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OFFICIAL MAGAZINE OF THE CLOTHING MANUFACTURERS ASSOCIATION OF INDIA

PATH BREAKING

Life

Value

AS THE NAME SUGGESTS, AHIMSA SILK IS CREATED THE PEACEFUL WAY — WITHOUT CAUSING HARM TO THE SILK MOTHS THAT ARE USED TO CREATE SILK, THE FABRIC THE WORLD LOVES TO DRAPE ITSELF IN.

TEXT BY PREETI VERMA LAL

EVER HEARD OF SILK BREWING IN a teacup? No? Well, there is this story of how a sprightly Chinese princess picked some mulberry cocoons from her garden and inadvertently dropped one in her teacup. When she tried fishing it out of the cup, it had turned into a gossamer thread. And lo! Silk was born...

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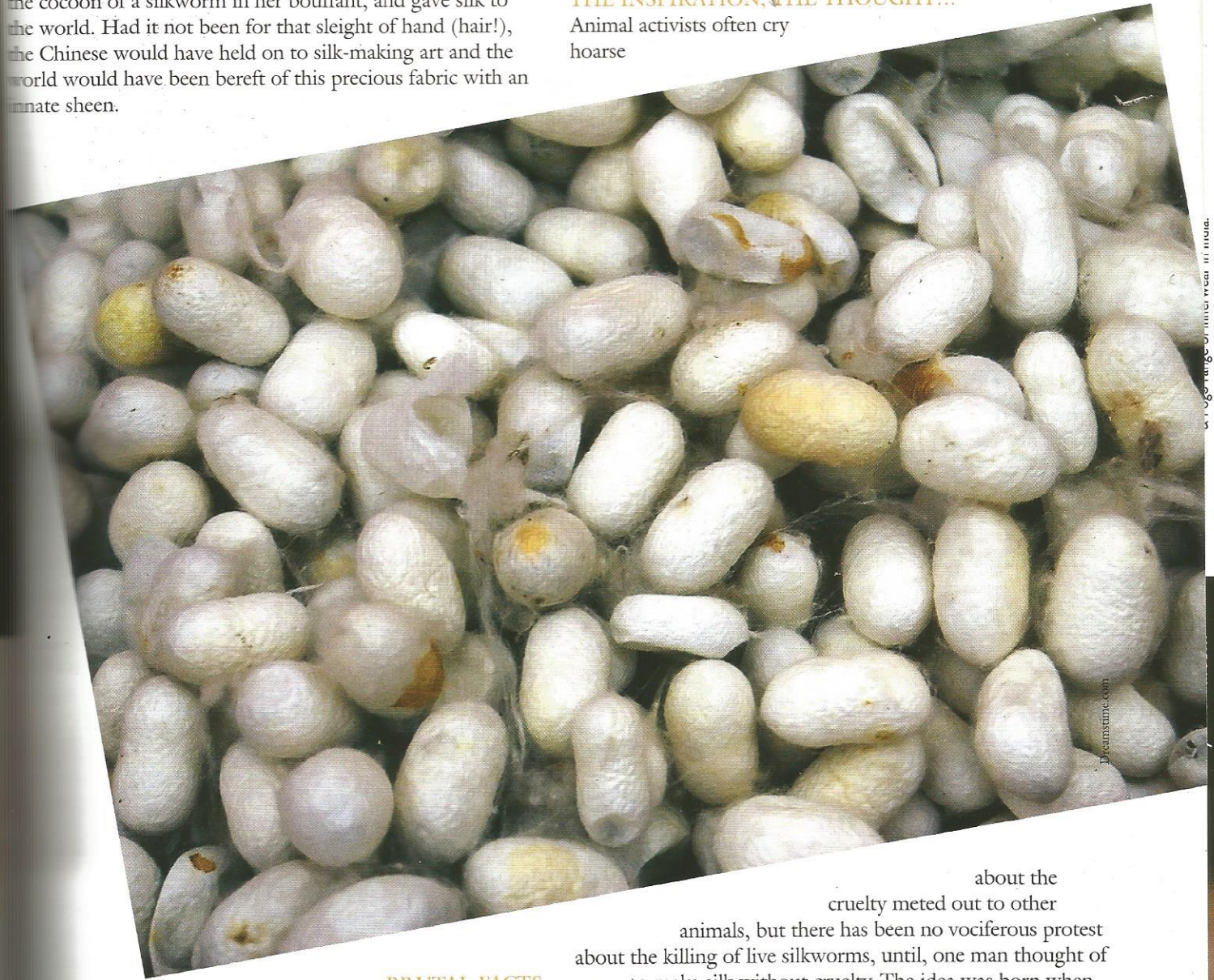
Chinese kept the secret under wraps for eons, letting only finished fabric out of their fiefdom. The rich and the ritzy travelled miles to barter mounds of gold for bales of silk. Such was the demand that an entire route borrowed the name and came to be called Silk Road, a path trudgeed by countless travellers and traders, around which several wars have been fought.

But the story of silk would be incomplete without a dash of stealth! Yes, stealth. Bless the Chinese princess who stole the cocoon of a silkworm in her bouffant, and gave silk to the world. Had it not been for that sleight of hand (hair!), the Chinese would have held on to silk-making art and the world would have been bereft of this precious fabric with an innate sheen.

about 50,000 dead moths to make one six-yard silk saree. It is said that the best silk comes when the worm is about 10 days old and just a week before it breaks the chrysalis. According to the natural process the worms break the cocoon to lay eggs, live for about five days and then die a natural death. However, with so much demand for silk, millions of silkworms are killed every day, so that the rich could drape themselves in silk!

THE INSPIRATION, THE THOUGHT...

Animal activists often cry hoarse



BRUTAL FACTS

Silk is often the chosen fabric

for special occasions, be it offerings to deities or

special trousseau, everyone loves the rustle of silk. But

the swish and the

everyone forgets

thousands of live

worms that lose life

being plunged into

boiling water, to get the

finer thread, which

is woven into silk.

It might baffle you,

but 5 silk moths have

to be killed to make one

yard of silk and it takes

about the cruelty meted out to other animals, but there has been no vociferous protest about the killing of live silkworms, until, one man thought of a way to make silk without cruelty. The idea was born when Janaki Venkataraman, the then First Lady of India walked into the showroom of Andhra Pradesh Handloom Weavers Cooperative Society (APCO) and asked for a silk saree that

was made without any cruelty to the silkworms. But APCO did not have any bolt of silk they could call "non-violent". However, that incident stirred the thinking mind of an APCO technical officer. Kusuma Rajaiiah, a degree holder from the Indian Institute of Handloom technology,

TRADITIONALLY, THE COCOON IS THROWN IN BOILING WATER WHEN THE MOTH IS STILL LIVING IN IT. IN THE PROCESS, LIVE MOTHS GET KILLED. BUT THE MAKERS OF AHIMSA SILK DO NOT KILL THE MOTHS, THEY LET THEM PIERCE THE COCOON AND COME OUT NATURALLY, ONLY THEN, THE COCOONS ARE PUT IN BOILING WATER.



Salem, took it to his heart to find out the “non-violent” way towards silk.

THE PROCESS

The idea was brilliant, but there were several hurdles, the technicalities being the most challenging one. The silkworm which is the size of a woman’s smallest finger spins the fibre out of its mouth, using its forelegs to spool it. When it pierces out of the cocoon on its own, the continuity of the thread is broken and silk woven out of such cocoons result in a lot of wastage. However, when the cocoons are boiled the continuity of the thread remains intact. This ‘cruel’ method consequently means less wastage and more production of silk. For obvious reasons, it is the preferred method worldwide.

OVERCOMING HURDLES

It took years of research for Rajaiah to perfect the art of making silk without killing the silkworm, a method he has now patented and calls ahimsa silk — ahimsa taking cue from Mahatma Gandhi’s non-violent method and Rajaiah’s love for the Gandhi credo. The first attempt led to a lot of wastage and he could get only 16 kg of yarn from nearly 100 kg of cocoon. Without losing heart, he persevered along the long and arduous journey, whilst refusing to hang his boots.

Today, Rajaiah is known as the inventor of ahimsa silk. Several companies have followed his footsteps and have started making silk without killing the cocoons. Amongst these are People for Animals, headed by Maneka Gandhi. Though not available in every silk shop, ahimsa silk can be bought from APCO in Hyderabad and from select stores in Chennai. Ahimsa silk is more expensive than the regular silk but is wrinkle free and extremely durable.

Rajaiah buys the cocoons from the mulberry farms in Chittoor and his handloom units are based in



THE AHIMSA WAY...

Ahimsa silk takes its name from the non-violent way of making silk. Traditionally, the cocoon is thrown in boiling water when the moth is still living in it. In the process, live moths get killed. But the makers of ahimsa silk do not kill the moths, they let them pierce the cocoon and come out naturally, only then, the cocoons are put in boiling water.

“TODAY, KUSUMA RAJAI AH IS KNOWN AS THE INVENTOR OF AHIMSA SILK. SEVERAL COMPANIES HAVE FOLLOWED HIS FOOTSTEPS AND HAVE STARTED MAKING SILK WITHOUT KILLING THE COCOONS. AMONGST THESE ARE PEOPLE FOR ANIMALS, HEADED BY MANEKA GANDHI. AHIMSA SILK CAN ALSO BE BOUGHT FROM APCO IN HYDERABAD AND FROM SELECT STORES IN CHENNAI.”

Karimnagar districts of Andhra Pradesh. Though difficult to produce, the ahimsa silk makers are keeping pace with changing

times and are abreast of the demands of the hip and trendy. Not only do they make the traditional sarees, dhotis, angavastram and fabric for dresses, but have also branched out to ties and T-shirts. Rajaiah, who has 30 designs in his repertoire, rucs the lack of

impetus from the government. But Rajaiah is inspired enough to increase the production capacity from the present 1,000 metres a month to 5,000 metres a month on order.

IN VOGUE...

Ahimsa silk has found a lot of takers. Orders are pouring in from the West, especially the US and Europe where animal lovers have taken to this silk with great glee. Business propositions are looking possible with Pascal and Guitha Samy, designers from Geneva and Nerul Rodriguez, a Parisian designer having flown into Hyderabad to discuss ahimsa silk. The fabric has found favour with religious communities that adhere to non-violence to all human beings. So grateful is the Jain community for this invention, that they recently honoured Rajaiah with a prestigious award. That is not all on the who's who list though. Danseuse and activist Amala is a regular ahimsa silk buyer, so are Delhi's chief minister Sheila Dixit and activist Maneka Gandhi. At a symposium in Jakarta, Megawati Sukarnoputri, the former Indonesian President, picked up six ahimsa silk sarees.

VALUE LIFE

From that chance discovery of the art of making silk, to the

princess who hid the silkworms in her bouffant, it has been a long journey for this gleaming fabric. For ages, millions of silkworms were massacred to make silk, until one man thought of a non-violent way of making silk.

Not only are the animal lovers grateful to Rajaiah, but so are the mute creatures that suffered silent death for long, whilst sedulously creating the yarn, that we love draping ourselves in.

“AHIMSA SILK HAS FOUND A LOT OF TAKERS. ORDERS ARE POURING IN FROM THE WEST, ESPECIALLY THE US AND EUROPE WHERE ANIMAL LOVERS HAVE TAKEN TO THIS SILK WITH GREAT GLEE. BUSINESS PROPOSITIONS ARE LOOKING POSSIBLE WITH PASCAL AND GUTHA SAMY, DESIGNERS FROM GENEVA AND NERUL RODRIGUEZ, A PARISIAN DESIGNER HAVING FLOWN INTO HYDERABAD TO DISCUSS AHIMSA SILK.”



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Twist

The New Wool Record Established 1909

Issue 10
June 2009

Summer cool

New looks
for linen on
Savile Row

The Bozzalla & Lesna story

Bruce Montgomery
on shirtings

Rare and speciality fibres

Childrenswear

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A joint promotion highlighting the benefits of linen, involving the European Linen Association (CELC) and the Savile Row Bespoke Association, has produced a range of linen summer suits and jackets that contrast in spectacular style with the traditional image of one of the world's oldest fibres. Twist was chosen as the media partner for the promotion, providing us with exclusive access to the garments. Story and photo shoot by Elizia Volkmann.

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The New Zealand babywear brand mokopuna merino™ is utilising the extraordinary benefits of New Zealand Merino wool, including ultraviolet protection and flame resistance, resulting in a diverse and increasingly popular range of babywear clothes and accessories. Wendy Mill finds out more.

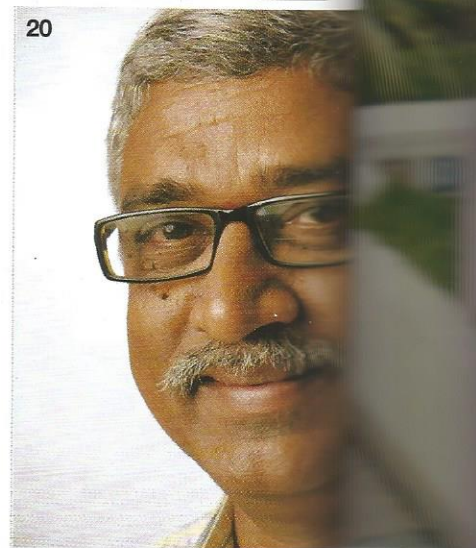
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Kusuma Rajaiah speaks to Mini Zachariah about his increasingly popular Ahimsa Silk, how he made the initial discovery, and his plans for the fibre and his company.



10

20



Kusuma Rajaiah

The inventor of Ahimsa Silk, the first type of silk created through an ethical treatment of silkworms, speaks to our India correspondent **Mini Zachariah** about how the discovery came about, the growing demand for the fibre, and his plans for the development of his company.

Considering the success of Ahimsa Silk, it is today hard to imagine that Kusuma Rajaiah almost didn't opt for a profession in weaving. Though he belongs to Padmasali, the weaving community from Warangal district in Andhra Pradesh, his family switched to agriculture as a profession during his early years. But when Ramaiah passed out of school, he studied for a three-year diploma in handloom technology from Salem in adjoining Tamil Nadu state and landed a job as a handloom textile technician with the Andhra Pradesh State Handloom Weavers' Cooperative Society (APCO) in 1990. He is still working there.

'In India, where many people are vegetarians and cringe at the thought of harming animals, I found many people who shunned silk because it involved the killing of silkworms'

Ahimsa Silk is great news if you love the soft texture of silk but squirm at the thought of killing thousands of silkworms to drape that stole around your shoulder. The technique developed by Rajaiah involves extracting silk from silkworms without killing the tiny beings in their cocoons.

Coming from the land of Mahatma Gandhi, the silk is rightly named Ahimsa Silk, ahimsa, or non-violence, being one of the tenets of Gandhian philosophy. The unassuming Rajaiah, now 53, is the inventor and patent holder for the silk, described as "the eco-friendly method of manufacturing mulberry silk (*Bombyx Mori*) yarn." The patent from the Government of India came Rajaiah's way in May 2006, but his invention of silk through non-violent means preceded the patent by 15 years.

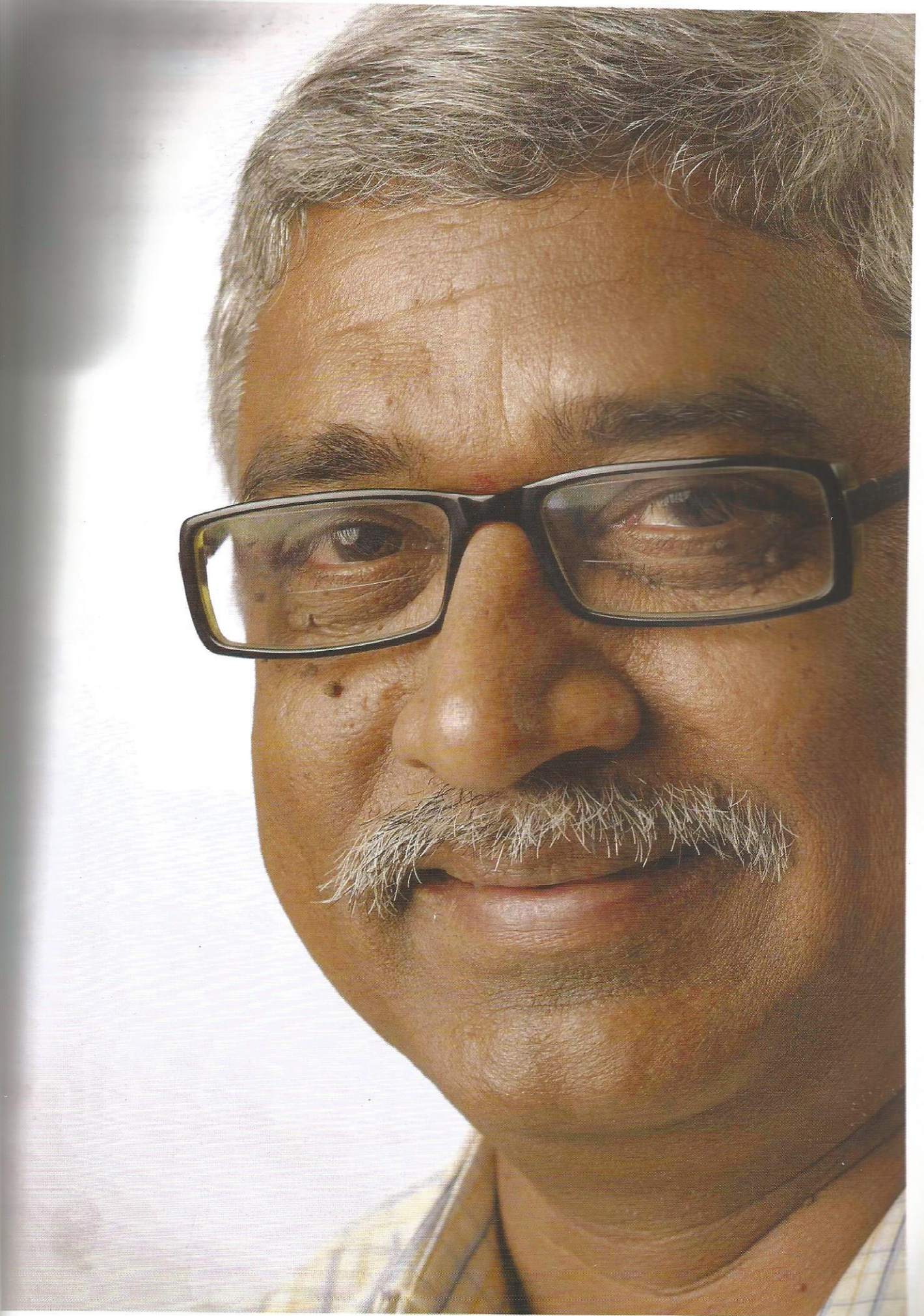
How Rajaiah discovered the method of producing Ahimsa Silk is a story in itself. At an exhibition of silk saris, the then First Lady of India Janaki Venkataraman casually inquired if there was no humane way of producing silk. World over, silk is produced by dropping silkworm cocoons in hot water or placing them in a hot oven to kill the silk-producing caterpillar inside. The silk is extracted from the cocoon in strands to be spun. Though it produces the best natural fibre in the world, the killing of thousands of silkworms - 1,500 silkworms to get a metre of woven silk



Products made from Ahimsa Silk.

cloth - is an uncomfortable concept for people sensitive to living creatures.

So, faced with the poser 'is there a humane way of making silk?', Rajaiah put on his thinking cap and emerged with this solution: let the silkworm live its life the way it would in the wild, expanding its girth on mulberry leaves, encasing itself in the silky cocoon; and when the time is ripe, say in 10 days, it will pierce the cocoon and fly away as a moth to live a full life not truncated by the gas chambers of an oven or a boiling





Kusuma Ramaiah with some Ahimsa Silk products.

pot. The silk can then be extracted from the cocoon left behind. These cocoons are treated with detergent-like chemicals to make them into small blobs that look like cotton balls, and it is these that are used to spin yarn to make silk fabric. In 1991, Ramaiah managed to produce enough silk through this non-violent way to weave two saris of six metres length each. The new silk created a minor flutter when the leading film actress Aamla chose to buy one that was twice as expensive as an ordinary silk sari. But soon the hype died down and Ramaiah returned to his job.

However, as the Indian economy opened in the new millennium, Ramaiah reconsidered his plan to produce Ahimsa Silk commercially. A year of market research convinced him that there was a market for his niche product. "In India, where many people are vegetarians and cringe at the thought of harming animals, I found many people who shunned silk because it involved the killing of silkworms," recalls Ramaiah. "And internationally too, the vegan movement was taking shape. I realised there was a potential for my product."

As the inventor of a non-violent way of producing silk, Ramaiah realised he must move quickly to get the patent registered in his name. Though he applied for it in 2002, the final order of the Government of India came only on May 10, 2006. Since he continues to be in the service of the federal government, Ramaiah's wife Savitri is the proprietor of Designer Weaves, the company based in Hyderabad, the state capital of Andhra Pradesh, that promotes his brand of silk.

Compared to conventional silk, the cost of Ahimsa Silk is twice as much. "Conventional silk will cost, on an average, Rs 200 (US\$4) for a 50 g per metre fabric, but Ahimsa Silk

costs Rs 500 (US\$10.1) for a 80 g per metre fabric of 45 inch width," explains Ramaiah. That's because when the moth pierces the cocoon to fly away, it breaks the delicate strands of silk. It is a laborious and costly process and takes about 100 kg of cocoons to produce up to 15 kg of yarn. In the conventional method, a single cocoon can yield 500 metres of silk yarn, whereas Ramaiah's method yields only 15-20% of this. Hence, a higher price tag. Besides, he says that he makes sure that the principles of fair trade are followed in Designer Weaves.

So who is willing to pay for this silk? Most of Ramaiah's products are traditional saris popular with Indian women, but he also makes stoles and plain fabric. Ramaiah adds that the silk is popular with people in India "who follow religions that prohibit cruelty to animals, like the Jains who would not even hurt a fly - they do not use conventional silk. Ahimsa Silk comes in handy for them." Ramaiah adds that abroad, a growing clientele is becoming sensitive to all forms of living beings and to ecological concerns, particularly in the US, the European Union and Australia, with a growing number showing interest in Ahimsa Silk.

The silk Ramaiah produces does not have the same lustre as conventional silk, but it breathes better, keeping the body cool in summer and warm in winter. Ramaiah shies away from calling his product a luxury fabric: "Let us say it is a niche fabric - a fabric that has a select market."

Though Ramaiah sold 10,000 metres of Ahimsa Silk last year as against an installed capacity of 5,000 metres per month, Ramaiah is confident the demand for the fabric will catch up. "There is a 30-40% growth per annum in demand," he adds. And with many more people around the world turning to vegetarianism and concern for the environment, he hopes to see that demand rise and rise. ●

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DECODING ANCIENT INDIAN ICONOGRAPHY 18

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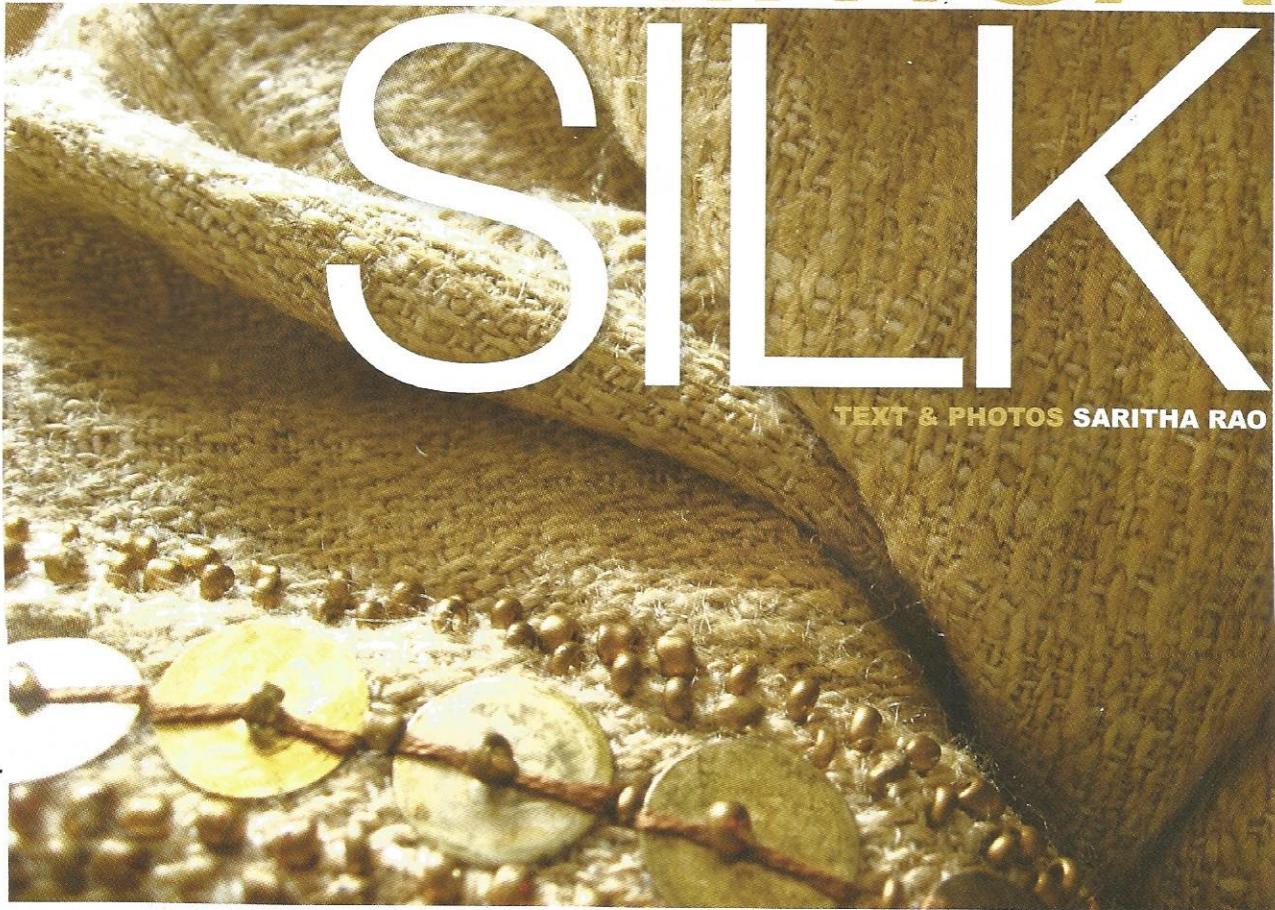
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AHIMSA

SILK

TEXT & PHOTOS SARITHA RAO



FINDING out about Ahimsa silk is a little like spooling a cocoon – the information unravels gradually and what you find at the end of it is a hand full of strands and thin air. But yes, those few silken strands of information are worthy of interest.

Ahimsa (literally meaning non-violence) is a concept with its origins in Hindu, Buddhist and Jain philosophy. The word has also become generic to silk that is produced without killing the silkworm for its cocoon. It is also called non-violent silk or peace silk that has a strong following among certain orthodox communities and environment friendly individuals.

Most commercially produced silk are by-products of the life-cycle of silkworms and the final product is called Mulberry silk because of the worm's diet of mulberry leaves. The worm builds a cocoon for its larva and pupa stage. To derive the yarn, the cocoon is usually plunged in hot water to kill the developing pupa and degum the strands.

In non-violent silk rearing, the silkworm is allowed to metamorphose into a moth. It emerges from the cocoon and flies away, thereby living out its natural life-cycle by going on to mate and create a new set of eggs. The pierced cocoon left behind is carefully unravelled for spinning into Ahimsa silk yarn.

In terms of appearance, Ahimsa silk differs in texture from commercially produced silk. While regular silk has a rich, smooth sheen, Ahimsa silk is softer to the touch; sometimes the yarn is thicker and has a lustre rather than a shine.

Many theories abound on the origin of Ahimsa silk; some say that it was created during pre-independent India's Swadeshi movement of self-sustenance. As is Khadi, propagated by Mahatma Gandhi. Khadi is simply hand-spun and hand-woven fabric, either cotton, silk or wool. Khadi became a brand and went on to create innovative non-violent products like leather from carcasses of animals that have died natural deaths. Mahatma Gandhi is known to have been critical of sericulture. Perhaps it is from these associations with Khadi and Mahatma Gandhi's focus on Ahimsa or non-violence that the origin of the phrase, Ahimsa silk came about.

While non-violent silk is an exciting concept, finding authentic Ahimsa silk is a challenge. Some say that Tussar silk, Muga silk and Eri silk are true non-violent silk varieties. There are accusations among animal protectionist groups that certain types of hand-spun Ahimsa silk are actually cotton in the weft and commercially produced silk yarn for the warp.



Ahimsa (literally meaning non-violence) is a concept with its origins in Hindu, Buddhist and Jain philosophy

However, Kusuma Rajaiah, a Technical Officer at APCO (Andhra Pradesh State Handloom Cooperative Society), Hyderabad, holds the patent for this eco-friendly method of manufacturing Mulberry silk (*Bombyx Mori*) yarn. Price-wise, Ahimsa silk can cost almost twice as much as regular silk. One reason for this could be the cost of production. The spinning of non-violent silk yarn is an intricate process as the moth pierces the cocoon to emerge. Kusuma Rajaiah says, "There is heavy wastage in the process and it is not possible to bring the costs down further. Having a separate factory is an expensive investment, so I outsource the spinning to a spinning mill to get the required yarn."

Ahimsa silk can be found in textile exhibitions, some retail outlets and boutiques in India. It is used mainly for apparel although furnishing is a strong line for exports. Ahimsa silk is a viable alternative for those who would still like to wear a semblance of silk without the killing. Provided, of course, that one finds the real deal.



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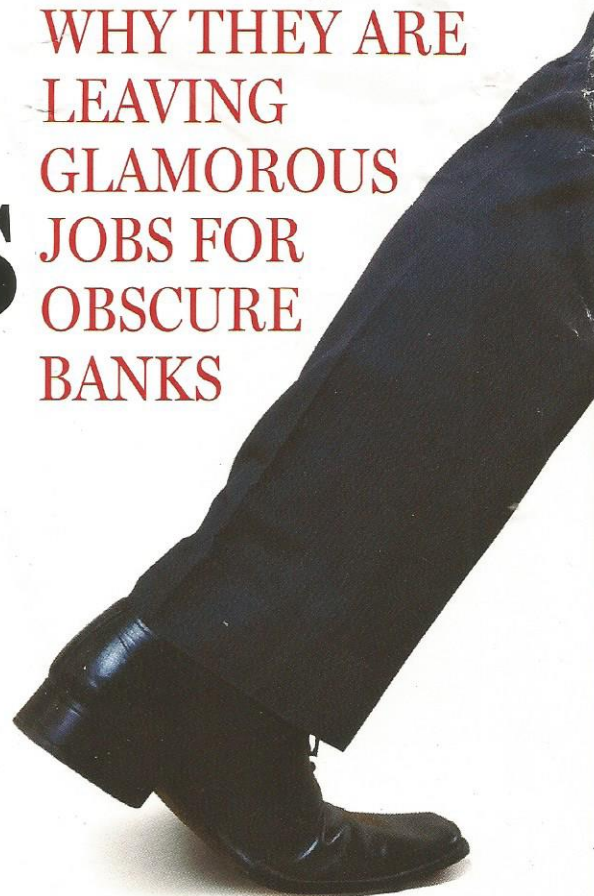
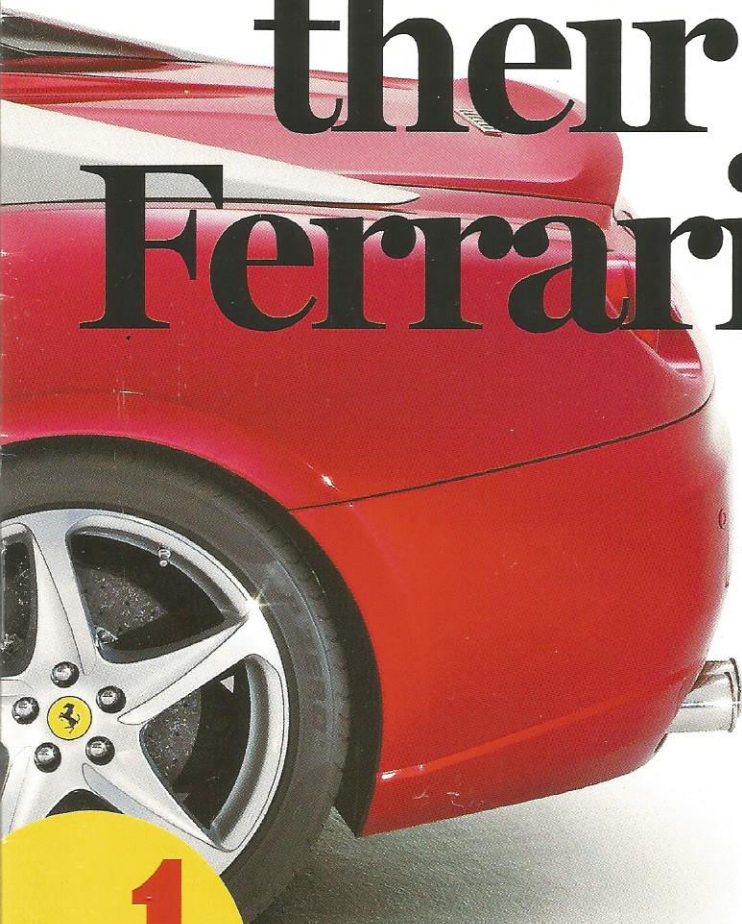
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The Bankers who sold their Ferraris

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NON-VIOLENT FASHION:
Designer Deepika Govind poses with her Eri collection

DEEPIKA GOVIND

LIFESTYLE

Thou Shalt Not Kill

The doctrine of 'ahimsa' is fast catching up, as a growing number of concerned citizens choose to live the vegan way

By Kavitha Srinivasa

FROM HAUTE CUISINE TO HAUTE COUTURE TO PET feed, a vegan way of life is becoming an ethical choice for many across the spectrum. (Incidentally, 'vegan' is not the same as 'vegetarian'; a vegan platter excludes not just meat but also milk and its products, eggs and honey). Vegan is a sensitive choice that does away with the use of animals for food, clothing or cosmetics, and the vegan experience lingers on without the burden of guilt. While fashion designers of national repute are on a mission to create a dedicated line of clothing from natural fabrics such as khadi, vegan bakeries are coming up with 'compassionate' delicacies. But first, let's start with vegan attire.

Sample this: 1,500 silk worms have to be killed to get one metre of woven silk cloth. Enlightened or horrified? Not unexpectedly, silk boutiques keep mum about these grim statistics. After all, silk trousseaus inch up the

glamour quotient, besides keeping profits high. But a revolution is clearly afoot as designers make that extra effort to craft ensembles without cruelty to animals. This has led to the evolution of Ahimsa Silk, a fabric that is produced without killing the silkworm. It is extracted after the silkworm has completed its metamorphosis and emerged from the cocoon.

Promoted by activists such as Shabana Azmi and Amala Akkineni, and patented by Kusuma Rajaiah, Ahimsa Silk came about when Janaki Venkataraman, wife of former President R. Venkataraman, during a visit to the Andhra Pradesh State Handloom Weavers' Cooperative Society (APCO), wanted to know if saris could be made without killing silkworms, in the 1990s. The question put Rajaiah on the silk route, where he researched and developed an alternative silk fabric that did away with killing of any kind.

"Ahimsa Silk is more expensive than regular silk and has a niche market because it takes two to three months to produce yarn and involves wastage," says Rajaiah, who is the procurement officer for APCO and operates from his Hyderabad home. Kicking off with saris, the prices of which now range from Rs 4,000 to 10,000, the Ahimsa Silk portfolio now includes scarves, dhotis and knits. The selection is diverse and offers comfort. "Ahimsa Silk is breathable and absorbs sweat. It drapes well and can be worn all the year round," says Rajaiah.

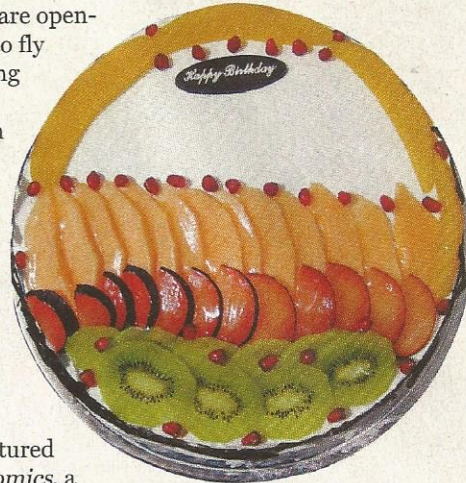
The green and non-violent quest became a lifestyle choice for fashion designer Deepika Govind who retails in Bangalore and Delhi. "My quest to find a silk that doesn't harm any life form finally found an answer in Eri. It was a challenging task to turn a naturally coarse silk into a supple and soft fabric of international quality," says the designer about her new collection. "Eri continues to intrigue me with its unusual properties (warm in winter, cool in summer), making it one of the finest options for stoles and shawls, which sell for Rs 3,500-Rs 12,000."

Eri's spinning process, which is known as *endi* or *errandi* in India, does not involve the killing of

the silkworm. The cocoons are open-ended and allow the moth to fly to freedom once the spinning is complete.

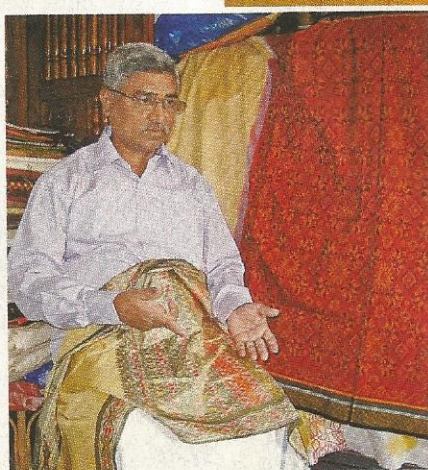
Govind has come up with vegan fabrics such as bamboo knit, soya bean knit, khadi cotton and tencel (a man-made eco-friendly fibre). Her eco-finesse is also evident from a pure khadi blend and an organic denim collection.

The warp and weft of responsible fashion has textured connotations. Like *khadinomics*, a term fashion entrepreneur couple Kochery C. Shibu and Mini Varkey Shibu coined to describe the economy that would be built around the fusion concept of 19th-century quality khadi and 21st-century fashion. The philosophy of *khadinomics* incorporates skilled weavers, vegetable dyers and the organic cotton farmers in the changing dynamics of the fashion industry, and lives through MINC, the Shibus' Bangalore-based eco-friendly fashion store for women and young girls. "The concept is to promote eco fashion, work with khadi fabrics, organic cotton and vegetable-dyed fabrics, and support



CARNIVAL CAKES & BREADS

COMPASSIONATE SPREAD: Fresh Fruit Gateux, a Carnival Cakes & Breads delicacy; (Below) Kusuma Rajaiah and his Ahimsa Silk



KUSUMA RAJAI AH



SUSHMA'S MINEFIELD:
Right Woman, Wrong Party? P20

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GodFellas II 'Politics Is Too Small A Platform For Me' **Sri Sri Ravi Shankar** P14

Tehelka

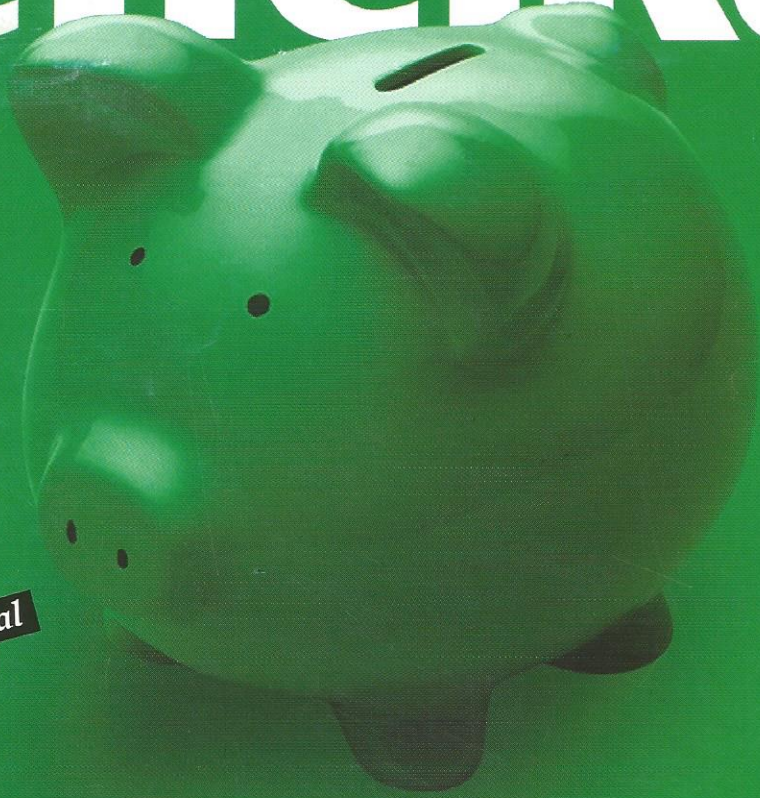
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The **Big** **Green** **Rupee**

It's clean.
Eco-friendly.
Profitable.

Why isn't India
minting it?

P32



Fashion Without Victims

Couture now has a conscience. When will fashionable Indians develop one, asks **NISHITA JHA**

FASHION NEVER cost as much, as it did if you were a silk worm. The adornment of a single woman in six yards of shimmering silk meant 50,000 silk worms were boiled alive in their cocoons, their homes dipped in chemicals and its fibre processed to spin the coveted yarn. Until one day in the 1990s, when Indian President R Venkataraman's wife, first lady Janaki Venkataraman visited a silk factory — "Is there no way to make silk without killing so many silk worms?" she asked, her brow furrowing in concern. Within earshot stood Kusumah Rajaiah, an officer with the Andhra Pradesh State Handloom Weavers' Cooperative Society. The lady's words touched a nerve. Dropping the armour of apathy he wore every day when casually tossing silkworms to their death in vats of steaming water, he shifted his focus to developing a 'non-violent and painless' way to extract silk from the cocoons. Finally in 2000, Rajaiah made his first batch of commercially viable, non-violent silk. In 2006, he was rewarded with a patent for his work, and Ahimsa Silk was born.

Like most green warriors, Rajaiah found that Indians were still to find their conscience when it came to the environment. In spite of the additional expense of producing Ahimsa Silk (making non-violent silk is highly labour intensive and time consuming. The process extracts only 16 percent of the silk available from the cocoon and thus it can cost almost double the price of regular silk), Rajaiah found that once he put his concept and samples online, he was flooded with bulk orders from customers abroad. Those whom he believed to be most in tune with the concept of Ahimsa, his own countrymen, remained impervious. His ultimate validation came at last year's Golden Globe awards, when nominated director James Cameron's wife showed up on the red carpet in a stunning blue Ahimsa Silk gown. Finally, the Indian dailies were claiming him as their own.

For those already accustomed to the spotlight, like Delhi-based designer Anita Dongre, thinking green was a slow but steady process that began percolating to every sphere of her life. What started with a penchant for organic food, soon grew into a fashion line — Grassroots, and Dongre is now in the planning stages of constructing an entire green building as her office in Vashi, Mumbai. While the USP of

🔗 **Looks don't kill**
It's now possible to take the violence out of fashion



Grassroots is the beautiful organic cotton and vegetable dyes used in the dresses, the aesthetic itself is a far cry from the overdone Fabindia ethnic-chic. "Indian women buy clothes that look beautiful. They don't give a damn about harmful dyes and chemically-treated cotton. So I create designs keeping in mind the fact that most people who buy my clothes think 'organic' just means a 'softer kind' of cotton," she says.

Most people are unaware of the fact that the process of chemical dyeing involves detergents that are harmful to aquatic life and cause ozone depletion. Printing gums and preservatives can cause dermatitis, liver and kidney damage in human beings. Several chemicals used in dyeing, such as polyphosphates trisodium have been banned in Europe but continue to be widely used in India. Thanks to NGOs like Natural Dyes and Shop for Change, Dongre is committed to using organic fabric for all her lines, but admits that green fashion can be quite a pricey affair. "Organic yarn is 10-15 times more expensive than regular cotton. If I use

'Most people are unaware that the detergents used in dyeing kill aquatic life and deplete the ozone layer,' says Anita Dongre

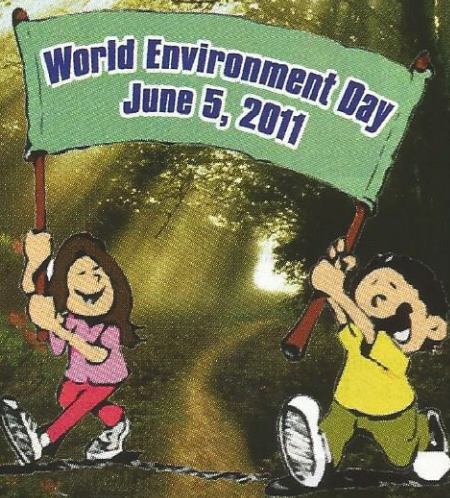
vegetable dyes as well, the line becomes 3-4 times more expensive than the clothes I usually make. I once did a whole line of vegetable dyed kurtas, but they were so pricey that I ended up keeping them for myself," she laughs. Awareness is still slowly trickling in through retail store doors. Dongre's collaboration with Shop for Change is sold in 70 stores through the country. Each garment came with an explanatory note and a store clerk who explained the concept of organic cotton and fair trade. After starting with an initial order of 20,000 metres of organic cotton, Dongre's demand for organic increased to more than 80,000 m per line.

While the lack of environmentally-conscious customers is frustrating, Dongre, like Rajaiah, has found solace in the fact that her green creations do better outside the country. Until we finally awaken to the fact that living green is about more than having a few odd plants in the balcony, India will continue to be the place where fashion comes to dye. **T**

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COVER STORY

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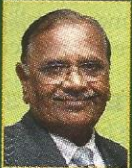
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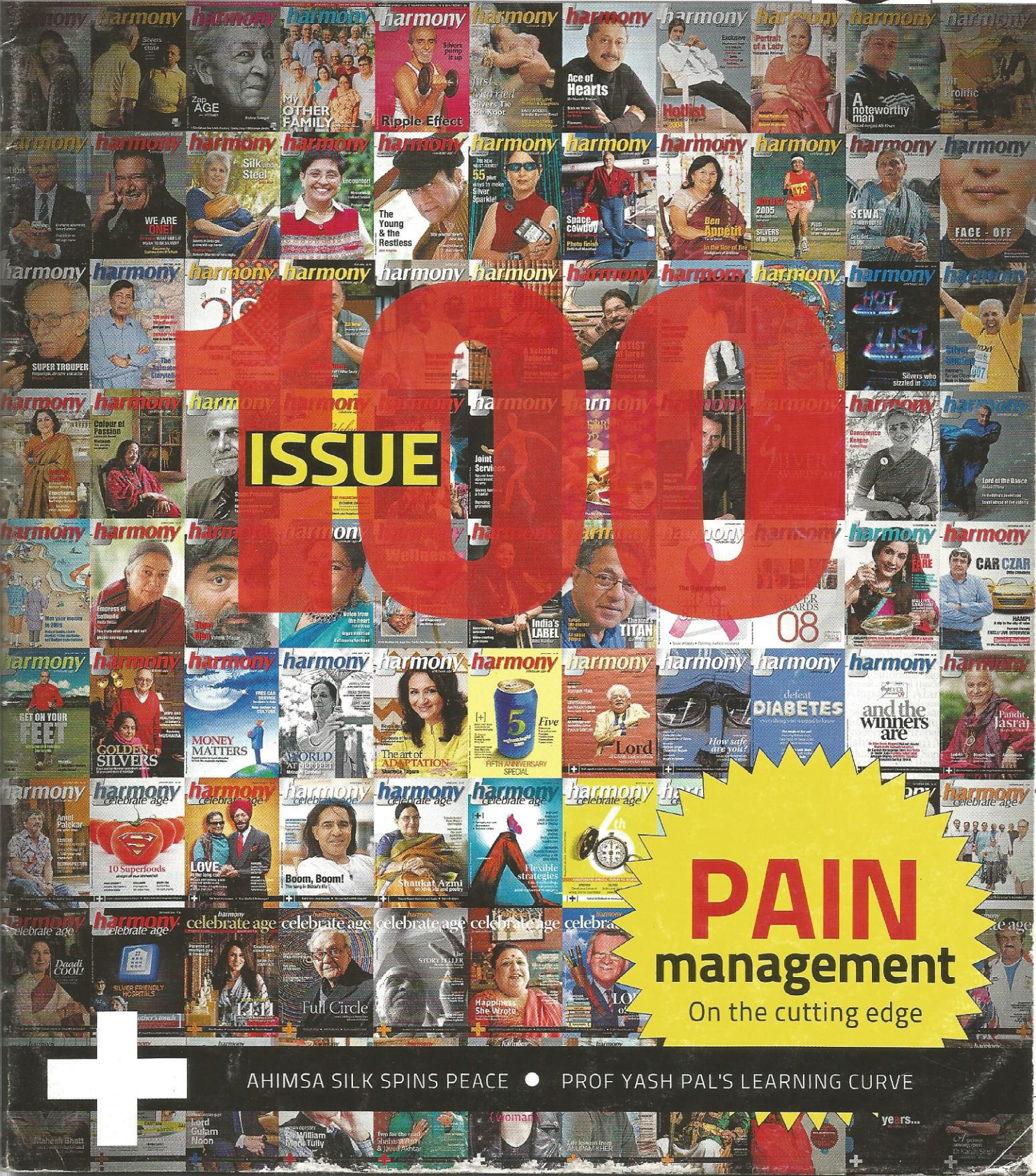
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PAIN
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AHIMSA SILK SPINS PEACE • PROF YASH PAL'S LEARNING CURVE



The fabric of CHANGE

Photographs by Stella Paul

Can a yard of fabric lead a society from unrest to peace? 'Yes,' affirms Hyderabad's Kusuma Rajaiah who created Ahimsa silk—an alternative silk fabric made without killing silkworms. **Stella Paul** meets the man behind the groundbreaking innovation

This is not just another consumer product but a concept aimed at changing hearts," says Hyderabad's Kusuma Rajaiah of Ahimsa Silks—a revolutionary silk fabric that is spun without killing silkworms. The 57-year-old textile technologist from Andhra Pradesh State Handloom Weavers Cooperative Society Ltd (APCO) is eagerly looking forward to 2014—the year he retires from his job. But leisure is the last thing on his mind; in fact, he is planning to use his unique yarn to not

only transform the textile industry but also contribute to the making of a more peaceful society.

AHIMSA SILK, A UNIQUE FABRIC

In the production of regular silk, the cocoons are immersed in boiling water to kill the worms and spool the silk yarn. With Ahimsa silk, however, cocoons are left alone for seven to 10 days, until the caterpillars have metamorphosed into moths and flown away. Once the moth leaves the cocoon, the extraction of the silk filament begins.

"To weave a normal five-yard silk sari, one has to kill at least 50,000 silkworms," explains Kranti Kiran Kusuma, Rajaiah's son-in-law who manages the production of this unique fabric. "Those who know this think the killing is inevitable, while some don't know this at all. We, however, check each cocoon individually to ensure that the moth has escaped before the silk thread is spun." Now a small-scale, home-based business, it is supervised by Rajaiah's parents, wife and two children, as Rajaiah himself is still an employed professional.

The whole process—from spinning to weaving—takes three months; it's longer than the conventional way of making silk, as the cocoons are collected at least a week after the worms have left them. At present, Rajaiah can produce only up to 2,000 m of silk every month. Yet the inventor has no regrets. "Mass production is not my goal; I want the fabric to reach those who are able to understand and value the thought of non-violence attached to it," he emphasises. "In fact, it is technically possible to develop this into a nationwide, even worldwide, venture with multiple franchisees."

FROM FARMING TO INVENTING

Rajaiah is no stranger to challenge. He was born in Nagaram, a remote village in Andhra Pradesh's Warangal district. Though he belongs to a weavers' community, there was no loom or spinning wheel at home as his family had been practising agriculture for a long time (now his parents have moved to Hyderabad with him). His parents dreamt of seeing their little boy become a doctor but back then, the village had neither motor roads nor electricity; only a school that could teach up to the third grade. Rajaiah had to change schools eight times before finally completing his 10th grade.

After completing his intermediate examinations, when he got the opportunity to study textile technology, he jumped at the idea. It was a course offered by the Indian Institute of Handloom Technology in Salem, Tamil Nadu, with a scholarship for students from disadvantaged communities. "A government job was all that I wanted at the time; something that would end my hardship. The course offered that and a stipend of Rs 150 to each student, which was a big bonus," recalls Rajaiah with a smile.

Three years in college proved to be more enriching than any monetary returns. During this time, he had the opportunity to learn various weaving techniques as well as the history, old

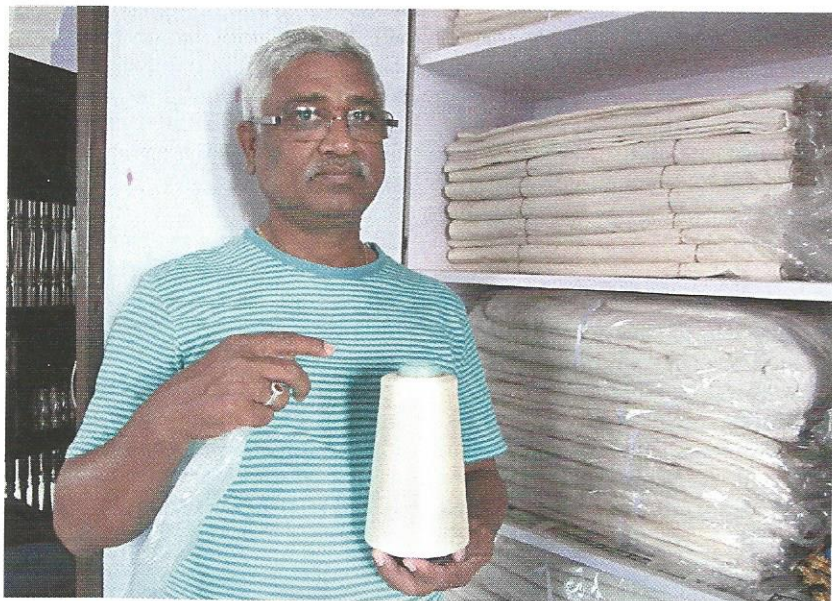
practices and how the craft shaped people's lives. It stimulated Rajaiah's young mind; he spent a lot of time with old weavers asking them many questions, whetting his appetite for knowledge. It left him with the urge to do something new, something truly different.

A decade later, this impetus finally led Rajaiah to the invention of a method to create silk without killing silkworms. The story, however, has a fascinating prelude: in 1990, Janaki Venkataraman, wife of the late Indian President R Venkataraman, visited Hyderabad. During her visit, the first lady asked whether APCO made

silk saris without killing silkworms. The query prompted Rajaiah, then a procurement officer at APCO—a job he bagged soon after completing his diploma in textile technology—to experiment.

"The beginning was really tough; I had only an idea and my passion, but nothing else. There were no raw materials and no equipment," remembers Rajaiah. "I knew I had to begin from scratch and follow a long-drawn process. From finding a farmer willing to grow silkworms to looking for a factory where I could spin yarn, I had to struggle before my experiment bore fruit. Finally, in 1991, the





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Lohia Group of Industries in Raipur, Chhattisgarh, allowed me to use their facility. It was there that I took 100 kg of silk cocoons. Each of these cocoons was empty inside as the silk moth had bored a hole on the surface and flown away. Using the spinning equipment at the factory, I started to extract the yarn from these cocoons. Finally, I was able to spin 16 m of silk yarn."

During the next 10 years, Rajaiah conducted a few more experiments. The first batch of silk he spun in Raipur was rather coarse in texture. He wanted to improve it. At college, he had also learnt about a few weaving, designing and colouring traditions that were no longer in practice. He wanted to revive and incorporate them in his fabric. These included making dyes out of eco-friendly and herbal agents such as onion peel, turmeric, black jaggery, and the bark of the *babul* tree. Of the designs, he tried

to revive the peacock motif that was once the benchmark of the Andhra handloom industry. Finally, in 2002, the Government of India awarded Rajaiah with the patent for the silk yarn Ahimsa.

A TRIBUTE TO THE MAHATMA

Ahimsa silk derives its idea and the brand name from Mahatma Gandhi, who was also critical of the conventional method of silk production. In fact, he had written to the Silk Board of India to explore ways of producing silk without hurting any living being. For Rajaiah, it's a matter of pride to have fulfilled that wish; a pride shared by those who use the fabric. "Though the fabric is made of cocoons that are technically 'damaged', it is much smoother than conventional silk," says Sumedha Goswami, a Hyderabad-based social development professional who owns an Ahimsa silk stole. "Besides, it is a great feeling to

wear something that you know is not tainted by suffering or death of any creature and is, therefore, 100 per cent pure."

WINNING ACCOLADES

Though Rajaiah owns no boutiques or showrooms and hasn't advertised the product anywhere, he already has a dedicated clientele comprising celebrities and leading designers. Among them are the former president of Indonesia Megawati Sukarnoputri and Suzy Amis, actress and wife of filmmaker James Cameron, who wore an Ahimsa silk gown to the Oscars this year. Apart from that, there are a number of leading designers in Israel, the UK, Europe and the US who regularly buy silk from him. Among Indian designers, Wendell Rodricks has designed innovative lines with Rajaiah's fabric.

The invention has also won Rajaiah several awards. Ahimsa International of New Delhi honoured him in 2008 for his humane approach towards silk production. Goethe Zentrum, a German educational institution, has made a documentary on Rajaiah and the Supreme Master Ching Hai International of Taiwan has conferred the 'Shining World Compassion Award' on him.

THE NEXT CHALLENGE

Having given the world something to celebrate, Rajaiah is now gearing up to contribute to another issue he is equally passionate about: education. In fact, he wants to use the profit earned from the sale of Ahimsa silk to support rural education. "Having lived in a remote village, I have seen how hard a child has to struggle to get education," he says. "I also know the difference education can make in one's life. If it wasn't for the diploma in textile technology, I would have been suffering like thousands of other marginal farmers today, struggling to make ends meet. Now, I want to reach out and help those children who are orphaned and have nobody to turn to. I want to help them go to school." ❀