?
Act 1: The Stage

"Part of what the Wellcome Collection tries to do is to hang on to some of the jars but to integrate other ideas and other material too.

It links back to Henry Wellcome’s extraordinary collection and its interest in material visual culture."

Dr Ken Arnold
1.1 The Wellcome Trust

“The Wellcome Trust is the largest charity in the UK and the second largest medical research charity in the world. It funds innovative biomedical research in the UK and internationally, spending around £500 million each year to support the brightest scientists with the best ideas.”

The Trust however is quite specific in the way in which it supports projects. According to Peter Williams, "one of the principal aims in the administration of the fund of the Wellcome Trust as a charitable foundation is to give flexibility to the methods by which medical research is financed. […] To support promising new advances and in adequately supported or interdisciplinary subjects which offer opportunities for development until such time as these can be absorbed into regular budgets. They do not consider it to be their function to make up the deficiencies created in regular budgets by inadequate allocation of public funds.”
<table>
<thead>
<tr>
<th>1853</th>
<th>1880</th>
<th>1885</th>
<th>1901</th>
<th>1924</th>
<th>1936</th>
<th>2009</th>
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<tbody>
<tr>
<td>USA: Birth of Henry Wellcome</td>
<td>Henry Wellcome and Silas Mainville Burroughs created the pharmaceutical business Burroughs, Wellcome &amp; Company.</td>
<td>Upon the death of Burroughs, Wellcome, by then a British subject, became the sole proprietor of the company and transformed it into a highly successful worldwide pharmaceutical business while pursuing his personal interests in the history of medicine, with extensive trips across the world to study and collect medical artefacts.</td>
<td>Henry Wellcome recognised the need for a research organisation and was keen to promote human welfare, nutrition and the history of medicine. He developed an interest in tropical diseases, helped set up laboratories and funded much needed research in this area of medical science.</td>
<td>Henry Wellcome created the Wellcome Foundation Limited and used his colossal fortune for the advancement and support of medical science, for which he was also knighted.</td>
<td>On his death Henry wellcome donated the entire business to a board of Trustees. This legacy was used to create the Wellcome Trust charity while the Wellcome Foundation retained the management of the business. The assets of the Wellcome Foundation were close to £15 billion with a £600 million expenditure income available to the Wellcome Trust. This impressive fortune enables the Trust to invest in a wide range of projects supporting research in medical science across the world.</td>
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1.2 Science and Culture

1.2.1 The knowledge of Science

Designing exhibition spaces today is a complex multidisciplinary activity. Strategies are collaboratively selected by a wide range of design professionals – spatial, graphic and information, installation, interactive, lighting - to engage visitors and provide a rewarding and fulfilling experience.

Early science museums however had no real design strategy and no labels. They were akin to cabinets of curiosity, cataloguing artefacts in glass cabinets and jars, and primarily aimed at the educated and specialists. The Victorians introduced labels in a drive to make the information more accessible to the uneducated masses. This however developed into a proliferation of information in the latter part of the 20th century, which meant that people weren’t looking at the objects anymore. As an experience it was limited to passive participation and rote absorption of knowledge.

Innovations in exhibition design took place between the 20’s and 60’s with artists and designers such as El Lissitzky and Frederick Keisler who saw the design of exhibitions as an important aspect of their work. Modernist exhibitions were designed so the space had resonance with the work’s key thematics. It was memory rich.

Technical innovation allowed for enhanced viewer interactivity while areas of mass media and communications transformed modern life and pushed towards the development of new frontiers that became the precursors to installations. For example, the 1951 Festival of Britain featured designs inspired by science at the South Bank Centre and the Science Museum.

Figure 11. Huntarian Museum vault, London

Early Museums grew from collections and as such could often be found within universities and research facilities, and were used as learning tools.

The contemporary Huntarian Museum is reminiscent of early medical collections yet artefacts are displayed in a contemporary, even precious way, like jewellery.

They are set within a vault across level 1 and 2 of the building. The Wellcome Trust contributed financially to the restoration of the collection and refurbishment of the Museum in 2006.
Exhibitions on scientific subjects were traditionally serious to mirror the status given to the subject. However people’s perceptions today are different because the knowledge of science has become more accessible.

Science has become part of our culture and spaces dedicated to science have risen in popularity over the last few years. It’s not only places such as the Science Museum and the Wellcome Collection that offer events and promote debate but also art galleries such as Tate Modern and The Arts Catalyst. So why this revival? Why did science decide to make itself more public and accessible?

Perhaps it isn’t science who made itself more accessible but the public who was seeking science. Robert Bidder, an artist who also works at the Wellcome Collection believes that “Science is the new religion”. An increasingly secular society needs nonetheless to believe in something so could science, for some, offer an alternative to religion? Scientists work on facts. They research and test to provide firm evidence. There’s certainty in the outcome.

The media have been quick to capitalise on this shift and a BBC iPlayer search came back with 1828 programmes on science available to watch now (February/March 2012). Programs such as ‘A history of the brain, Dr Geoff Bunn journeys through 5,000 years of human understanding of the brain’ or ‘Placebo, Ben Goldacre investigates the latest research on the placebo effect’.

These people make science interesting and attractive to a whole new generation and like the Medicine Now exhibition, also need to capture audiences within a highly complex and specialised field. To achieve this they wrap their subject with excitement, wonder, enlightenment and while it is accessible to non-specialists it remains meaningful.

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1.3 The Wellcome Collection

The Wellcome Collection building located at 183 Euston Road, London, is the original Wellcome Foundation building set up by Henry Wellcome. Its primary functions included an administrative centre, a library and a teaching space on the history of medicine on the top floor.

As the Trust grew bigger it required a new site so bought the land next door where in 2004 it built larger, more modern premises. The Trust was however keen to retain the original building because it is part of Henry Wellcome’s original vision and so created the Wellcome Collection.

The original Wellcome Foundation site was remodelled and modernised in 2007 by Hopkins architects to house the Wellcome Collection 1,300 exhibits over three galleries as part of the Trust’s mission ‘to foster understanding and promote research to improve human and animal health.’

It also includes a temporary exhibition space, library, conference centre, public debate forums, member’s club, bookshop and cafe together providing visitors ‘with radical insights into the human condition’.
Most of the first floor of the building is dedicated to two permanent exhibitions, Medicine Man and Medicine Now, with the Forum area within the Medicine Now gallery.
Act 2: The Script

"If you have never been there I am sorry to report that you have deprived yourself of the pleasure of being in one of the best galleries in London. Three things put the Wellcome Collection in a league of its own:

1. Their ability to make complex information accessible and interesting.

2. Staff who seem to know everything about the collection and share it enthusiastically.

3. A relaxed 'choose-how-you-want-to-spend-your-time-here' atmosphere."
Medicine Now grows out from some of the thinking behind Medicine Man so it is useful to briefly explore their similarities and contrasts.

Both galleries were designed by the same teams, Gita Gschwendtner for three-dimensional spatial design and Kerr I Noble's Frith Kerr for the graphics and information design.

The design team was keen to have some continuity between the two spaces for visitors to feel that the patterns of looking at objects and reading about them is similar even though their respective design is also decidedly distinct.

For example, both galleries contain three types of objects: contemporary art, objects from the world of science, objects from daily life. However as Medicine Man is a darker space and showcases the pre-1936 historical collection of Henry Wellcome, Medicine Now is a bright white space that focuses on medicine since 1936 and especially medicine in the last 10 years, reflecting the Wellcome Trust’s current interests.
Experiential progression through the galleries

In the Medicine Man exhibition the lighting levels are kept deliberately low to protect the exhibits. The audience is presented with a collection not dissimilar to an old cabinet of curiosity that presents Henry Wellcome as an Edwardian collector of artefacts. The space although contemporary in design strongly reflects the past with its American walnut wood panelling and glass cases. An old context presented in a new language.
2.2 Medicine Now

2.2.1 A Cultural Space

Medicine Now, with its focus on biomedical science is neither too serious nor solely aimed at younger generations and therefore appears unique amongst exhibitions on science. A key decision when curating the exhibition is that it’s not primarily for children, which is unusual in the world of scientific exhibitions. Both the Science Museum and Natural History Museum are, for example, dominantly aimed at 14 year olds and below.

Medicine Now positions itself to attract a mature audience and its design as a cultural space is an important factor in attracting the right audience. Dr Ken Arnold explains that the kind of audience the Wellcome Collection is aiming at are people who go to the V&A, the British Museum and The Tate, places that have culture and art on display. So even though compared to these museums, the Wellcome Collection is relatively new, The Trust wanted the galleries to feel like an alternative to these places.

Monitoring visitors confirmed that many people who visit the Wellcome Collection also visit other museums and galleries but few have recently been to other museums predominantly about science, even though about 30 to 40% of visitors have a professional interest in the subject, either working in health services, architecture and design or artists. It seems that the broad interests of the Collection appeals to people and engages them in a personal way.
2.2.2 Curation

Three aspects of material culture, objects from the world of science, objects from daily life, and contemporary art, are brought together to illuminate five topics: the body, obesity, malaria, genomes and experiencing medicine. These topics were chosen amongst many other possible modern medical topics because they reflect Henry Wellcome’s legacy and are all close to the Wellcome Trust’s interests. For example, the Trust has invested a lot of money in funding research in genetics and genomics in the last 20 years so the organisation felt it was appropriate to include a section on the Genome in the gallery.

There is also a strong belief that the body has always been at the heart of medicine and so the Wellcome Collection wanted to include a section that looked at how the body is examined in contemporary medicine. This includes aspects of the body functioning normally alongside aspects of the body malfunctioning, for example Malaria a prevalent type of infectious disease and Obesity as an interesting combination of genetics and lifestyle.

The Wellcome Collection is committed to showing real artefacts rather than copies although there are a few commissioned pieces in the Medicine Now gallery, such as the enigmatic display of the books of genomes.

This is an interesting exhibit because although it represents pure science, it is presented as a metaphor and therefore could also be perceived as an art installation.

The print out of the human genome is unique in the world and its inclusion into the gallery space gives it a new aura as, as soon as an object is brought to a gallery space, people start looking at it differently.

Figure 26. Genomes library

The Wellcome Collection is committed to showing real artefacts rather than copies although there are a few commissioned pieces in the Medicine Now gallery, such as the enigmatic display of the books of genomes.

Figure 27. Plan view of topics spatial organisation - Not to scale

Within the gallery space, the borders between topics is deliberately kept fluid in order to emphasise the relationship between them in the context of biomedical science.
When visitors arrive at the gallery main entrance they are greeted by this luminous display from which all exhibits radiate.
2.2.3 Objects from the World of Science

As well as medical props and samples, objects from the world of science include high-tech equipment and sound bites from medical professionals. They are there to remind us of the complexity and diversity of biomedical science and highlight the work of the Wellcome Trust and scientists. Reproductions of organs have replaced specimens in jars while technology enables scientists to slice and beautifully preserve entire sections of the body.

One could argue that this sanitised version of medical science loses its direct connection with reality. Medical science does however use highly advanced technology and it does enable the Medicine Now exhibition to convey an optimistic outlook into the future of biomedical science.

Sound bites explore the human side of scientific topics and their conversational tone help create a connection with the audience. In this example, Steve Jones speaks about DNA.

“DNA when you first see it, looks embarrassingly like snot. I don’t think people realise how much of it there is about. If you were to run to Euston Road and be squashed flat by Ken Livingstone’s bendy buses, the number 18 maybe, the DNA in your body would stretch to the moon and back 8000 times.

That’s a lot of DNA, and of course it all comes from six feet or two metres of DNA, which is the cell that made you, which was the fertilised egg. One of the most astonishing things about the Human Genome project, which is this scheme, now complete, to read the three thousand million DNA letters inside everyone of your cells, was to discover how incredibly simple they are.

When I was a student, we used to talk of 100 000 or millions of genes, like factory making proteins that went to make a human. In fact the number is embarrassingly small. It’s about 25 000. That’s about the same number of individual bits that go into that bendy bus which has just run you down on Euston Road. I like to think, most of us like to think, that we’re more complicated than the bendy bus, but in fact, in some sense, we’re not. […]”
The medicine Now exhibition also reaches into everyday lives to capture audiences around issues of human health within the highly complex field of biomedical science. Although human health concerns us all and despite the plethora of programmes and events on science, the majority of people only have basic scientific and medical knowledge, often distorted by the many claims and latest fads available from non-scientific sources also known as bad science.

Diet books are a good example and the Medicine Now curatorial team took the decision to dedicate an entire section to this issue. As well as diet and exercise paraphernalia there is also a bookshelf containing 700 diet books, all making promises they cannot keep as one of the specialists speaking from one of the sound chairs nearby clearly explains.

These objects are specially chosen because they can be found in homes and establish a connection with our beliefs, understanding and constant preoccupation with health and wellbeing, often looking for a ‘quick fix’ rather than following a long term approach, highlighting human and social contradictions.
Although the appropriation of art by science is not a new concept, artists bring a new dimension to the communication of medical science and offer an opportunity to explore individual experiences and enhance the context of scientific knowledge. Marc Chagall said “Great art picks up where nature ends” while Einstein believed that “Imagination is more important than knowledge”.

Through imagination and metaphors, art is able to show what science alone cannot. The work isn’t meant to be realistic but to offer a viewpoint, to reach into the depth of meanings and interpretations. It reduces a complex situation to a single concept that can be understood and doesn’t need to be compliant with elaborate knowledge or context.

The drive to integrate specially commissioned artwork, thus contextualising its content in an evocative and thought provoking manner is explained by Clare Matterson, Director of Medicine, Society and History at the Wellcome Trust: “the Wellcome Trust understands the power of using the arts to engage audiences around issues of human health.

Since 2002 we have awarded £5.5 million to original and imaginative art projects inspired by biomedical science. It combines our experiences with the vision and legacy of Sir Henry Wellcome to provide a contemporary space that enables people to explore the connections between art and medicine in dramatic and challenging ways.”
One of the challenges faced by the curatorial team and designers was how to display scientific objects and art together. Should all the objects be put together in one space or should there be a clear distinction between both contexts? Should the distinction be emphasised with graphics or should visitors be allowed to decide for themselves? This was a crucial aspect of the decision making process in the design of Medicine Now and one that is essential to the level of cognitive and emotional engagement afforded to the audience.

From the onset of the project the spatial designer was keen to create a framework for viewing art distinct from the architecture of the space so took the decision to incorporate red cubes into the design to contain all artwork. Works on display include sculpture, drawing, moving image, spoken words, poetry and installations.

The art in the gallery serves to enhance the emotional power of inanimate objects. Messages are reflective, cultural, meaningful and sometimes even beautiful or fun. Despite its chosen topic, there is beauty in ‘Swine Flu’ by Luke Jerram and work such as ‘The seeing Mind’ by Osi Audu produce a high level of emotional engagement.

Although the pure white setting may give an impression of an idealised world, there is a real depth in the art work with some thought provoking creations such as the installation ‘Veil of Tears’ by Susie Freeman and Dr Liz Lee highlighting the inequalities in the treatment of Malaria due to poverty.
Portrait of an Artist - Osi Audu

Interview with Osi Audu about ‘The Seeing Mind’, his sculpture for the Medicine Now gallery.
Interview date: 2nd of February 2012 (via email)

VM. How do you perceive the role of art in an exhibition on biomedical science?
OA. Art gives aesthetic form to concepts. In the scientific field, as in all other fields of investigation, there are visual implications of most of the ideas and discourses within the field. Generally, the artists give a creative response to scientific thought. However, there are occasions where artists, because of the intuitive nature of our work, have been visionaries for scientific researchers. An example are Leonardo studies of the human form and the mechanical drawings of flying machines.

VM. Were you given a specific brief?
OA. We were to consider some existing scientific ideas and research. We were to look into artefacts within our native cultures, and to explore experimental possibilities within our own practice as artists, and to make our creative response to the human head.

VM. How would you describe your response?
OA. My focus was on PERCEPTION. In my dialogue with professor Kennard at the University of London, we looked at how vision occurs. It was concluded that the way the mind interprets the electromagnetic neural sparks generated by the retina and passed through the optic nerves, was still a mystery. However, my sculpture installation – THE SEEING MIND explored the notion that – it is not the eyes that see, instead, it is the mind that sees through the eyes. The concealed proximity/motion sensor attached to the work is what actually does the “seeing” or sensing, not the mechanical animatronic eye.

Aesthetically, I was exploring, and perhaps creating, a new sculptural language using steel, rope, and electronic/mechanical components as part of a new visual vocabulary.

VM. How was it received?
OA. THE SEEING MIND was extremely well received. It was very popular with the viewers to the exhibition. Adults as well as children seemed quite engaged with the animatronic eye as it opens and shuts.

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Figure 41. Experiencing Osi Audu’s ‘The Seeing Mind’

The animatronic sculpture comes to life when people pass in front of it, activating its mechanical eye and emitting a sharp sound, creating an element of surprise.

Startled, people look around to try to understand where the sound comes from. Many come back to the area, walking around the sculpture until they identify its source. It is then that most people notice the eye staring straight at them.

The audience appears to enjoy activating the mechanism with many walking back and forth in front of the sculpture and taking photographs.
The red art cubes are not only organisational but also experiential. The greyed out area in the drawing represents the space within the gallery with the highest footfall. All exhibits converge to this central point and this area is the most accessible. This is where the majority of visitors will give objects on display the major part of their attention and consequently the art cubes are loosely positioned at the boundaries. Act 3 of this study explores strategies for display and audience strategies in more detail.
Act 3: Set Design

“I think that the exhibition is laid out well. It allows plenty of space around each exhibits, this is good, as it does not feel too crowded and allows sufficient space for wheelchair users or pushchairs to get around comfortably.

I really like the fact that there are sound chairs in each section where you can learn more about the topics by listening to an expert talking. [...] It is good that they have the sound chairs as it is varying the stimuli that the visitors are experiencing, making it more interesting.

[...] Overall I would recommend this exhibition to others. I think that it provides a varied exhibition, with information to read, visual displays, interactive exhibits, short films to watch and speeches to listen to. There is something for everyone.”
The gallery is entirely white with energising red cubes punctuating the space. The white environment contains objects from the world of science and from daily life while the red cubes contain contemporary art.

The white spaces also invite a contrast of light and dark with the Medicine Man gallery and represent a discernible reference to the clean and pristine environments of modern medicine and research laboratories. The apparent simplicity of form and colour make the perfect backdrop for the wide range of objects on display.

There is a strong relationship between human scale and that of the red ‘art cubes’ creating spaces within the main space, following the original intention of the designer to define art work in relation to scientific objects.

This bright and airy environment is inserted directly into the architecture of the room, bringing energy to the original rectangular space. The light maple floor brings warmth and softness to the white and red contrasts and sharp lines of the fixtures. The palette consists of six key materials:

- Smooth white Corian surfaces
- Glossy white metal for tables and chairs support
- Light maple floor
- Glossy red metal clad cubes
- Rubber flooring inside each cube
- Glass to protect some of the display

3.1. Forms and Materials

Figure 44. White environment and red metal cladding with light maple floor

Figure 45. Corian listening chairs

The chairs are angled to invite people to sit down and listen although they are not designed for comfort as people are not expected to use them beyond their original purpose of listening to medical experts. The weight of the solid material used for the construction and the lack of handles means that they remain in their original position without need for regular maintenance.
The forms of the space and displays is achieved with simple cubic volumes repeated across. All fixtures in the space start with a cube manipulated vertically or horizontally to the desired form. Although most of the fixtures and fittings are straight, the occasional slanted elements adds interest and echo the angle of the smaller stand alone art installations.
3.2 Experiential Strategies

3.2.1 Display & Interaction

Dr Ken Arnold argues that visiting museums and galleries can be quite a tiring experience as a consequence of moving through spaces that are very similar and offer very little visual and emotional diversity.

For example, although the British Museum is undeniably a great museum that contains a wide range of fabulous objects and artefacts, the visual experience can sometimes feel less stimulating because the rooms, light levels and graphics are very similar. In contrast I would argue that for diametrically opposite reasons, an environment like the Science Museum is also tiring because of the over stimulation it provides. The Wellcome Collection aims to strike a balance between these two extremes.

As a space the Medicine Now gallery presents an experience that is varied but not chaotic, interesting but not confusing with different zones to provide different experiences across three different areas - contemporary art, objects from the world of science, objects from daily life. The exciting red features articulate the content acting as spaces within the space, unexpected elements with varying heights to encourage movement, with explicit personalities, functions, rhythmic forms and colour sharply contrasting with the pure white surroundings.

The way in which displays are layered across the space creates natural vistas to other displays that encourage movement throughout. In other words, visitors can be guided by curiosity. The layering is vertical, horizontal, includes colour and form. In the example on the left, the plinth is positioned in the foreground and the larger floor to ceiling display behind as this is the way visitors would approach the site from the entrance.
Study of the Medicine Now gallery lobby sensory narrative and spatial qualities

EXHIBITION LOBBY

<table>
<thead>
<tr>
<th>SENSORY CHART</th>
<th>OVERLOAD</th>
<th>DEPRIVATION</th>
<th>NOISY</th>
<th>QUIET</th>
<th>SMOOTH</th>
<th>ROUGH</th>
<th>FLUID</th>
<th>CONSTRAINED</th>
<th>WARM</th>
<th>COLD</th>
<th>IMMEDIATE</th>
<th>AMBIENT</th>
<th>PLASTICITY</th>
<th>STABILITY</th>
<th>INTUITIVE</th>
<th>PROGRAMMED</th>
</tr>
</thead>
</table>

The visual perception remains fairly neutral although the vista into the gallery acts as a focal point. Although dimmed by the distance, it is possible to hear sounds from the restaurant on the ground floor. The smooth polished stone and metal are balanced by the wood grain texture of the doors. Movement is controlled by the entrance to the gallery. The temperature is neutralised by the building’s air conditioning system.

There isn’t any strong smell associated with the space but an ambient odour emanating from the materials and architecture of the building. Perceptions are enhanced by the vertical elements and the light and dark contrast between the lobby and illuminated sign at the entrance of the gallery. The orienting for visitors to the Medicine Now exhibition is restricted to one entry point.
Sensory Chart 02

Study of the Medicine Now gallery interior sensory narrative and spatial qualities

GALLERY SPACE

<table>
<thead>
<tr>
<th>VISUAL</th>
<th>Overload</th>
<th>0</th>
<th>Deprivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUND</td>
<td>Noisy</td>
<td></td>
<td>Quiet</td>
</tr>
<tr>
<td>TOUCH</td>
<td>Smooth</td>
<td></td>
<td>Rough</td>
</tr>
<tr>
<td>KINESTHESIA</td>
<td>Fluid</td>
<td></td>
<td>Constrained</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>Warm</td>
<td></td>
<td>Cold</td>
</tr>
<tr>
<td>ODOUR</td>
<td>Immediate</td>
<td></td>
<td>Ambient</td>
</tr>
<tr>
<td>PERCEPTIONS</td>
<td>Plasticity</td>
<td></td>
<td>Stability</td>
</tr>
<tr>
<td>ORIENTING</td>
<td>Intuitive</td>
<td></td>
<td>Programmed</td>
</tr>
</tbody>
</table>

The gallery is visually dynamic but also coherent. The red brings energy to the space. There aren’t any noticeable sounds other than that of people’s conversations and the film on display. Surfaces are polished and smooth. There’s no restriction in movement due to the fluid layout of the space. Although actual temperature is regulated by the building’s air conditioning system, the space feels cooler because of the pure brilliant white used throughout.

There’s no specific smell associated with the space. The only clue to the outside is the diffused light coming from the windows so visitors are forced to focus on the interior. Perceptions are nonetheless changing as people progress through the space because of the variety in levels of stimulation. Although there are signs to identify each topic, visitors are encouraged to browse as they wish, with no clear spatial pattern controlling the visit.
Even though the space is visually coherent with enough variety to remain stimulating, it could also be argued that the gallery is in some ways like a cluster of smaller projects.

For example a unique feature is the forum where people are invited to complete feedback cards instead of the usual written feedback, they are encouraged to slow down and draw their thoughts as a form of reflective play. It’s a way for people to think about the overall ideas behind the Wellcome Collection while leaving something that others can enjoy.

This is an extremely effective ingredient to the success of the gallery and illustrates a core aspect of why people go to museums, namely to see what others are doing. Even when, in this case, they are unknown, it still enables people to see what others were thinking in relation to what they are experiencing in the present.

### 3.2.2 Responsive environments

While the Wellcome Collection was looking for a different way of collecting feedback, it is evident from the wall of drawings on display and the quality of the majority of the drawings, that this is an activity that people are really keen to take part in, with humour and creativity.

Another very popular feature is the transparent body placed near the entrance. This analogue display reveals the organs of the human body. People are invited to press a button at the base of the display. The display responds to this action by lighting the corresponding body part and highlighting its location.
Unlike many museums and galleries dedicated to science, the Wellcome Collection contains few digital exhibits with only two screens connected to medical internet sites in the Experiencing Medicine section and two interactive displays specially designed for the gallery.

When asked why digital displays were included, Dr Ken Arnold replied that so much of contemporary biomedical activities are digitally based – databases, recording biorhythms, imaging, scans, etc – that the curatorial team wanted to draw on the experiences of patients and reference them in digital exhibits.

The Wellcome Collection commissioned ICO to design two interactive displays, one with facial recognition and morphing software (in collaboration with the designer Joe Cutting) and the other with personalised biometric identity software. As well as reflecting on people’s experience of medicine, the displays are also part of a drive to offer variety and give people the opportunity to take on the role of active participants.

The brief given to the designers for the face capture installation was “to design and produce interactive installations that would intrigue visitors and cause users to question preconceived ideas of biomedical data and what it means to be human […] the world's first fully automated ‘facial average generator’ which uses a combination of facial recognition and morphing software.”

This installation captures data from users and blends the information to create average faces across a range of sub-groups such as the average smoker or vegetarian. The experience therefore becomes more meaningful as more people use the display.
The exhibition captures visitors attention using a variety of means: curiosity, control, personal space, shared experiences, investigation, reflection and discovery.

The curatorial and design teams aimed to create a varied experience. As well as more familiar display cases and artwork on plinths, exhibits also include soundscapes of medical narratives, poetry and testimonials, with headphones available for people who like to be on their own when listening, while larger exhibits and interactive pieces play a role in engaging people in conversation with others.

The drawing forum offers something for people to do and share, for people to leave their mark on the exhibition.

This is part of a drive to provide a range of activities with different levels of engagement to keep the experience vibrant and people interested. “It is educational because people learn from it but it’s not narrowly educational. We want people to learn but through doing things rather than guessing what the answer is, because that’s more real”. Dr Ken Arnold
3.2.3 Spatial communication

Medicine Now is an information rich environment. So how is this managed? In exhibition design, objects on display contextualise new meanings and values and the way they are arranged determines the nature of the message.

Information using signs and text is important but appears dull and limited to a 21st century audience so interaction forms part of the communication bridge between displays and visitors. It recreates an experience of doing something while being unique to the site. It brings the required level of surprise needed to induce visitors’ excitement and maintain interest.

As the gallery is aimed at adults it’s possible to implement an investigative learning process, blending informal learning with multi-sensorial experiences. Avoiding the narrow path of specific learning objectives in mind for exhibits, the curators chose to provide people with a wide range of learning opportunities and let them decide which they want to learn.

This constructivist approach to learning is often found in exhibition environments where visitors can choose how they engage with the information in order to facilitate knowledge development. “Each of us learn in a different way and we contextualise information through cognitive processes that are both particular to ourselves and shaped by our past experiences.”

For some, it may highlight issues that previously felt remote such as malaria, for others it may enhance some of their understanding of medicine and genomes. For me it allowed me to discover a passion among medical scientists that had previously escaped me.
This diagram shows a path of eye movement and spatial perceptions when scanning the space for the first time. This would happen shortly after someone enters the gallery as this view is taken to the left of the entrance.

The red dots show points of fixation for the eyes, usually at key points of interest. A visitor would briefly scan the space before deciding on where to proceed. This is also likely to inform the journey people take through the space although the relationships established here could change as visitors go deeper into the space and discover new spatial relationships.

Figure 70. Diagram of eye movements and fixed points
Conclusion: Medicine Now, Revitalised Synergies

As Don Norman reminds us that “the emotional system changes how the cognitive system operates”16, a visit to the Medicine Now gallery is both an intellectual and emotional journey. This high level of engagement is achieved through varied activities and means of communication to foster individual ways of acquiring information. The narrative is fluid, the environment malleable, facilitating the link between interaction and experience.

Meaning making in the art brings stories to life and creates a relationship between content and context, moving away from pure aesthetics towards more complex systems of implicit and explicit sets of information that illicit responses and relationships. In doing so it engages visitors in discourse, conversation and reflection.

Experiencing medicine brings a horizontal perspective based on the exchange of shared connections between past and present visitors. The spatial context and psychology of the exhibition give people a sense a belonging, a range of collective and personal experiences and most importantly self-image.

So even though most of our understanding about humans come from research, experimentation and data collection, the Medicine Now space highlights the very personal side of medicine, that of real individuals with lives, beliefs and emotions. This a key factor in the appeal of the gallery but not its sole measure for success.

It also satisfies key selected objectives, it is energising and inspirational, it is challenging enough to offer opportunities to learn, it offers a careful mix of shared and personal spaces, it communicates important information while avoiding cognitive exhaustion and conflicts between the verbal and the non-verbal.

The teams have wrapped their subject with excitement, wonder, enlightenment and while it is accessible to non-specialists it remains meaningful. It celebrates the objective rationality of medicine but also re-unites it with its subjective, emotional and personal characteristics. It is able to successfully bring back to a human level an often too generalised and abstract view of medicine, reminding us that we are at the centre of its practice and celebrating its achievements.

After 5 years its design has remained fresh and attractive. The exhibition demonstrates a high level of emotional intelligence and incorporates creative and intellectual life rather than passive viewing. It educates, surprises, fascinates and entertains at the same time, each visitor developing a unique insight. As a basis for further investigation its discourse encourages debate and exploration of the subjects.

With future developments including opening the library reading room to public access to make it a cultural and intellectual destination, it is clear that, beyond informal learning, Medicine Now as part of the Wellcome Collection heralds new synergies for museums, that of cultural spaces and life long learning providers.
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Figure 11 <http://londonist.com/2009/09/museum_of_the_month_the_hunterian_m.php> [Last visited 25/02/12]

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