

# **Imagining the Future IV**

**Theatrescience India**

**at the**

**National Centre for Biological Sciences (NCBS),  
Bangalore, India**

**January 12th – February 8th 2009**



*View of main NCBS Building, seen from the lawn*

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## **1. Introduction: History and context of the project**

Theatrescience was formed by Rebecca Gould and Jeff Teare in 2002 as an innovative way to explore biomedical science issues through the medium of theatre. It engages audiences and participants in discussions of social, ethical, and political issues relating to biomedical science, and develops exciting new drama inspired by these issues. It has been supported by the Wellcome Trust since its inception.

*Imagining the Future IV: Theatrescience India at the National Centre for Biological Sciences* is the most recent phase of a project that began in Plymouth, UK in 2003. The first *Imagining the Future* brought together scientists, writers, actors and directors for a series of workshops and seminars, and resulted in four new plays based around biomedical science. This was followed by 'Theatre of Science', an year-long programme of work which combined science with theatre, in association with the Theatre Royal, Plymouth.

From 2006, Theatrescience began working with theatre practitioners and scientists in Kolkata, Mumbai, and Bangalore. India is not only the home of a distinctive dramatic tradition, but also a region of great significance in terms of the social, political and economic effects of new biomedical research. *Imagining the Future II* took place in Bangalore in 2007; this event included workshops and seminars and resulted in performances of four plays and readings of three scripts.

Two of these plays, *Crab Soup* by The Creative Arts (Kolkata) and *The Invisible River* by The Artistes' Repertory Theatre/Jagriti (Bangalore), were then brought to London in July 2008 for *Imagining the Future III*, and were performed at the Lillian Baylis Studio, Sadler's Wells. *ITFIII* also included workshops and playreadings at the Soho Theatre and a presentation at the Nehru Centre.

*ITFIV*, the residency at NCBS in January and February of 2009, was the third collaboration between Theatrescience and Jagriti. It involved the setting-up of an intercultural theatre company, comprising ten Indian theatre practitioners and four from the UK, to work alongside scientists at NCBS to develop new theatrical work and investigate new ways of engaging the public with biomedical science.

The context of the project is therefore the continuing collaboration between Theatrescience and the Indian theatre practitioners and scientists who had previously worked together on *ITFII* in Bangalore 2007 and *ITFIII* in London 2008.

## **2. Intended Outcomes**

The intended outcomes of the project, as stated on the original funding application, were as follows:

*The main project outcome will be a strengthening and broadening of science-theatre connections already partially in place in Bangalore. Specifically there will be:*

- Two productions – one primarily for adults, the other for schools.*
- Discussions and debates – with adult and student audiences.*
- Two published scripts, to be available in India, the UK and worldwide.*
- Video material of process, performances and debate to be made available and posted on the Theatrescience website.*
- A written report and evaluation also to be made available (to Wellcome etc.) and posted on the Theatrescience website.*
- The development of a new way of engaging with science, through theatre and performance, in India and the setting up of a new model, in which a large scientific institution and a regional theatre can work together.*

This report considers to what extent and in what ways each of these outcomes was achieved. The results are discussed in section 9 of this report.

### 3. Participants

The Theatrescience company consisted of:

From India:

Arundhati Raja	director
Jagdish Raja	rapporteur
Gautam Raja	writer
Sukhita Aiyar	actor
Ruchika Chanana	actor
Raza Hussain	actor
Dayaprasad Kulkarni	actor
Naveen Kumar	actor
Nandini Rao	actor

From the UK:

Rebecca Gould	producer/director
Jeff Teare	director/dramaturg/writer
Shereen Martineau	actor
Richard Pepper	actor

Arundhati and Jagdish Raja formed The Artistes' Repertory Theatre/Jagriti in 1982. Ruchika Chanana directed *The Invisible River* for *ITFII* and *ITFIII* and Sukhita Aiyar was a cast member. The play was written by Gautam Raja. Raza Hussain and Nandini Rao have previously worked with ART/Jagriti. Dayaprasad Kulkarni is a doctor of medicine with experience in clinical research and Naveen Kumar is a full time actor. Richard Pepper appeared in the 2007 Theatrescience production *Something Somatic* by Simon Turley in Plymouth and London.

#### 4. Structure of the Project



*NCBS Theatrescience Company*

The *ITFIV* residency took place at the National Centre for Biological Sciences in Bangalore. The NCBS is spread over 11 acres at the Gandhi Krishi Vigyan Kendra (the Gandhi Agricultural Knowledge Institute) campus of the University of Agricultural Sciences.

NCBS is an affiliate of the Tata Institute of Fundamental Research (TIFR), Mumbai, involved in research in biological spectroscopy, nucleic acid biochemistry, cellular neurobiology, human and population genetics, cellular networks and cell biology. Much of this research is multi-disciplinary and NCBS is looking forward to increased research activity at the interface of biology and clinical medicine.

This report will now outline the chronological structure of the project and how it developed through the weeks of the residency.

##### **Initial phase**

The company was invited to access all laboratories, lectures and presentations, guided by their NCBS project partner, Prof. Mukund Thattai, who participated in *ITFII* and *ITFIII* as the scientific adviser for *The Invisible River*. Prof. Thattai indicated the research areas which he thought had the most potential to form the scientific bases for theatre pieces. Alongside their own visits to lectures and laboratories, the company invited scientists,

researchers and students to join initial discussions and early rehearsals to discuss how scientific ideas might be dramatically developed.

### **Week One: Presentations, discussions and workshops**

At the beginning of the programme, the group prepared for developing the plays by attending a number of presentations by scientists to learn about current biomedical issues and inspire ideas. They also took part in workshops to facilitate the dramatic process.

Scientists, PhD students and NCBS associate scientists gave the following presentations to the Theatrescience team on current/recent research:

- Dr. Sumantra Chattarji and visiting fellow Rajnish Rao: post-traumatic stress disorder (PTSD) and its impact on memory
- Dr. Shomita Mukherjee: the use of DNA analysis to study the ecology of small carnivores
- Dr. Sanjeev Jain (a psychiatrist who combines his research with clinical work at the National Institute of Neurological Sciences and Mental Health): bipolar disorder and schizophrenia, and the genetics of some mental diseases
- Prof. Mukund Thattai: the dynamics and evolution of cellular networks
- Prof. Panicker: the effects of serotonin in the brain
- Prof. Apurva Sarin and students Soumya and Divya: cellular apoptosis

Members of the team were then assigned to look at specific areas of work and to assess the potential dramatic ingredients' of these areas.

Alongside these talks, the directors (Jeff Teare, Rebecca Gould and Arundhati Raja) also led theatre workshops which focused on the creation of theatrical metaphors. Through practical theatre-making exercises and discussions, the group explored the different definitions of *narrative*, *character*, and *plot* that were held by the performers in the room, in order to reach a consensus on the elements needed to create an effective story on stage.

As a starting point for the workshops, Rebecca asked each company member to bring a traditional story of their choice: preferably one they had a personal connection with, had been told as a child, or especially liked. Throughout the first week's sessions, the participants told their story to the rest of the group, who asked questions in response.

During the workshops, the participants also played out moments from these stories which they had found especially affecting or poignant. The group then reflected on these and discussed what it was about those particular moments that made them dynamic and engaging.

In small groups, the participants discussed and fed back on questions such as:

- Why did these particular moments provoke empathy or curiosity?
- What makes an audience engage with and understand a story?

- How do you inform an audience without making them feel they are digesting facts?
- How do we make people feel as well as understand?
- Why is metaphor important when telling a story?
- How can you transform a two-dimensional story narrative into a three-dimensional piece of theatre?

Scientists also contributed to the workshops, explaining to the group what happens in the brain when a 'feeling' becomes attached to a 'fact', and how this leads to long-term memory storage. This explanation of the neurological relationship between memory and affect added to the group's understanding of how to make a story emotionally and dramatically effective.

As a result of this process, the group found that they were better able to recognise when they were affected, drawn in, made to feel something or able to imagine a scenario when the scientists were telling us about their work.

Rebecca Gould:

*We referred to it as a spark; this spark sometimes happened when the scientists told us about real-life case studies, but often it happened when it chimed with something from our own experience or someone close to us. In these moments we could often see not just a story but characters, and a way of framing the science through a metaphor.*

## **Week Two: Beginning the plays**

In the second week, the directors and actors divided into two groups to work on the two areas of scientific research agreed as bases for dramatic development.

*Group One: Play for schools*

Actors: Dayaprasad Kulkarni, Sukhita Aiyar, Richard Pepper

Writer: Jeff Teare

Director: Rebecca Gould

Scientific advisers: Dr Chattarji and Rajnish Rao

This group decided to develop a show about teenage post-traumatic stress disorder (PTSD) and memory.

Group One visited Vidya Niketan School and ran a workshop with students on both PTSD and the students' own idea for a show about Munchausen's syndrome.

They also heard from two speaker; Maitri Gopalakrishna talked to the group about the use of drama therapy with such conditions as PTSD, and Jyoti Thyagarajan gave a personal account of memory loss due to a stroke.



*Group Two: Play for adults*

Actors: Shereen Martineau, Ruchika Chanana, Raza Hussain, Naveen Kumar, Nandini Rao

Director: Arundhati Raja

Writer: Gautam Raja

Dramaturg: Jeff Teare

Scientific adviser: Dr. Suhel Quader

This group began to develop the first scenes of a full-length play about 'invasive species', specifically Lantana Camara.

Group Two started with some Situation/Intention Improvisations, such as:

- The keen young scientist and his reluctant wife
- The not-so-keen young scientist and his pushy boss
- The wife and her very urban best friend
- The boss comes to dinner to convince the wife
- First visit to the forest!

These scenarios were improvised and then discussed by the group. Gautam took from these discussions what he needed and went away for a couple of days to begin writing, while the rest of the group researched the science and ecology involved.

Gautam then returned to the group with new material which was read and rehearsed. The group and playwright examined the characterisation and whether situations and actions rang true or not, with advice from Jeff as dramaturg. Dr Quader acted as scientific adviser, giving the group feedback on the accuracy of the science as well as the associated behavioural and social issues.

A visit was also made to a local NGO, Atree, that works closely with tribal people in the forests of Karnataka. This visit gave the group their first insight into the negative and positive effects of Lantana's invasion in these tribal areas.

**Week Three: Writing, rehearsal and research**

The third week was spent feverishly writing and rehearsing. The groups held ongoing discussions with scientists, and undertook further research into the relevant subject areas.

There was an interactive process of development; the groups invited scientists into their rehearsals to watch scenes that had been created, and also emailed them drafts of text and dialogue. The scientists gave feedback in person or via email.

The groups also continued to highlight where they felt they had insufficient scientific or cultural knowledge to complete their scenarios, and the directors and dramaturg set the company research tasks to fill in these gaps in their knowledge. These involved actors discussing the subject with scientists and

experts, researching in the library, and finding specific people who suffered from the conditions concerned.

#### **Week Four: Final preparations**

By the fourth week, both shows were reaching a stage when they could be presented. Dr Quader and Rajnish attended full run-throughs of the plays and gave notes to the directors, mainly scientific but some dramatic as well.

For example, Rajnish picked-up on some problems with the scientific vocabulary in the early draft of *Amol's Stories* and gave advice on Indian attitudes to the use of anti-depressants. He also suggested some rewrites to the Memory Story section and some minor changes to Tara's early dialogue.



*The company in discussion with Prof Mukund Thattai (extreme right)*

## 5. Performances

*Amol's Stories* (Group One: The School play group)



*Sukhita Aiyar and Richard Pepper in a scene from 'Amol's Stories'.*

*The Clearing* (Group Two: The adult play group)



*Shereen Martineau and Naveen Kumar in a scene from 'The Clearing'.*

## **NCBS**

Both shows were performed in the NCBS open-air amphitheatre on the afternoon of Friday 6th February. An audience of 150 faculty and students attended, as well as invited guests.

Both shows were enthusiastically received and discussion continued over many hours of chai, samosas and beers. Recognition of many of the personal issues raised by *The Clearing* to field researchers was particularly marked. The work was significantly developed through this process, as the directors, writer and dramaturg made copious notes about how to reshape and redraft existing material, and also on possibilities for how the plays could be developed in future.

## **Bharatiya Vidya Bhavan**

On Sunday 8th February, both shows were again presented (after an evaluation session) in the Khincha Auditorium of the Bharatiya Vidya Bhavan cultural centre. Another audience of over 100 attended, this time made up of Bhavan members, students (some from Vidya Niketan School), and the general public.

A long discussion was held after the performances concentrating on the process by which the plays had come about, the representation of Indian (as opposed to American/Western) attitudes to PTSD in *Amol's Stories*, and the range of invasive species covered in *The Clearing*.

## **Audience feedback**

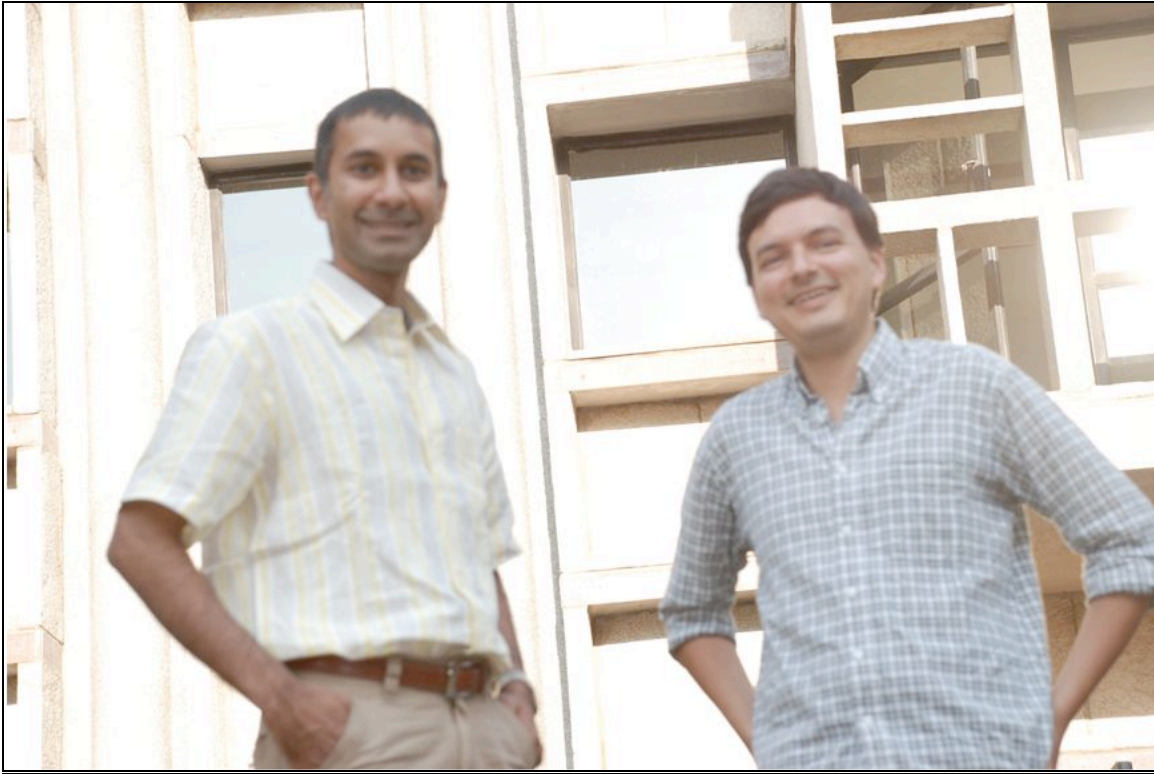
At the Bharatiya Vidya Bhavan, the audience, who came predominantly from non-scientific backgrounds, responded first and foremost to the plot and the social issues that arose, whereas the NCBS audience was mainly made up of scientists who had a more detailed response to the scientific issues.

Jagdish Raja:

*It is important to mention here that audiences in India are not used to presentations of works-in-progress; therefore, much of the audience feedback at both venues was based on the works as if they were finished pieces. For example, with *The Clearing*, of which only the first few scenes were presented, many in the audience at Bhavan couldn't 'see where it was going' and didn't realise that their feedback was valuable in suggesting how it could develop. By contrast, the scientists that made up the NCBS audience were less concerned with plot development, and reacted to the play on a more personal level as they identified more closely with the characters and the situation.*

*Amol's Stories, on the other hand, as its storyline was more complete, prompted a wider variety of responses at the Bharatiya Vidya Bhavan.*

## 6. Feedback from scientists



*Professor Mukund Thattai and Dr. Suhel Quader*

The scientists from NCBS who had been involved in the project were very positive about their experiences. They emphasised the interactive process of mutual learning between themselves and the Theatrescience team.

The researchers found that presenting their work to theatre practitioners helped them to discover new ways to communicate their work to the public, and that it also made them reflect upon their own research practices. The fact that the Theatrescience company were in residence on the campus itself led to excellent integration between the theatrical and scientific worlds.

### **K. Vijay Raghavan, Director of NCBS:**

*Art and culture in a science-research environment are the sparks that light the torch of innovation. By placing science in the context of society, science is humanized and scientists are inspired to think of their work in new ways. The Theatrescience programme is path-breaking and deserves continued support and encouragement: NCBS, in gratitude, will always provide both.*

### **Professor Mukund Thattai:**

*Theatrescience is an experiment. When I got involved with Imagining the Future India in 2007, I could not have guessed how successfully the experiment would turn out. The only problem with success is that it sets the bar very high for the second iteration. How to do even better? If you stick to an old formula, it might turn stale. If you try something new, or more ambitious, you run the risk of failure.*

*No problem for this group. Theatrescience 2009 was outstanding: both the process and the outcome. I think key to its success was that the directors, actors and playwright were in residence on the NCBS campus, they could walk into labs at will, they could spend hours in conversation with researchers, and see first hand how biomedical science really works.*

*Out of this process came two nuanced (but very entertaining) performance pieces, on topics that lie at the heart of current research. But also, for a whole month the energy around the campus was special. Each morning, while we waited in line to pick up coffee at the terrace cafeteria, we would gaze down at the grounds, to see this crazy bunch of theatre people 'warming up', with physical and vocal exercises, or discussing the structure of ancient stories, or work-shopping new characters. It somehow reminded us to step back a while, that there are other ways of looking at things, and that there was a whole world beyond this campus that our science might someday touch.*

**Dr. Shomita Mukherjee:**

*Interacting with the theatre group was a very fresh and exciting experience for me. Although I have participated in several discussions on biodiversity conservation in the past, most of these tended to revolve around the same old stale solutions. For me, this interaction opened a new way of approaching the challenges of conservation, mainly spreading the message, through the medium of theatre. The play that was set up at the end was more about how ecologists/conservationists/ sociologists go about their work and the complications involved (emotionally, politically, ideologically) as humans. It brought out the subjectivity of the entire endeavour of conservation planning very well. I would have liked to see more hope in the end and would love to see how the play materializes finally. I have already included theatre (street plays) as a part of one of my proposals on small carnivore conservation in Rajasthan! What also struck me was the passion with which the theatre group worked. I thoroughly enjoyed my discussions with them because they seemed genuinely interested and clued into our work.*

**Dr. Rajnish Rao:**

*My first interaction with Theatrescience was during their residency at NCBS when I gave a talk describing my research interests. I broadly spoke about some basic aspects of neuroscience: how different types of memories are processed by different brain regions and why some forms of memory (emotions) are stored much better and longer than say facts (numbers,*

names etc). Subsequently, I went on to describe some of key findings from our laboratory that could explain these differences in memory storage. The next part of my talk was aimed at discussing the challenges in developing animal models of psychiatric conditions. Here I spent a fair amount of time describing the methodologies used to study anxiety and depression and wound up with a short description of my work on an animal model of Post-Traumatic Stress Disorder (PTSD). The talk was a challenging and rewarding experience as it taught me how to communicate my work better and engage with people outside of my field.

The eventual development of 'Amol's Stories' was a pleasant surprise for me. I attended one rehearsal and discussed key scientific issues in the script (amongst other things with the group). The performance in front of the NCBS community was for me a particularly striking counter example of what has often been said of art and science, that 'never the twain shall meet'. I am looking forward to Theatrescience performing 'Amol's Stories' at schools in Bangalore and see theatre as refreshing new medium to not only communicate science with young people but also creating awareness and facilitating dialogues on several other issues of global importance such as transgenic crops, the drug industry etc.

**Dr. Suhel Quader:**

I was involved with the Theatrescience group in 2009 as an informal advisor to one of the plays. The loose subject of the play was invasive species, which are species that establish and spread after arriving in a new area. Such species often create problems for local biodiversity; the play sought to describe this issue and also draw human parallels.

The group made a tremendous effort to talk with researchers at NCBS and to understand the details of complex issues at the interface of ecology, conservation, and the livelihoods of forest dwellers. At the end of the Theatrescience group's stay at NCBS, the script for about a third of the play had been written (and was enacted in public). Almost everyone from NCBS whom I spoke with thought that the group had accomplished a lot in a very short time. This first third sets out the background upon which a really exciting script could be written that conveys the nuances of doing science to a lay audience. In addition, an outsider's interpretation of how science is done stimulates researchers to introspect on their own motivations and methods in doing science.

## **7. Feedback from company members**

A formal evaluation meeting was held between the performances at NCBS and Bhavan. All company members were present. The following questions were discussed in small groups and then fed back to the group as a whole.

### **What were your expectations? In what ways did the project meet these expectations? Where did it differ?**

The intervention by and interaction with scientists was much greater than anticipated. The group had found that the scientists were much more forthcoming than they had expected. This was very welcome, and meant that the group had learned more science than they had expected to. They found this very instructive and interesting.

However, participants had expected less exposure to 'pure' science and more time rehearsing pre-prepared material. It was pointed out that this was never the point of the project: 'You're here as human beings, not just as actors'. Some members of the group thought that the decision on subject areas could have been taken earlier to allow more development/rehearsal time.

All the participants were emphatic that the four-week period could have been extended so that more time could have been given to the devising process. It was also thought that the residential facilities should have been extended to all in the company, not only to the UK contingent, with the others having to commute every day.

It was noted that both of these points had been the original intention but had not been implemented for financial/logistical reasons.

Another alteration for logistical reasons was that the plays were not performed in the Jagriti theatre, as originally intended, because the theatre is not yet ready (the new theatre is scheduled to open in late 2009). However, this was not a problem as the Bharatiya Vidya Bhavan cultural centre kindly offered the use of their auditorium.

### **What have you learned from participating in this project?**

**a) Scientific.** The group consensus was that the exposure to pure science and not just 'translational biology' was very enlightening. It was noted that, according to many NCBS scientists, science is often as market-driven as theatre. A general opinion was that 'scientists are fun people'.

**b) Theatrical.** Participants found the warm-up in the open in full view of the NCBS offices and laboratories was very energizing. The Indian and British actors learned from each other, especially in terms of methods of improvisation and ways to devise drama. It was noted that while the basic approaches of both Indian and UK practitioners were essentially the same,



there were differences in vocabulary and training. This presented challenges but was also an opportunity to learn and build new skills.

**c) Cultural.** The interaction between the six Indian actors and the two British actors was mutually enriching. Perhaps, however, the directorial/writing/dramaturgic functions could have been differently organised to achieve greater group cohesion.

**What do you see as the main outcomes of the project? How should it develop in future? What would you change in future workshops?**

While the two works-in-progress have been developed to the original plan (and have been very well received by the scientific and the lay audience), there was a feeling of incompleteness, which, for practical reasons, cannot be corrected by the team involved in the formulation. The two UK actors have returned to their own priorities. The actors in Bangalore are part-time and have commitments in their main jobs.

It was agreed that the project should develop along the lines outlined, with further workshops and readings leading to final productions and audience interactions. It was generally thought that future workshops should have more time, and therefore more money!

**Any other comments/questions**

- *Could it be arranged that The Clearing be performed to tribal people?*  
Yes it can and should be performed. The script will need to be translated first into the local language in a dialect that would be understood by the tribal people.
- *Could music have been involved more?*  
There was insufficient time to work with musicians as well. However, incorporated as part of the further development process, it will certainly work well with *Amol's Stories*.
- *How can the Bangalore audience for science-based drama be developed?*  
A public awareness can only be developed through actual performances of Theatrescience plays, around the country. These plays should be both from the UK and from India.
- *How can the relationship between NCBS, Jagriti and Theatrescience be further developed?*  
The true result of the project will not be known until the two pieces are fully produced and received by audiences. However the interaction between the company, NCBS scientists and the Bangalore public has already achieved much. The project can now progress towards performance of the plays developed.

It was noted that while press coverage of the Theatrescience project in India has been extensive over the last two years, little radio and TV exposure has been achieved.

Finally, it was understood that Theatrescience and Jagriti will continue to develop the plays and that at least some current participants will have further involvement. It was further noted that the engagement with NCBS will continue. NCBS personnel had clearly expressed their wish that this should happen, but it was not yet clear how.

## **8. Future developments in India and the UK**

### *In India*

At the time of writing, May 2009, both scripts are being further developed. *Amol's Stories* has reached a fourth draft with two new scenes added since the Bangalore performances. *The Clearing* is approaching first full-draft stage. It is intended that both scripts receive further workshops and a public reading in Bangalore later in 2009.

It is then planned that both shows receive full productions later in 2009. *Amol's Stories* will tour schools in the Bangalore area, perhaps in association with The Deccan Herald, a leading daily newspaper in the city. It is hoped the production of *The Clearing* will be part of the inaugural season at Jagriti Theatre, hopefully in association with NCBS.

Arundhati Raja:

*There has also been a request from Mallya Aditi International School, Bangalore, to open The Clearing as part of their twenty-fifth anniversary celebrations. They are keen on this because of the educational aspect of the play and also because both the playwright Gautam Raja and the project's scientific advisor Dr Mukund Thattai are alumni of the school.*

### *In the UK*

It is intended that both plays receive, at least, a public reading in the UK in 2009. It is also hoped that a full production of *The Clearing* might be mounted in 2010. *The Clearing* may also be part of a major programme of work currently being planned in association with The Eden Project.

## 9. Evaluation of intended outcomes

This evaluation will now consider how and to what extent the original intended outcomes of the project were achieved.

- *The main project outcome will be a strengthening and broadening of science-theatre connections already partially in place in Bangalore.*

That this outcome was successfully achieved can be seen above from the enthusiastic responses of the scientists and theatre practitioners involved. Furthermore, there was an increase in public engagement with biomedical science as a result of the invited guests, faculty, students, school pupils, and general public who attended the performances, and the group's work in the VNS school.

- *Two productions – one primarily for adults, the other for schools.*
- *Discussions and debates – with adult and student audiences.*

The two productions, one for adults and one for schools, were successfully presented twice, and both were followed by in-depth talks and debates, as discussed above.

- *Two published scripts, to be available in India, the UK and worldwide.*

The scripts have not yet been published, as the plays are still in development, as outlined above. *Amol's Stories* will be workshopped again before it goes into schools for final development, and will then be pitched to publishers. Both scripts will be further workshopped and be read publically in April in Bangalore.

- *Video material of process, performances and debate to be made available and posted on the Theatrescience website.*

Video material is available on the Theatrescience website and Youtube.com (full URLs are given at the end of this report).

- *A written report and evaluation also to be made available (to Wellcome etc.) and posted on the Theatrescience website.*

This report will be posted on the website.

- *The development of a new way of engaging with science, through theatre and performance, in India and the setting up of a new model, in which a large scientific institution and a regional theatre can work together.*

As can be seen from the scientists' and participants' comments above, this was a very successful part of the project, in which both groups learned from each other. Having the theatre group rehearsing and developing the plays on the NCBS campus itself was a particularly innovative and fruitful aspect of this project, as it led to a very high degree of integration and mingling between the two groups. As Jagdish Raja commented:

*The immediate and cordial synergy established between the NCBS scientists and the Theatrescience team was remarkable. The morning warm-up on the grounds within sight of the faculty and students was a very effective advertisement for Theatrescience's presence and purpose.*

The scientists were fully integrated in the creation and development of the plays, and there was ongoing interaction with the scientists offering advice and feedback at all stages of the process. This was beneficial for both the scientists and the theatre practitioners.

In summary, then, the outcomes of the project were met to the fullest extent possible given the limited time and economic resources, and the work produced as part of the project is continuing to develop. The project as a whole built upon the existing strengths of Theatrescience, in particular in enabling interaction between groups of people from very different backgrounds, nationalities, and ages. It suggests exciting and effective new ways to bring science and theatre together across different cultures.

## **10. Thanks and further information**

Theatrescience would like to thank all participants in their residency at the National Centre for Biological Sciences.

They would also like to thank the staff of NCBS in administration (especially Sujata and Sweta), catering, and at the guest house.

Special thanks to the Bharatiya Vidya Bhavan cultural centre, in particular Mr H. N. Suresh, Director of Programmes & Projects, and Mr C. N. Ashok Kumar, Administrative Officer, who were very gracious in offering the use of their Auditorium for rehearsals and presentation for the whole day under the aegis of the H.N. Dwarakanath Endowment Programme.

Jeff and Rebecca would further like to thank Arundhati and Jagu for their immense help, and hospitality.

And finally, thanks Sukhi, Ruch and Nandini for a great meal!

Further information about the project is available on the Theatrescience website:

<http://www.theatrescience.org.uk>

Video footage from the residency is available online at:

<http://www.youtube.com/watch?v=O30Jeq1cyuQ>