REGIONAL POST

CAUCASUS

#3 / 2018

SCIENCE IN ARMENIA

FUTURE BY THE DOOR

MUSCARI

Caring for Land, People & Culture

Gyumri Ceramics

Inspired by the know-how of the Armenian potters of Kütahya

The prestigious galleries such as “Galerie de la Tour” in Lyon in 2016 and “Galerie de Gourney” in Paris in 2017 held exhibition-sales of unique pieces of ceramics made by the craftsmen of Gyumri using the know-how of Armenian potters from Kütahya, a major center of ceramic production in the Ottoman Empire during XVI-XIX centuries.

The exhibitions were initiated by Muscari, an association for the promotion of Armenian and French cultural heritages, and its president Manoug Pamokdjian.

The events were organized as part of the global project aimed at the promotion of the economic and artistic prowess of Gyumri, initiated by Antonio Montalto, Honorary Consul of Italy in Gyumri, and the Pamokdjian family.

The Muscari association plans to establish several Houses of Armenia (les Maisons d’Arménie), centers for the distribution and promotion of Armenian crafts across France and other European countries.

In addition to the unique nature of the presented items, the goal of the exhibitions is to use art as a way of reviving Gyumri, a city devastated by a powerful earthquake in 1988 as well as continued economic crisis.

The exhibition will also take place in other prestigious locations in France followed by a tour in various European cities throughout 2018-2019.

These events are supported by Muscari association, Family Care and Friends of Gyumri foundations.

FONDATION Family Care

FONDATION BULLUKIAN

contact@muscari.fr

Friends of Gyumri

VILLA AYGHEDZOR

YEREVAN

VILLA DELENDA

YEREVAN

VILLA KARS

GYUMRI

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DBL/TWN – 35 000 AMD
TPL – 45 000 AMD
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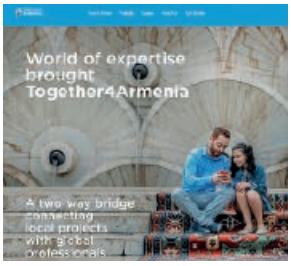
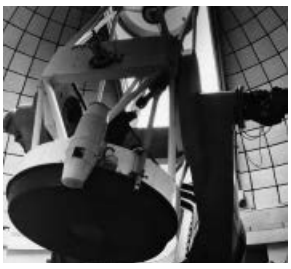


VELVET REVOLUTION

SCIENCE IN ARMENIA



ARTS AND CULTURE

WORLD

ARTIFACT

BRIDGING PEOPLE

In December of 2016, Armenian General Benevolent Union launched BRIDGE for CSOs program aimed to contribute to the empowerment and sustainable development of the civil society in Armenia. The three-year project with the overall budget of €2.2 million is implemented by the AGBU together with the Eurasia Partnership Foundation and is financed by the European Union. BRIDGE for CSOs will provide trainings, small grants, quality expertise and network for civil society organizations working in a variety of fields from art to IT. One of the ways AGBU strengthens CSOs in Armenia is through connecting Diaspora professionals with local Armenian projects. Successful specialists from different countries of the world became Goodwill Ambassadors, investing their experience, knowledge and skills for further development of the civil society in Armenia.

TEXT :KARINE GHAZARYAN / PHOTO : AGBU ARCHIVE

WHAT IS THE BRIDGE

Increasing the capacities of Civil Society Organizations (CSO) to better respond to citizens' needs is a critical question in Armenia. BRIDGE for CSOs program is designed to address this gap by linking Armenian CSOs with Diaspora expertise. BRIDGE stands for Bringing Real Impact with Diaspora and Global Engagement. The program is funded by European Union and implemented by the Armenian General Benevolent Union (AGBU) in collaboration with the Eurasia Partnership Foundation (EPF). A unique characteristic of this three-year program is strengthening nonprofit sector by using Diaspora talent and expertise.

The program offers thematic trainings, pro bono Diaspora expertise, Non-profit management university certificate program, grants to improve financial sustainability of CSOs, Good Will Ambassadors to increase awareness about work of CSOs, a skill share platform to connect CSOs with Diaspora. 80 CSOs and 200 professionals working for those organizations will benefit through the project. BRIDGE for CSOs will positively impact the lives of 16,000 beneficiaries in Armenia, engage up to 400 Diaspora individuals, provide funding to CSOs to start or expand social enterprises and improve their operational and service delivery capacity.

Dr. Yervant Zorian with "One Step Ahead" team at AGBU

Dr. Yervant Zorian announced as a Goodwill Ambassador for Women and Information Society NGO

TECHNOVATION ARMENIA

Women in Information Society NGO

In September of 2017, Chief Architect of Synopsys and AGBU Central Board member Dr. Yervant Zorian became the first Goodwill Ambassador of BRIDGE for CSOs. He supported Women in Information Society NGO in its Technovation Armenia initiative, which is a part of global Technovation Challenge contest. Technovation provides training and mentorship to girls around the world and encourages them to build careers in IT industry where the ratio of female specialists makes up only about 10% of the overall workforce. Thousands of girls from schools in different cities and villages of Armenia assembled teams and competed for travelling to Silicon Valley and presenting their project to the leaders of the tech world. The school team of Karbi village called "One Step Ahead" presented a bilingual Armenian sign language app and became one of the 12 finalists selected from 3,000 teams across the globe. The team won Technovation's People's Choice Award and received $10,000 for developing the app.

Dr. Yervant Zorian

Chief Architect of Synopsys, President of Synopsys Armenia
BRIDGE for CSOs Goodwill Ambassador

"It was in the Soviet times that I first travelled to Armenia. They did not let us get acquainted with the local tech sector; instead they showed us the churches and the shoe factory. But when I came back in 1993, the current President Armen Sarkissian connected me with the key individuals of the tech industry, and we started working pretty successfully. Back then Armenia had many high-qualified experts but no jobs. When we started bringing businesses here, there were about 20-30 applicants for one position, i.e., we had less demand and more supply. In the 2000s, big multinational companies started to establish branches in Armenia, and the situation with the workforce was balanced. Now, there has been an impressive growth in the industry: we went from 3 companies in the early 1990s to 750 today! But those 750 companies don't have enough people to hire as we have certain demand but no efficient supply from schools and universities. That is why I decided to support the initiative of Women in Information Society when AGBU's BRIDGE for CSOs team told me about the project and offered to become a Goodwill Ambassador. This project is a very good attempt of creating excitement in schools and doing some level of training. After the girls of the winning team had their project in hand, I met them and we flew together to the US.

What Google provided for them was more of a closed environment for competition, and my thinking was that they ought to be more connected to the tech world. So, I took them to some companies; we went to the National Accelerator Laboratory and to Stanford University Campus. But I also wanted them to feel at home, so we made acquaintance with the Armenian community in the Silicon Valley. And during the final competition at the Google Headquarters, which was open to the public, there was a big support group of Armenians. And of course, we won the People's Choice Award!

I continued to be in touch with the team after they got back to Armenia, helping them connect with TEDxYerevan and the President Prize committee. But my role in this project is more generic: I work less with one particular team but encourage more teams to participate using previous experience as a success story."

SEVAN STARTUP SUMMIT

Startup Armenia Foundation

From July 22 to 29, over 1000 IT specialists and entrepreneurs gathered at a camp at the shore of Lake Sevan. Sevan Startup Summit hosted multiple activities: from small talks to contests with $50,000 prize-fund. BRIDGE for CSOs Goodwill Ambassador Tatul Ajamyan spent two days at the camp. Resident of Silicon Valley and the founder of Wakie voice conversation app with 2 million users in 80 countries, Tatul provided mentorship to local start-up teams, gave motivation fire-side talks, as well as judged a battle of start-up Social Entrepises and chose the winner of special prize from BRIDGE for CSOs. He shared his experience with the participants and used his social network platforms to publicize Sevan Startup Summit.

Sevan Start-up Summit 2018

Tatul Adjamian and Hovhannes Yeritsyan exchanging BRIDGE4CSOs Certificates of participation

Tatul Ajamyan
Founder of Wakie
BRIDGE for CSOs Goodwill Ambassador

"13 years ago, I founded an Armenian youth organization in Moscow, SIVAM. We were pretty innovative in our work with the community and grew into a great network over time. So, I spent many years trying to help Diaspora to thrive. But then I took a look at older communities, like the ones in Paris or LA, and I saw that Diaspora has this idea of conservation, of protection, of losing people and yet protecting, of trying to be integrated but not assimilated. At some point I understood that the only power in the Armenian world that can thrive is the state of Armenia. So, if I had just one shot, I would try to develop Armenia. And, in a landlocked country with closed borders tech can be the biggest leverage.

You see, China or India have this great number of people working in tech. Armenia is much smaller, so we must be smarter. We can't have 10 000 startups a year, we can have maybe 500, but we should have a higher success rate. And Armenians do build great tech, we are just a bit not experienced in building businesses, especially international businesses that can compete with world giants. So, I think what one needs to do in Armenia is to bring people and experiences. And that is precisely why I was so excited to take part in BRIDGE for CSOs program and support Sevan Startup Summit as their Goodwill Ambassador.

By the way, when I was still getting ready for my trip to Armenia I couldn't imagine something this big is possible here. This camp is huge compared to the sizes of the Armenian tech community, and the energy and investment here are incredible. With BRIDGE for CSOs, we awarded financial support to one of the many incredible startups presented at the summit, but we will go further and stay engaged with the participants to build wider network with local companies."

Greg Guerguerian and Satenik Hovhannissyan exchanging BRIDGE4CSOs Certificates of participation

MIASSINE BAKERY

Miassine Foundation

On July 27, French-Armenian baker Greg Guerguerian held a master class of French patisserie in Miassine Bakery in Gyumri. Miassine is a social bakery which trains and hires young people aged 16 and older who come from vulnerable communities or closed social institutions.

The bakery in Gyumri offers its customers various kinds of French and Italian artisan bread. Greg Guerguerian, owner of Monsieur Spoon café in Bali, Indonesia, and Roots café in Stepanakert, Artsakh, will provide training on cooking French desserts and thus expanding the range of products for sale.

Fundraising concert for the benefit of Pahapan Foundation's Playground Shelters Projects

Greg Guerguerian

Founder of The Roots in Artsakh
BRIDGE for CSOs Goodwill Ambassador

"I always choose to travel, discover small places or share my experience with small businesses because I'm against big industries with standardized approach to everything. I strongly believe that if we make smaller enterprises, quality will be better and the relations with customers will be more humane. Unfortunately, big corporations are everywhere: in Paris, New York or London all the brands are the same; the world is getting very homogeneous. However, in Armenia – also in Artsakh – we are still protected from that, we are still independent and unique. And that helps this place to preserves its personality.

It has been almost a year since I opened Roots café in Stepanakert, which operates quite successfully. And for me, it was not more difficult to establish a business in Artsakh than it was, say, in Bali where our Monsieur Spoon café is located. But I do understand that small businesses have a very little chance to fight against the resources that major companies possess, and I am always happy to help a small producer, if I can. So, when I heard that young guys in Gyumri started a bakery and was offered to become their Goodwill Ambassador, I was very willing to help! BRIDGE for CSOs team introduces me to the Miassine staff, and together we learnt to bake French fruit tarts. The recipe I shared with the Miassine combines several must-know techniques which are the base of French patisserie. I got acquainted with what Miassine does and saw the quality. We also discussed the market for French bakery in Gyumri and I shared my experience of creating French cafes far away from Paris."

Greg Guerguerian holding a French pastry masterclass for the interns and employees of Bon Appétit Bakery run by Miassine Foundation

PLAYGROUND SHELTER IN BORDER VILLAGE KOTI

Pahapan Development Foundation

On October 26, BRIDGE for CSOs hosted a concert organized by the opera coach Serine-Lyuba Tatevosyan in support of Pahapan Development Foundation. Tatevosyan, who is originally from Moscow, has been working in Armenia on staging Jules Massenet's "Manon" opera which will premiere during the Francophonie Summit in Autumn. In the framework of BRIDGE for CSOs program, she organized a French music night and raised money for building playground shelter at the school of bordering Koti village. The shelter will be equipped with school supplies and toys to make it less traumatic for children who may need to hide there in case of bomb attack.

Serine-Lyuba Tatevosyan

Opera singer, vocal coach
BRIDGE for CSOs Goodwill Ambassador

"I have two professions: linguistics and vocal coaching. I train singers to perform properly in Italian and French. In Armenia, we are currently working on a very difficult opera "*Manon*". French opera tradition has some strict rules for performers, moreover, President Emmanuel Macron is expected to attend the premiere, so we have a pretty challenging task! During my stay in Armenia, I learnt about AGBU's BRIDGE for CSOs project. I wished to contribute and wanted very much for my efforts to be helpful for children. I was very excited when I discovered Pahapan Development Foundation and the Playground Shelters project. So, we organized a concert where singers from the Young Artists Opera Program, kids from Mkhitar Sebastatsi Educational Complex, as well as "Astghikner" vocal studio choir performed different French arias. I coached the kids for several weeks. With young singers we worked on phonetics. The kids were very artistic and receptive; they couldn't even write in Armenian yet but performed amazingly in French! They opened the concert, then "Astghikner" performed, and then the Young Artists came in. I myself also sang, and all the proceeds from the concert we transferred for the benefit of Pahapan's project of building the playground shelter. The construction works are now in process. This whole experience taught me that one does not have to have an extremely big network or a lot of money to help someone: you can do good even with very small means and support form the right initiatives – just like BRDIGE for CSOs!" ◆

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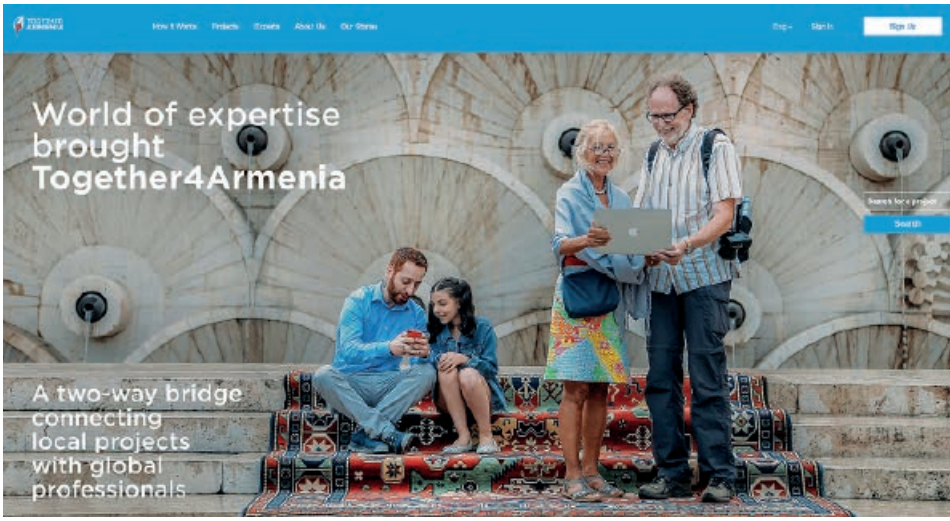
TOGETHER4ARMENIA:

Sharing the Value



Following its century-old traditions and putting in use the latest technologies, AGBU is partnering with UNICEF and the EU to bring Diaspora closer to Armenia with the new Together4Armenia web platform. If you are a professional living abroad, use www.together4armeni.am to empower civil society in Armenia by sharing the greatest value – your knowledge and skills.

TEXT : KARINE GHAZARYAN

Armenia has been developing steadily over the past years, and it is now full of hopes, plans and tremendous energy. It seems this is the perfect time to put in use all the potential of the country – not only within its borders, bus also accumulated in its Diaspora throughout the globe. This is precisely what AGBU, the largest Armenian non-profit organization, in partnership with UNICEF, world's leading child rights organization, decided to do by bringing together civil society communities of Armenia and high-skilled experts of Diaspora. The Together4Armenia web platform ignores the borders and engages Armenians all over the world, because who said borders are boundaries in the 21st century? Traditionally, Diaspora used its financial resources to help Armenia thrive, by making donations and implementing philanthropy projects. But at times, skill and knowledge investment can be more impactful. What Together4Armenia offers is an innovative tool to contribute to the development of your homeland by providing valuable expertise and helping local organizations and communities to head towards sustainable growth. There is no need to be physically present in Armenia, you can contribute from your place of residence simply using Together4Armenia as a social network to connect to the local projects. Register and indicate your professional field at www.together4armenia.am, and the system will automatically match you with initiatives looking for respective expertise.

Talar Kazanjian, Executive Director of AGBU Armenia, at the launch of the revamped Togteher4Armenia website. Opening Remarks

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In Armenia, NGOs, non-commercial initiatives, communities and individual project initiators can use the platform. They go through a simple registration process with a number of pretty standard requirements (including non-political activity, ethical content, etc.), create a profile and upload a project indicating what expertise they are seeking. Approval takes one day. On the other hand, Diaspora based professionals from all over the world can create their profiles on the Together4Armenia platform, describing their professional background and indicating the skills and expertise they are ready to share. Experts can also indicate whether they are available online, offline, or both. Based on the entered information, the system matches projects with experts sending notifications suggesting to connect. And the intellectual volunteering begins. This is what David Dikranian, a youth soccer coach who has worked with Yale University Women's soccer team, did. Before registering on Together4Armenia platform and connecting with Armenian projects, Dikranian had never been to Armenia. But after finding on the platform promising organizations teaching girls

Children in a rural setting in Armenia, @UNICEF Armenia/ 2015/MaramAva

Soccer camp for girls run by GOALS NGO

to play soccer in rural Armenia, he traveled to the country, met the beneficiaries and held workshops for them in Yerevan and in the remote villages of Armenia, empowering girls through coaching. Once connected, he now travels to Armenia every summer to coach girl soccer teams during summer camps. Another specialist, Artur Muradian, tourism industry expert and director of Russian Space Travel tour company, provided in-person training not only for industry workers from the capital, but also from regions. "Together4Armenia is a great project as it helps people living in Armenia, especially in the regions of the country, connect with world-class experts, providing a high-quality boost to the sector," Muradian says.
Since its launch, Together4Armenia engaged more than 60 professionals from Diaspora who have shared their knowledge with over 2100 participants through more than 80 workshops, making meaningful connections and jointly engaging in local projects.

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Together4Armenia was originally created by United Nations Children's Fund (UNICEF) with the EU support and had primarily a social orientation. However, the platform had potential to expand and become a useful "skill transfer" tool in many other areas. To fully explore this potential, UNICEF partnered with AGBU, and in April 2017 the two organizations signed a memorandum of understanding to better engage Diaspora in supporting local communities and contributing to civil society development in Armenia. For a year the organizations worked on redesigning the website and adapting Together4Armenia to meet broader needs. In 2018, the web platform was relaunched and it can now serve as catalyst for Diaspora's meaningful engagement in developing and empowering Armenia.

ISABELLA MERABOVA
BRIDGE4CSOs Program Officer, AGBU

Diaspora's meaningful engagement is a priority for AGBU. That is why we put time, skills and tremendous energy in developing Together4Armenia. This is an innovative online tool which allows AGBU to promote intellectual volunteering of Diaspora professionals for the benefit of our country and creates a new opportunity to be closer to Armenia.
On the other hand, connecting global expertise with local social projects fosters the development of Armenian civil society. Another objective that AGBU is pursuing through its EU funded BRIDGE for CSOs program.
We work hand in hand with UNICEF in Armenia with the support of the European Union and in partnership with Mission East Armenia. And with thousands of beneficiaries and dozens of experts, Together4Armenia community is growing fast.

ARMENUHI HOVAKIMYAN
Social Protection Officer, UNICEF Armenia

UNICEF's vision is an Armenia where the rights of every child are realized. In everything we do, we work to achieve that all children and adolescents, especially the most vulnerable and disadvantaged, have equal opportunities to survive and thrive, develop and reach their full potential to the benefit of the sustained growth and stability of the country.
At the core of Together4Armenia platform is the concept of pro-bono skill transfer – sharing knowledge, expertise, experience and information,which is increasingly important for today's Armenia. The platform aims to translate the "brain drain" into a "brain gain", as it offers an opportunity to tap into the potential of the worldwide Armenian Diaspora to address local challenges together. Nurturing the links between professionals from the Diaspora and local communities is very important, as they lead not only to change of quality in many aspects of life, thus impacting families and children, but also build trust and the feeling of partnership between the experts and communities, which may lead in the future to other – maybe even more complex initiatives.

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GOING GREEN

ACBA-Credit Agricole Bank became the first financial institution in Armenia to provide funds for development and reconstruction of green infrastructure in different municipalities of Armenia.

TEXT : KARINE GHAZARYAN

SOLUTIONS RATHER THAN MONEY

Using factoring instead of traditional loans and applying environmentally-friendly technologies, ACBA-Credit Agricole Bank provides solutions for development or reconstruction of infrastructure in municipalities of Armenia. As a result, the municipalities can produce green energy and save substantial amount of money. “Back in 2017, we had an idea of developing a unique financing mechanism which would be commercial but would also create value for the general public,” says bank’s CEO Hakob Andreasyan, “When a financial institution provides usual loans, it does not measure how much the society benefits from it. In this case we developed a different approach engaging a maximum number of beneficiaries.”
The program is based on cooperation between ACBA-Credit Agricole Bank and the Government of Armenia. At the first stage, the municipality defines the need (which may include solar water heaters for municipal buildings, energy-efficient lightning for roads, and more), it then announces a competition, and the winning company implements the construction and installment works. Strict rules are designed to regulate the competition process and ensure that the winning company offers high-quality and energy-efficient solution, as well as the most reasonable price. The entire process is monitored by governmentral Armenia Renewable Resources and Energy Efficiency Fund. The fund not only follows the competition to be held properly, but it also checks the quality and the energy efficiency of the final product. The bank also provides with free consulting on drafting necessary documentation. Only after this verification and documental approval from the municipality, ACBA-Credit Agricole Bank transfers the money to the implementing company.

HITTING $3 MILLION

The scheme of the green infrastructure project excludes any corruption risks: along with careful monitoring, no money is provided to the municipal officials directly. But the uniqueness of the project is not limited to this the resources are granted with only 9% interest rate, and for a period of up to five years with no additional charges or service fees. This is a record-low rate: even the government bonds have interest rate of more than 10%. “We do not want to rely on charity. The banking system should offer commercial products aimed on resolving social problems,” notes Mr. Andreasyan. “The rate is designed to allow the municipality to pay back by saving resources, and to ensure the bank’s sustainable interest to implement the project.” Municipalities don’t need to have additional resources: the energy-efficient infrastructure allows saving enough money to cover the costs without much loss. “To implement a similar project on their own a municipality must put aside money for years,” CEO explains, “And it is difficult to do so when you have so much ongoing expenses. Using this opportunity can save a lot of time and money.”
The project is currently implemented only in regions of Armenia, not in Yerevan: “Working with a large and densely populated city like Yerevan would need precedents. Actually, we announced the project publicly only

Solar panel in Kasakh village

ACBA-Credit Agricole Bank CEO Hakob Andreasyan

after we had the first successful case in Kasagh village," Mr. Andreasyan says. In Kasagh, solar water heaters have been installed for all municipal buildings, and the streets have gotten new energy-efficient lighting. Solar panels, solar water heaters, water pumps, and LED lighting have already been installed in three other communities of Kotayk region. Many other communities have already applied for integral solutions.

ACBA-Credit Agricole Bank overall investments are predicted to comprise more than $3 million in the upcoming four months.

LONG-TERM IMPACT

It is not accidental that ACBA-Credit Agricole Bank concentrates on energy and infrastructure. Energy is one of the most challenging issues in Armenia today, but it also has great potential here. Furthermore, investing in energy is the shortest way to create positive precedents which can be then applied in other fields. On the other hand, infrastructure in general is what creates an environment in which the quality of life improves and the business grows. The municipalities of Armenia not always have the capacity to attract significant investment. The green infrastructure project empowers municipalities with competitive advantages to attract businesses thus contributing to the development of communities. If, for example, a municipality is interested in developing tourism industry, it needs private companies to establish enterprises. In this case, the green infrastructure project may fund a road construction to make the area more attractive for private investors. Simply put, this project has never been only about money: it is designed to provide sustainable solutions and contribute to the long-term development of Armenia.

KARAS:

A particle of love

In 2000s, the creation of Karas Project gave a significant boost to the development of winemaking in Armenia. It is possible to see with your eyes the process of making the world-famous brand. From now on, Karas, part of the Tierras de Armenia project, is happy to welcome everybody to its winery and vineyard: company is committed to the transparency of its products. The Regional Post's team took advantage of the tempting possibility.

TEXT : ARTAVAZD YEGHIAZARYAN / PHOTO : KARAS WINES

Juliana Del Aguila, Director of Karas Wines and Michel Rolland, well known French winemaker and consultant winemaker of Karas Wines

DOING A SERIOUS BUSINESS IN WINEMAKING IN ARMENIA HAS HAD MORE THAN ONE REASON FOR THE EURNEKIAN FAMILY. FIRST, RESTORATION OF HISTORICAL JUSTICE

Wine is an essential part of Yerevan's life. Enjoying wine has become the most usual entertainment of the weekend. You just choose one of the dozen specialized wine bars in the city, find good friends and choose on spot one of the numerous Armenian wines, e.g., 'Karas' which is one of the most important pioneers of the rebirth of Armenian winemaking.

Together with Beatrice, the head of the Communication and marketing department – a repatriate from Argentina, who is accompanying us, we are recalling those years when it was as hard to find a good Armenian wine in the city as it was finding a bar or a restaurant with relevant specialization, almost impossible.

During the Soviet times Armenia was the all-union center of brandy production, wine was mainly the regional monopoly of Georgia. During the Independence brandy was still the beverage of the elite, while the wide masses were interested in vodka or beer. Wine, once an inseparable part of the millennial history of the Armenian state, for a guilt unknown, had been left in the shade until one day Argentine-Armenian businessman Eduardo Eurnekian arrived in Armenia.

Doing a serious business in winemaking in Armenia has had more than one reason for the Eurnekian family. First, restoration of historical justice: It was around these years when the ancient wine pots were discovered in Areni, and it reminded the Armenians once again of how important wine has been in our life for centuries. Also, another important fact is that Mr. Eurnekian is not a novice in wine production: he has long been busy in winemaking in Argentina and it would be strange if he didn't do the same in the historical homeland with such a high potential. And, lastly, the establishment of Karas Project has had an immense social importance for the region of Armavir. ›

Later, Juliana Del Aguila – Eduardo Eurnekian's grandniece and the head of the company, whom we met in the winery, explained that 'Karas' is not an ordinary business, "It is very important for our family that the investment we make has a real influence on the place where the business is done. Eduardo became a successful, established businessman in Argentina, but he and all our family always stayed loyal to our Armenian heritage and roots. Our endeavors in the country are a means of supporting Armenia, we believe that the only way of impacting positively and in a deep way is not by charity but by creating jobs. We aim to generate opportunities, growth and success. We think long-term, invest in education and training for our staff, investigation and development, have high quality standards and sustainable practices. We choose local partners and products (such as bottles, labels and even barrels made from 'Karabaghtsi' wood) supporting our community and helping other industries grow along with 'Karas'."

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The silhouette of the winery appears in the horizon quite unexpectedly. In a flat and rocky site there emerges a building which by no means can be featured as a simple 'winery' because of its modern, beautiful look and smart solutions. Before entering the site, the car passes a man made puddle, weird at first sight. Catching my amused look, Beatrice explains, "This is done for disinfection purposes, so we have as little harm from the outside as possible." So, that's what it is! Even before you step in, you get clear of the seriousness with which they treat grapes and wine here. The second thing that catches the eye of a newcomer is the rocks: big, small, flat, round – of all shapes and sizes, and a lot. Quite a lot! The entrance of the winery is built with rocks and large heaps of rocks are seen across the whole territory of the winery. But, as Haik, field sub-manager states, who works for the company from the very first day of its foundation, the visitors can see only a very small amount of it. Interestingly, 'Karas' might have been a brandy. The thing is, when Eurnekian entered the Armenian market, nobody was talking seriously about wine whereas brandy was already well-known. The first vineyards were planned just for brandy. But, experienced in winemaking in Argentina, the businessman decided to do the same in Armenia. "Many took him for crazy, but Eduardo knew very well that wine had had a long history in Armenia and was convinced the project would work," says Juliana, while Haik is pulling the car closer as the vineyard is so big it's impossible to cross on foot. During the excursion in the vineyard Haik was telling that the site used to be so rocky and derelict that even in the Soviet years nobody had thought of cultivating it. "Snakes, scorpions, rocks and nothing else," Haik recalls, as we pass another heap of rocks. "But, Mr. Eurnekian believed that something could come out and he got busy. The first two years we were just cleaning the land from rocks, also from those under the soil: this was the hardest." In 2006, the first vineyards were planted. Now they occupy 400 hectares of the 2300-hectare land, and they are gradually growing with each year.

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The treasures of the site, naturally, are the endless symmetrical rows of vine seedlings. The outlook of this huge sea

MANY TOOK HIM FOR CRAZY, BUT EDUARDO KNEW VERY WELL THAT WINE HAD HAD A LONG HISTORY IN ARMENIA AND WAS CONVINCED THE PROJECT WOULD WORK

of green spread in the rocky desert is especially impressive from the scenic viewpoint on the red hill, the highest point of the Karas vineyards. The scene becomes even more impressive when you look around and realize that you are standing between the two giants of Armenia, Ararat and Aragats. As we sit down for a minute to admire the amazing beauty, I ask Juliana how she first came here. “I grew up in an Armenian family and in an Armenian hearth, but all the same my first visit to Armenia in 2010 was stunning. I fell in love from the first sight and started to learn the language and go into wine-making and soon joined the ‘Karas’ team.” Since 2014, Juliana has been heading the company to advance the work started by her great uncle. It makes her proud to be a part of the family business that keeps growing and developing from generation to generation, especially doing it Eurnekians’ historical motherland, Armenia. Juliana says, that the last few years, the country has transformed in great ways and her family is being part of a rebirth of Armenia. She adds: “And we hope to encourage more people to get involved and come and join us working in and for Armenia.” ‘Karas’ is a great example of a successful company led by a family who’s love and passion for their homeland can be contagious.

“Great wine is not only about great terroir, but also about great people” adds Juliana, the ‘Karas’ team is formed by energetic wonderful people (men and women equally!) who are behind every part of the wine making process.
Haik joins the conversation, adding that while Juliana and Beatrice have repatriated owing to ‘Karas’, hundreds of Armavirits on the other hand have refused the idea of emigrating. “There are about 350 permanent employees from nearby villages, while this number exceeds 400 during the harvest time,” tells Haik, “in some families 2-3 of the members are engaged who earn good salaries, have insurance, uniform, daily healthy food, constant trainings for workers, and all the other things that help to improve the life of the villages around here socially and economically.”
The specialist brings one of the villages as an example and tells that before the opening of the winery they lived almost like in the Middle Ages. There was not possibilities of progress there, now most of people from villages works in different activities of this project and improved their living standard. Karas impacted on the whole region and is strongly committed to building and reinforcing its institutions.
Juliana adds that one of the main goals and visions of the company could be described in one word as sustainability. “‘Karas’ is committed to social and agricultural sustainability, environmental care, appropriate use of the natural resources,” she says, “Respect for the environment and community we are part of is vital, from the irrigation system to using light weight bottles, everything we do is with the purpose of impacting positively.”

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We continue our tour. Haik tells us about the sorts of grapes. We use the best sorts of foreign and Armenian grapes for ‘Karas’. But just planting the seedlings is not enough: good care is needed. Water, particularly, is very essential. Here drip irrigation is used which is very important for preventing the aimless waste of water in these derelict lands. Water supply is achieved by special rubber tubes made in Israel, in which specially created technology allows to equally distribute the pressure at all points. The whole process is guided by a system connected to wireless internet: this is what the strange at first sight yellow rods you occasionally see are for. To make the process completely autonomic, two water reservoirs are used at the site and the third one is on its way. Here in ‘Karas’ caring about water is one of the most important policies: everyone remembers that once there was a desert on this place.
“Speaking of the great working conditions again, I can’t but tell about the fish that over a time rise in a natural way in the reservoirs which are then distributed among the workers,” says Haik smiling, then from out of the car window he shows also the house for breeding birds and the greenhouse meant to support the employees. ›

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Talking again of the goals of the family, Juliana says, “Our purpose is to make a great wine that represents Armenia, to make the country visible on the world map through ‘Karas’. A glass of our wine is a small but strong bridge connecting Armenia and the world. And we need to build lots of them.” She then adds that the world is always waiting for new tastes and new impressions, and that Armenia can offer it all. “Our goal is to make Armenia well known as a new winemaking region which has revived from around 6200 years, and we have taken part of the rebirth of Armenian winemaking. Many people around the world are fascinated and impressed with Armenian wines, since it’s delicious and has very interesting characteristics that come from this ancient extreme land. So, our purpose is to present all this potential to the world.” ‘Karas’ wines are already available in 15 countries.

Juliana Del Aguila and Gabriel Rogel, resident winemaker

We stop at a sign which reads Khndoghni, a famous vine sort from Nagorny Karabahk: so, all the vine rows here have their personal ‘passports’. Then comes Ancelotta, the Italian one. But… wait a minute! Is it possible to get Armenian wine from an Italian or French grape?! Juliana is absolutely convinced that it is. “Many mistakenly think that wine can be somewhat more or less Armenian depending on the ‘passport’ of the grape used. In fact, if you plant Areni in Argentina and make wine from it, that will be a totally Argentine wine. The same here: we make high quality Armenian wine. Even having different origins, grapes can be planted in different regions and get different results. And we love the results we get from the Armenian soil.” She says that the combination of climate, soil, water, high altitude, and every particularity of Armenia has influence on vines and wines. So Juliana likes the result that all this combination has on the wines. Her personal favorite

is ‘Karas’ white because it’s a perfect combination and balance of all this, being a blend of Kangun and Chardonnay, exotic and elegant. Also she loves Syrah since it’s originally a variety from Caucasus, which became well-known around the world and now returning to its birthplace, Armenia, it finds something new to express. This grapes have a very rich character, full of flavors and intense color.

All the rows are covered with black net on either side. In response to my surprised look I am told that they are anti-hail nets, that protect vines from hail. While we walk among the rows, Haik tells about the interesting piece of advice the specialist of winemaking from Argentina had given him years ago. “One day he said, ‘take a glass of newly made wine, go to the vineyard, sit between the vine rows and have it there. You’ll understand why we are doing what we are doing.’” Juliana adds: “It’s like reading a great book, each glass tells the story people of this country, this land, its history, us.” Well, it is clear, that wine for Eurnekian family is much more than a product.

OUR PURPOSE IS TO MAKE A GREAT WINE THAT REPRESENTS ARMENIA, TO MAKE THE COUNTRY VISIBLE ON THE WORLD MAP THROUGH ‘KARAS’

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After the vineyards we go into the winery building where the grape turns into wine in an Italian high-quality equipment. Now, we are accompanied by Astghik. She is from Yerevan, a graduate of Evn Wine Academy, has been working for the ‘Karas’ for two months and her goal is to tell the world about the Armenian wine. She has already met the first tourists visiting the vineyards. This year the winery is open to everyone. Astghik says that what makes ‘Karas’ tour different from the rest is the opportunity to have a real, professional guided wine tasting: “It is important for us for people to understand the essence of wine, to realize what exactly they are tasting and enjoy it,” she says, adding: “It’s a pleasure to see visitors sharing opinions and feelings, doing notes during tasting and learning a bit more about winemaking. The last is what it’s all about really.” The main goal was to show the whole process of winemaking, from the vineyards to the glass.

It’s hard to leave the vineyards, but we must: work needs to be done. However, the thought that this wonderful product can easily appear on your table in beautifully labelled bottles is comforting. And surely, at least a particle from the immense love that has been put into this work will shine on tables. ◆

ARMENAK KHACHATRYAN:

"You have a competitive advantage despite using only four senses"

Armenak Khachatryan was only 14 years old when he left the specialized boarding school for visually impaired kids and entered a regular one. He then obtained a degree in law, established a successful company, for the first time won a lawsuit against the monopolist of the market, and then started HelloSIM – one of the most promising startups in telecommunication industry in the region.

INTERVIEW : KARINE GHAZARYAN / PHOTO : HELLOSIM ARCHIVE

Mr. Khachatryan, why did you decide to leave the specialized school?

— This was a turning point in my life. I opted for Sebastatsi educational complex, which was a regular school, but its curriculum was very unusual. The studies were based on creative practice rather than on academic theory: it had its own authors and textbooks. The school was established by physicist Ashot Bleyan and his colleagues in the 1980s, and the Soviet educational machine had somehow accepted it. Bleyan himself helped me a lot. He once told me, "I think all the kids should leave the specialized school for a regular one. We can't build a school for curly people, right? Why then we need this one?" I have been in specilized schools in Yerevan and Kiev, but it was in the regular school that I first encountered communication between so many different people: I had to deal with the smart, the lazy, the calm, the unruly, even with those who could burn down the classroom door! This was a fantastic environment where I learnt a lot, not only in its academic sense, but also in the sense of human relations and the freedom of communication.

Was the Kiev specialized school different?

— In many ways it was better. It was bigger and stricter. Also, the school canteen was maintained almost entirely by

the kids – the cook was the only special personnel. The children had to clean the rooms themselves. In Yerevan we had employees for everything, but the result was not better: they did not pay much effort, and the kids had no duty to take care of the food or cleaning.

You studied law in Yerevan State University. Was there infrastructure for disabled students?

— No, but it was still manageable. I would just record the lectures and then listen and memorize them. Oftentimes I would copy the notes of the best students in class, then record a friend reading it. I actually think we should stop concentrating on what we lack and do what we can. We have to change the mindset of people: ok, this guy does not see, but there is always an alternative solution. For example, blind people's brain stays free from a lot of distracting information, leaving more space to attention and memory. So one has competitive advantage despite using only four senses.

Did you use braille during your studies?

— A 200-page book will comprise five folios when printed in braille, so it's not very practical. Audiobooks are much better, and there was a good tradition of recording them even during Soviet times. Armenian Association of the Blind used to record 20-30 books a year, and the best broadcasters were engaged in production. One copy was always sent to our specialized school where there was a library with about 300 recordings. In 1989, I found and bought a broken reel-to-reel tape recorder, repaired it, and started to listen to books with great pleasure. I still love literature, although now there is no need to find special libraries or equipment: a smartphone is just enough.

You got your degree in law but established a technological start-up. How did you enter the field?

— I understood very quickly that finding a job would be difficult, and I would need to start my own business. So, I soon got engaged in the growing IP telephony industry. We established a successful company, and even won a case against ArmenTel, the monopolist of the market at that time. They were afraid our company would grow into a competitor and used to create obstacles for us cutting off our telephones and the Internet. So, in 2002, we sued them and won 10,5 million drams. To my knowledge, this was the first case ArmenTel lost. It became a precedent and caused a whole chain of lawsuits.

Your current company also seems to have a potential to compete with big businesses.

— HelloSIM offers a unique solution. We provide universal SIM cards which allows to have all the Internet and voice services available in 207 countries – almost everywhere on Earth. And it can be used in any device with SIM card supply. So, imagine you get off the airplane, and need no roaming configurations – you haven't even been disconnected from the network. If you travel to several countries in a row HelloSIM can be the best option. Our offices operate in Armenia, Georgia, and Belarus, but we deliver cards all over the world: we have clients from 48 different countries.

You provide Georgian telephone numbers. Why not Armenian?

— In Armenia, the Public Services Regulatory Commission and their Chairman Robert Nazaryan refused to register us. The reason was still the same: we might become competitors for big companies. So, we got a Georgian license and have operated successfully for several years now.

You graduated from prestigious university and became a successful entrepreneur in a country which has no established inclusive policy for disabled people. And, you name going to a regular school the turning point in your life. Was it one of the keys to success? Would you recommend regular school to blind kids?

— It's certainly worth trying. I think kids these days are more open to accepting people with disabilities. In order to be inclusive, you have to be free from inside, and children now are much more independent than in the times of my childhood. In the past, the Soviet Union had a strategy of pressure and segregation: the government gathered disabled people in specialized institutions, isolating them from the general society. This policy of isolation encouraged the society to take no notice of those with disabilities. People thought they had nothing to do because the government took all the care of the disabled. The remnants of this attitude stayed for years after the collapse of the USSR.

Has the society changed now?

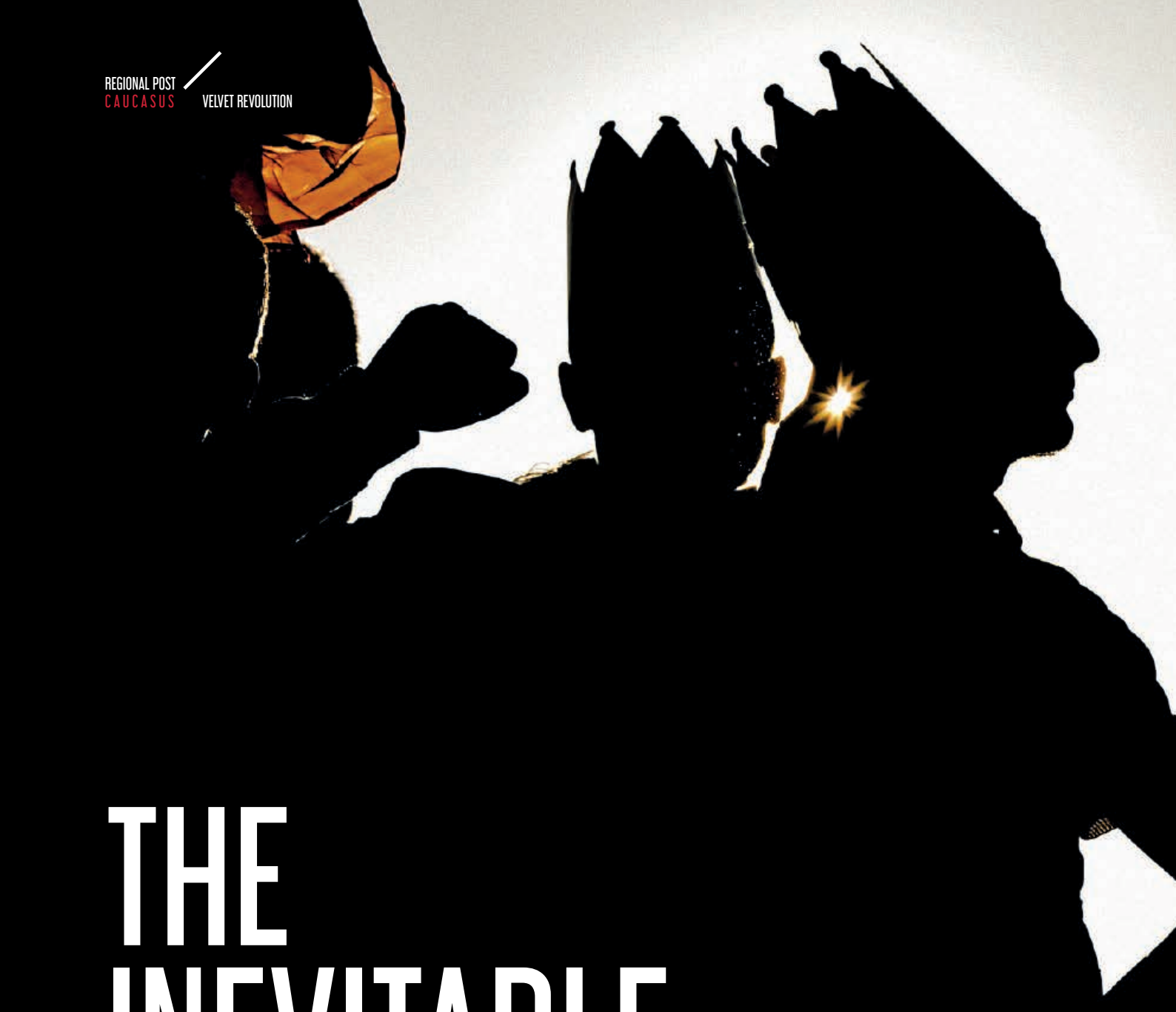
— I think it has, but we have also changed. 15-20 years ago, it was much more difficult for me. Not the life in general, but establishing new connections was particularly hard. Now, both me and the society have overcome some complexes, so it has become easier to break stereotypes.

After the Velvet Revolution it is common to make wishes. What do you think the government has to change in its policy regarding disabled people?

— There is so much valuable international experience which can be easily adapted and applied in Armenia if the government provides resources for disabled communities. But the most important is the psychological aspect. Disabled people should feel they are needed. Or, more precisely, they should be useful. Fantastic energy is concentrated in disabled people.

We already have brilliant examples, like Deputy Minister of Labor and Social Affairs Zara Batoyan.

— Exactly. These people are strong and enthusiastic, always ready to lend a hand and put effort. So, if the government can create a fair and efficient system to realize this great potential, we as a nation will gain a lot. ◆



THE INEVITABLE MIRACLE:

WHAT MAKES ARMENIA'S REVOLUTION UNIQUE

TEXT : MIKAYEL ZOLYAN / PHOTO : PAN PHOTO

THE REVOLUTION THAT NO ONE EXPECTED

On April 11, 2018, two opposition members of the National Assembly, Ararat Mirzoyan and Lena Nazaryan held a protest action at the parliament. In the middle of a session they approached the rostrum, read a statement calling upon the people of Armenia to rise up against the regime, and started burning flares. They stood silently at the stage, as the flares burned out and their colleagues from the ruling Republican Party were holding their noses and complaining about the smoke. Republicans did not seem impressed. Republican Edvard Sharmazanov, who was chairing the session, said in a condescending voice: "Looks like your show didn't work out, let's continue our work".

Less than three weeks later, on May 3, Sharmazanov was in a very different mood. On that day, explaining a somewhat vague statement made by his party earlier that day, Sharmazanov admitted that RPA would accept the protest leader Nikol Pashinyan as the new prime-minister. Effectively this was admission of defeat. It meant that the protest movement, which came to be known as "the velvet revolution" or "the revolution of love and solidarity," had won. The revolution had taken less than forty days: from March 31, when the first protest was held by Pashinyan and his supporters is Gyumri, to May 8, when Pashinyan was formally elected prime-minister of Armenia.

One of the things that make Armenia's revolution exceptional, is the fact that it took place against the background of increasing authoritarian tendencies, both on the global and regional scale. Only several months ago it seemed that Armenia was a part of the general trend toward authoritarianism that engulfed Eastern Europe, Middle East and Central Eurasia. As for Armenia's immediate neighbors, two of them, Azerbaijan and Turkey, recently underwent constitutional changes that strengthened their authoritarian leaders. Even in Georgia, arguably the most democratic country of the region, constitutional changes of last autumn have raised concerns, as the position of the ruling party has been significantly strengthened.

Against this background, Armenia's constitutional reform looked as an obvious part of this general authoritarian trend. The reform transformed the country's semi-presidential system into a parliamentary republic led by what Armenian analysts called "super prime-minister". And if some Armenia-watchers had doubts as to where Armenia was headed, these doubts hardly persisted after it became obvious that Serzh Sargsyan was not looking for a successor, but was planning to stay at the helm in a capacity of prime-minister. The April 2017 election, in which Republicans secured a majority in the parliament, seemed to confirm the strength of the regime, even though there were numerous reports of voter bribing and administrative pressure. As recently as March 2018 Sargsyan looked stronger than ever, and it seemed that nothing could prevent him from assuming the post of prime-minister after the end of his 2nd presidential term. All the more shocking was the fact that protests swept away not just Sargsyan himself, but effectively the whole system of authoritarian government.

THE TERM "VELVET REVOLUTION" USED BY ARMENIAN PROTESTERS, REMINDS US OF THE EVENTS IN CENTRAL AND EASTERN EUROPE IN 1989

AS "VELVET" AS IT GETS

Of course, an unexpected collapse of an authoritarian government is not something unheard of: in fact, that is what often happens to authoritarian governments, if they are unable to reform themselves. What was truly extraordinary, was how this collapse happened in Armenia. Revolutions, even the ones considered relatively peaceful, often lead to violence and chaos, at least in the short term perspective. In Armenia, however, as some of the activists have been joking, the revolution was "too velvet". Not only there was no violence on the part of the protesters, but the process of transition of power went ahead in full accordance with the existing legal framework. It was the former ruling party, the Republicans, who made sure that Pashinyan, "the candidate of the people", became prime-minister through a democratic and constitutional procedure. And, the leader of ancien régime, Serzh Sargsyan not only stayed in Armenia and remained the head of the Republican Party, but still remains Pashinyan's neighbor: they both live in the government compound in Yerevan.

It goes without saying that non-violent revolutions are not something uncommon. Armenia itself experienced a peaceful change of government as a consequence of a protest movement in 1988-1991. The term "velvet revolution" used by Armenian protesters, reminds us of the events in Central and Eastern Europe in 1989. "The Rose Revolution" in Georgia and "the Orange Revolution" in Ukraine in the 2000s were also largely non-violent. However, both 1989 and the "colored" revolutions differed significantly from what happened in Armenia, as they took place at a time when the ruling regime was at its weakest. The events of 1988-1991, both in Central Europe and in the Soviet Union, took place as the

Soviet system was already on the brink of collapse due to its own inefficiency. The Rose Revolution in Georgia and the Orange Revolution in Ukraine can be described as “electoral revolutions”, in which an already strong opposition used mass protests to change the outcome of a disputed election. In all those cases, though for different reasons, the governments were already in a fragile position before the start of the protest movements. In Armenia in 2018, the regime seemed to be in full control of the situation almost until the day it collapsed. From this point of view, the fact that Armenian revolution followed the path of peaceful transition of power, and evaded street violence is all the more remarkable.

Here are some more facts to show just how exceptionally orderly and smooth the transition in Armenia has been. Take currency rate fluctuations. Throughout the whole period of the revolution, including its most dramatic episodes, the Dollar/Dram rate remained within the corridor between 480 AMD/1 USD to 486 AMD/1 USD. The Armenian currency actually was more stable during the revolution than in autumn 2017, for example, when no major political events were taking place. Also, the Armenian bank system remained stable, even though some activists were calling on the population to withdraw money from their bank accounts in order “to punish the regime”. As the head of Armenia’s Central Bank Arthur Javadyan announced on May 21, withdrawals during the days of the revolution amounted to tens of millions of dollars, but not to hundreds of millions, and after May 10 the money that had been withdrawn started to flow back into the banks. And, finally, the constant “Achilles’ heel” of Armenia, the migration rate. According to the calculations of the website B4B, in May 2018 the balance of arrivals and departures to and from Armenia was positive for the first time in years (+3165, as compared to – 1466 in 2017, -8131 in 2016, and – 12474 in 2015).

A “HOMEGROWN” REVOLUTION

One more factor that makes the success of Armenian protests so remarkable is the external factor, or rather its virtual absence. International attention, whether on the level of governments or media, has been instrumental for the success of protest movements in various countries, while the lack of such attention has often contributed to the failure of such movements. In this sense, events in Armenia were principally different from other post-Soviet cases. International media had been paying relatively little attention to the protests in Armenia, until they simply became too big to ignore. In fact, most major international media decided that events in Armenia were important enough to send their correspondents to Armenia, only after Serzh Sargsyan handed his resignation. Indeed, during

Protesters trying to occupy Yerevan metro

Protesters blocking one of the central streets of Yerevan

the two weeks after Sargsyan's resignation Armenia probably received more international media attention than at any other time in its history. But this happened only after the backbone of the ruling regime had already been broken.
Moreover, in post-Soviet space and elsewhere, protest movements have often become proxy battles between global actors supporting different sides in the internal confrontation. Armenian revolution defied this trend as well. One of the most common questions that foreign reporters had been asking those days was regarding the position of Russia. It seemed counter-intuitive to them that Russia would not intervene to support the government in one of the countries of CSTO and EAEU. Russian neutrality even gave rise to conspiracy theories, probably promoted by Sargsyan's lobbyists, suggesting that it was Russia that stirred the protests, as it allegedly wanted to «punish» Sargsyan for being too close to the EU. At the same time, some talking heads in Russian media saw a conspiracy, organized by "the usual suspects" – America, EU, Soros. In reality, what happened in Armenia, showed that a popular democratic protest, if it is wide enough and if its leadership is smart enough, can win in a country considered one of Russia's close allies and be accepted as legitimate both by Russia and the West.
In order to understand "the homegrown" nature of the Armenian revolution, we need to remember that Armenians had been protesting "before it became mainstream". In fact, protest movements had been common in Armenia since the the mid-1990s, long before the world heard of "Arab Spring" or "Color Revolutions". Protest movements, big and small, continued for decades, effectively becoming a part of Armenian political culture. These included mass post-election protests, particularly the protests after disputed presidential elections in 1996, 2003-2004, 2008, 2013. Of these, the protests of 2008 were especially significant for understanding the events of 2018. It was the 2008 protest movement that severely undermined Sargsyan's legitimacy as president, and helped to bring the younger generation of opposition activists into the political process, among them Pashinyan and members of his team.
After 2008 there was a real boom of social and civil protests, which included big and small protest movements with various agendas, from preservation of public space to socio-economic issues. Among these movements were the Mashtots Park movement in 2012, "the 100 dram" movement against the public transportation price hikes in 2013, "Dem em" movement against pension reform in 2014, and the famous "Electric Yerevan" in 2015, which started as a protest against electricity prices. There was even an attempted armed uprising against the government by the "Sasna Tsrer" group in 2016, which was also accompanied by street protests. So, the history of protests in Armenia is quite rich.
As management gurus would have said, Armenians "failed fast, failed often", but stubbornly continued taking to the streets to protest their rulers' actions. Sooner or later this persistence had to lead to success, and that was what happened in 2018.

A REVOLUTION OF YOUNG MEN AND WOMEN

The revolution became possible, among other things, due to the fact that a new generation of Armenians had come of age. Busy with their power games, Sargsyan and RPA had missed the emergence of a new generation of Armenian youth that was no longer prepared to live under their power. The leaders of the revolution were quite young for politicians:

Protesters near the Shengavit police department, where some of the leaders of the movement are held

Serzh Sargsyan and Nikol Pashinyan in Marriott hotel

the majority were in their 30s, and Pashinyan himself turned 43 on June 1, 2018. But, many activists were in their 20s or even younger, which meant that they not only could not have any recollection of the Soviet system and of the difficulties of the 1990s, but they also they were not traumatized by the experience of failed protests of the previous decades. Many middle-aged Armenians were skeptical about protest precisely because they had seen so many unsuccessful attempts before, but the new generation of activists was free of that psychological burden.

Of course, the youth is not a homogeneous category. At the first stage of protests, an extremely important role was played by civic activists with an experience of previous protests, e.g. from “Electric Yerevan”. But very quickly the movement spread and became incredibly diverse, uniting different social and cultural strata, becoming a true people’s movement. Sargsyan and his plans to remain in power indefinitely were so unpopular with the majority of Armenians, that the protests brought together people with different backgrounds, lifestyles, ideological orientations and political views. Social-

ON APRIL 23 SERZH SARGSYAN’S RESIGNATION TURNED ALL OF ARMENIA INTO ONE HUGE PARTY GROUND

ists and liberals, nationalists and anarchists, religious people and atheists, globalists and traditionalists, “Putin-admirers” and “pro-Western liberals”, they were all together in the streets, united by one common goal: to get rid of the regime. By the time the revolution won, there was hardly any group of population in Armenia in terms of age, social class, or profession, that did not take part in the protests.

One of the qualities that helped to attract such a wide participation was the festive spirit of the protests. This spirit of carnival and celebration was also characteristic of the mass rallies of 1988, and it even became a subject of study by Armenian anthropologist Levon Abrahamyan. American historian Padraik Kenney compared the anti-communist movements in Eastern Europe in the late 1980s to carnival, calling a book he wrote on the subject “Carnival of Revolution”. In 2018 the spirit of youthful celebration was present throughout the protest, even at its most dramatic moments. Obviously, the celebration reached its apogee when the movement scored victories. Thus, on April 23 Serzh Sargsyan’s resignation turned all of Armenia into one huge party ground. But even at moments, which could be seen as a defeat, as on May 1, when the parliament’s Republican majority voted against Pashinyan, this festive spirit continued to dominate the streets.

Another factor that distinguished the movement of 2018 was the active participation of women. While women have always played a certain role in protests in Armenia, these protests were often dominated by men: even though women were present among participants, they were unlikely to be among the organizers and spokespersons and their distinct voice was rarely heard. There have been exceptions, as the Mashtots Park movement, for example, but these mostly remained confined to relatively limited circles of Yerevan-based civil

society activism. Larger protests, especially the ones that ended in clashes with the police, had been dominated by men. In one of his speeches after the revolution Pashinyan himself admitted that the protests of 2018 differed from all the protests he had seen before due to the extraordinary scale of women's participation, and it was women's presence on the streets that helped to keep the protests peaceful.

It is true that among the spokespersons of the movement on the main stage of the rallies women were outnumbered by men, but still they were significantly more visible there than in the movements of the past. Against this background, it was somewhat of a disappointment that Pashinyan's cabinet, formed in May, included only two women. However, the tendency toward expanding the role of women in the political realm is obvious in post-revolution Armenia, and it is likely to grow. Moreover, the mass participation of women in the revolution is likely to have influence beyond the realm of the political sphere, affecting social and cultural spheres as well.

NON-VIOLENCE 2.0: THE AGE OF INSTAGRAM

A vital element of the success of the protest was its non-violent nature. Apart from helping to win over public opinion, the non-violent character of Nikol Pashinyan-led movement helped to achieve two goals. First, it allowed more protesters to join, because it was psychologically easier to join a non-violent protest, and, second, it made it much more difficult for the other side to use violence. Pashinyan and other leaders of the movement repeated the message of non-violence many times to make sure that everybody involved in the movement adhered to that principle. Not only the protesters would not be the first ones to use violence, but they would not use violence in self-defense, even if assaulted or arrested by the police. There were several attempts by pro-government provocateurs to stir violence by staging attacks on policemen or on property, but these were quickly uncovered thanks to the new media and citizen journalism.

THE REMAINS OF OLD OLIGARCHIC NETWORKS CONTINUE TO WIELD SIGNIFICANT INFLUENCE, WAITING FOR THEIR CHANCE TO COME BACK TO POWER

While non-violent, the protesters were at the same time defiant and assertive. The protesters were constantly on the offensive, not giving the government enough time to capture the initiative. They broke the written and unwritten rules of the system and showed their defiance of the government's orders. A great example of this is the video, which became viral, showing how young activists, detained at a police station, took off the wall the portrait of Sargsyan and threw it out the window. Throwing out pictures of Sargsyan, which by that time had become ubiquitous in government offices, universities and schools, became a symbolic act, repeated throughout Armenia during the revolution, dealing an important psychological blow to the regime.

This example also shows how important for the success of the non-violent protest was the fact that it was taking place in a highly digitized environment. Social networks and new media in general became a major tool of the revolution. Facebook was by far the most common medium, through which Armenians were getting news, discussing issues and sometimes even organizing protest actions. Live videos by Nikol Pashinyan on Facebook routinely received hundreds of thousands of views, sometimes more than a million. An extremely important role was played by Internet television, channels such as Civilnet, Factor TV, Radio Liberty's online TV, whose cameras virtually never went off, providing 24/7 coverage of the protests. The Internet TV's audiences increased so much, that they made the government's control over the traditional broadcast TV channels almost obsolete. Telegram became the emergency communication medium. While it is still relatively less common in Armenia compared to other social networks, during the days of the protests it became a source of urgent and reliable information for the tech-savvy activists. The news appeared on Telegram channels, especially Infocom, before it appeared in other media, so, this channel, though it had only about 11 thousand followers, played a major role in the movement. Twitter became one of the main media of supplying information to the outside world. Finally, YouTube became a common medium for spreading the message of the revolution, from video and audio recordings of "revolutionary" songs and leaders' speeches, to videos documenting abuses by the police and pro-government thugs.

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As dramatic and picturesque as it was, the "Revolution of Love and Solidarity" took place in real life. And the difference between a happy ending in the movies and in real life is that in real life the most difficult part often comes after the "good guys" win. Yes, Armenia got rid of a corrupt authoritarian regime, but it still has to deal with its difficult legacy, whether it is the huge external debt, the mines destroying the environment, or the ugly buildings that had sprung up in the place of historical ones. Moreover, the remains of old oligarchic networks continue to wield significant influence, waiting for their chance to come back to power once again. Finally, the external setting, defined by the continuing conflict with Azerbaijan and unresolved issues with Turkey, is not going to be easy to navigate.

So, "the New Armenia" still has a difficult road ahead of it. And yet, whatever the future may bring, nobody can rob the people of Armenia of the memory of what they had done in April-May 2018. "Proud citizens of the Republic of Armenia", as the protesters called themselves, accomplished something that can become an inspiration to millions of people around the world. Whatever happens tomorrow, the amazing tale of Armenia's "revolution of love and solidarity" will always remain an inspiring episode in the never-ending story of the eternal fight between freedom and oppression. ◆

FORTY DAYS

That Shook the World (and Me)

It's been only a few months since the Velvet Revolution happened in Armenia, but it's already seems like a part of the historical past. Regional Post's political analyst Mikael Zolyan remembers the surprised reaction of the world media and his own contribution to the media coverage of this historical event.

TEXT : MIKAYEL ZOLYAN

Let me start with a confession. I, as a political analyst, failed to predict the Velvet Revolution. In my defense, I was not the only one. Almost no one did. Both for Armenian or international media "the Velvet Revolution" came as a major surprise. When the first protests started, I was away from Armenia, in a small and calm German city, researching history textbooks. At the time I had close to zero hopes that these protests would lead to anything substantial, and, frankly, Nikol Pashinyan's idea of walking from one town to another did not seem particularly efficient to me. But, I thought, at least he was the one doing something, against a background of almost complete apathy and depression. The actions of "Reject Serzh" initiative, like collecting coins for Serzh Sargsyan's pension, did not look like the beginning of a great revolution either, but at least they were funny: mocking the rulers is often a more potent weapon than hatred. Obviously, none of this held any interest for those outside of Armenia, and it would be difficult to imagine that only a couple of weeks later the word "Armenia" would be all over the news.

I was following the news from Armenia on social networks and my news feed was becoming more and more lively, especially after Nikol Pashinyan and his team entered Yerevan. I could not wait to get back to Armenia, but I had to attend an important conference of an international network of political analysts. The news of Armenian protests was already out, at least among the politically conscious crowd: at the conference everyone wanted to ask me a question, express their opinion on what was happening, or simply wish Armenians luck. A Georgian colleague of mine impressed me by knowing Nikol Pashinyan's biography in detail. As I was sitting at the sessions, I was trying to follow the news from Armenia, and I found myself in embarrassing situations couple of times, when I inadvertently opened Radio Liberty's live feed from the protests. Suddenly, my phone was yelling "Merzhir Serzhin"

eurasianet

Thousands of protesters shut down Armenia's capital, dozens injured in clashes

The protests are turning into one of the biggest crises yet in Serzh Sargsyan's ten years in power.

Grigor Atanesian Apr 16, 2018

Protesters in Yerevan after clashes with the police on April 16. (photo: Eric Grigorian)

Protests in Armenia continued for a fourth straight day on April 16, growing to an estimated 10,000 people and effectively shutting down Yerevan's downtown. The protesters also disrupted metro operations and stormed university campuses.

The protests also saw their first violence, with several clashes between police and protesters. As a result, 46 people, including six police officers, were injured, Armenia's Health Ministry reported.

The growing protests are aimed at preventing Serzh Sargsyan from assuming the position of prime minister. He resigned as president a week earlier and, under a new constitution that makes the prime minister the country's most powerful figure, is set to extend his unpopular rule indefinitely.

THE ONLY FOREIGN REPORTER I MET ON THAT DAY, WAS JOSH KUCERA, FROM EURASIANET.ORG. MUCH TALLER THAN MOST ARMENIANS, HE WAS TOWERING OVER THE CROWD


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Armenia

'We took down a powerful man': Armenians mark victory and genocide

Euphoria fades towards reflection about 1915 and the future a day after protests forced Serzh Sargsyan from office

▲ Tens of thousands of commemorate the victims of the 1915 Armenian genocide in Yerevan on Tuesday. Photograph: Gleb Garanich/Reuters

Andrew Roth in Yerevan

Tue 24 Apr 2018 17.57 BST

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(Reject Serzh) all over the conference room and a whole room of people in business attire was looking at me with condemnation. But then, I thought to myself, I had a good reason.

By that time I was already receiving calls and emails from international journalists, asking to comment on the situation in Armenia. I was doing the best I could, based on the news I was getting through media and Facebook. When I finally got back to Yerevan, after an incredibly long day of flight connections, I realized that the situation in Armenia was changing so fast, that it was virtually impossible to assess it adequately from afar. I realized that after the conversation with the taxi driver who took me home from the airport. Not only the taxi driver was pro-opposition, which was quite usual, (in fact I cannot recall meeting pro-government taxi drivers in pre-revolution Armenia), but he was OPTIMISTIC. Instead of going rounds about how he hated the government and his life, he said calmly: “don’t worry, the young people got this... they will do everything the way it should be done... everything will be great”.

The next day, I finally got to go out to the streets and I understood what he meant. On almost every street in the center of Yerevan, there were young people blocking the streets, shouting the revolution slogans, as the drivers were honking back at them. But even more revealing than the ubiquity of protesters was the festive spirit in the streets. Of course, sometimes, when “red berets”, the elite police, snatched people from the street, put them in police cars and drove them away, it hardened the protesters’ mood, made them angry, but even that could not kill the positive spirit in the streets: people were celebrating, as if they already knew they had won.

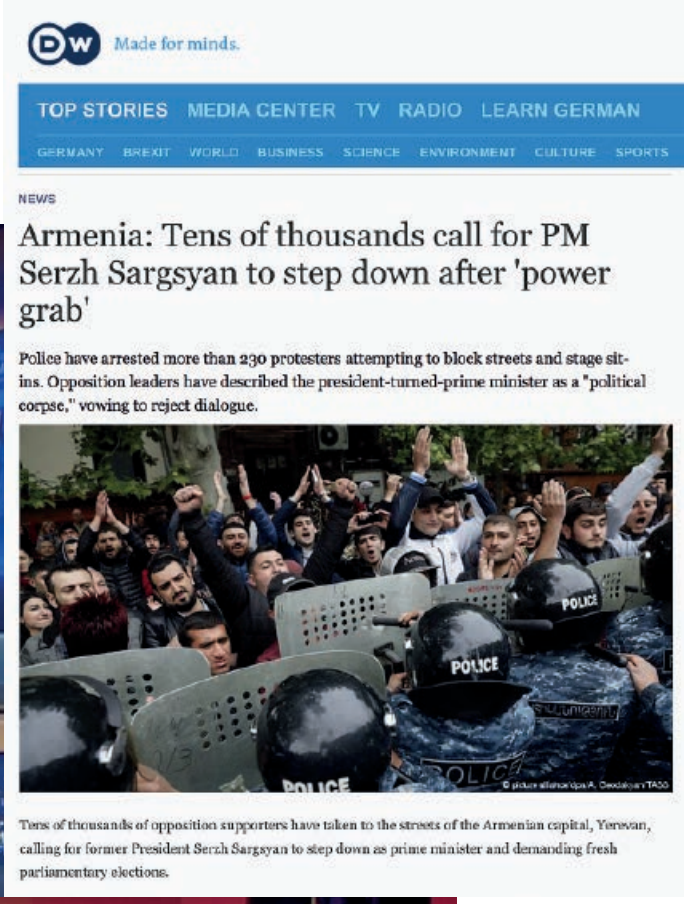
Though the protests were already quite significant, there still were very few international reporters around. The only foreign reporter I met on that day, was Josh Kucera, from Eurasianet.org. Much taller than most Armenians, he was towering over the crowd, and people would eagerly come to him to explain what was happening in broken English. Later he told me that initially he had doubts whether he should have come to Armenia to cover the protests. After all, there were protests almost every year in Armenia for the last decade, and none of them ended in victory. “Armenian protests” had almost become routine. But now, he said, he could see that this time was different from everything he had seen in Armenia before.

And then a couple of days later came Serzh Sargsyan’s resignation. The world suddenly discovered the Armenian revolution. Here are some of the headlines of these days from major international editions: “He Was a Protester a Month Ago. Now, Nikol Pashinyan Leads Armenia,” wrote New York Times, “Armenia’s everyman on brink of election victory” was the title of a Financial Times article, “He’s not a populist, he’s popular: Nikol Pashinyan becomes Armenian PM,” wrote

The Guardian. Most probably Armenia had never seen before such an amount of international reporters visit the country. Obviously, for every journalist who came to Armenia there were several who called, emailed, Skyped, Whatsapped, Vibered, Facebook messaged and Telegrammed. It seemed like Armenia simply did not have enough political journalists and analysts to answer all of these calls, emails and messages. Suddenly, my career decisions, which I always had doubts about, started making sense: If you were in the political analysis business in Armenia and spoke more or less descent English and Russian, it was your time. Those who have been in this business for a long time know how rare it had been for major international media to report on anything that has been happening in Armenia. It seemed that Armenia existed for the world only in two contexts: Armenia-Turkey relations (including the issue of Genocide) and Karabakh conflict. Nothing else ever happened in Armenia. And now suddenly, me and my colleagues were questioned by foreign reporters, who wanted to know the difference between "Prosperous Armenia" and "Enlightened Armenia", or what was the reason why Nikol Pashinyan had been expelled from the university back in 1990s.

It was probably the Russian media that was the most actively interested in what was happening in Armenia. It seemed that the Russian radio station Echo Moskvy had turned into "Echo Yerevana": those days one would probably find as many Armenian faces and names on Echo Moskvy, as Russian ones, and most of the Russians were discussing events in Yerevan anyway. Russian online TV channel Dozhd' was transmitting the discussions from the Armenian parliament live, with simultaneous translation and commentaries of Armenian political analysts. Ilya Azar from the web-site Meduza was among the first to recognize the importance of Armenian protests and report from Armenia, long before Sargsyan had resigned. On one of the days of the rallies I noticed him, sitting in a cafe on Amiryan street, sporting a "Dukhov" cap, came up to him and thanked for his reporting. He suggested having a coffee, but I had to run to Radio Liberty for an interview with the Radio's Prague headquarters. My interview was cut short, because Mikheil Saakashvili, who spoke before me, was too excited about the Armenian revolution and used up most of my time. When I came back, the coffeehouse was closed and Azar was gone. Couple of months later, in Moscow, at an indie rock concert, I ran into a tall man wearing a "Dukhov" cap: it was Ilya Azar.

That the Russian "liberal" media were inspired by the events in Yerevan, was not surprising. But the interesting part of the story is that the Russian state channels also offered mostly neutral and adequate coverage of the events, which was a surprise to many, given the negative coverage that anti-government protests often receive in Russian mainstream media. This time, too, there were some negative outbursts, including the one from ethnic Armenian political analyst Andranik Migranyan, who infamously said that looking at the protests made



COUPLE OF MONTHS LATER, IN MOSCOW, AT AN INDIE ROCK CONCERT, I RAN INTO A TALL MAN WEARING A "DUKHOV" CAP: IT WAS ILYA AZAR

him feel "ashamed to be Armenian", but, in general, Russian mainstream media's tone remained neutral and sometimes even positive. Probably, decision-makers in Moscow had learned the lesson of Ukraine: siding with corrupt autocrats was not going to advance Moscow's interests in Armenia. Obviously, it was not just English or Russian language media that were interested in what was happening. For a couple of weeks the words "Armenia" and "revolution" were spoken in different languages and different accents all over the world. I, for one, was asked for a commentary during these days to media as diverse as the French Liberation, Figaro and La Croix, German Die Spiegel, Polish Gazeta Vyborcha, a Kazakhstani private channel, Ukrainian English language TV channel, Israel's Russian Language TV channel, Estonian public TV and Australian Public Radio. A friend of mine posted on Facebook articles on Armenian revolution published in Phnom Penh Post, a Cambodian English language newspaper (these were taken from the Associated Press, rather than written by local Cambodian reporters, but still the fact is quite remarkable).

Probably for the first time in history modern Armenia had become the place the world was watching. Of course, there was a similar interest in 1988, but Armenia was still a part of the Soviet Union then. And this time it was for a good reason. What happened in Armenia in 2018 was truly phenomenal. Hundreds of thousands of people took to the streets, and brought down an entrenched autocratic regime without a single shot. No matter what happens in Armenia next, the story of "the Revolution of Love and Solidarity" has already become a phenomenal story that will inspire people around the world. ◆

SUCCEED OR PERISH:

Armenia's New Government and the Challenges it Faces

it's been about three months after the Armenian Velvet Revolution, and Nikol Pashinyan's new government is trying to create the so called New Armenia. Regional Post's expert Mikayel Zolyan explains what are its challenges.

Success is my only motherfucking option, failure's not
Marshall Bruce Mathers III

TEXT : MIKAYEL ZOLYAN / PHOTO : PAN PHOTO

PASHINYAN'S TEAM: MYTHS AND REALITY

Since May 2018 Armenia has been ruled by a new government, a government that came to power as a result of the "revolution of love and solidarity". Though the new team has been in power for only a few months, some common stereotypes and clichés have already emerged. To its supporters, the new government is a team of selfless revolutionaries, who will fix the country in a matter of months, while the critics, on the contrary, tend to present them as a bunch of inexperienced amateurs, on track to wrecking the country. The expectations that Armenians have from the new government are sky high and it is hard to imagine how anybody could meet them without divine or extraterrestrial assistance. At the same time, the previous regime has been so deeply unpopular with most Armenians, that many are ready to write an almost blank check to the new government, as long as its policies are a clear break from the previous government's practices.

Since Pashinyan continues to enjoy an almost universal support among the majority of Armenians at this point, it is the members of his team who are the favorite target of criticism, whether from the old government's loyalists, from the media or from the ordinary citizens. One common criticism is that they are young and inexperienced, an argument, which government supporters counter by saying that it is better not to have government experience at all, than to have the experience of corruption and nepotism, which has determined how Armenia was ruled before the revolution. On the positive side, there is a common perception that, unlike the previous government, the overwhelming majority of the new government is honest, untainted by corruption and links to criminal world. A large part of the public is inspired by down-to-earth and democratic attitudes of the new government members (probably best exemplified by their Facebook live videos and other social network activities), even as certain media outlets criticize them for "lack of seriousness", and old regime loyalists grumble about "populism".

There is also a conspirological perception, arguably enforced by the circles close to the ancien régime, that Pashinyan's team consists of "pro-Western" people, allegedly related to "Soros", "CIA", "State Department" and further on. This is clearly a propaganda cliché based on a distortion of reality. While many members of the government have Western education or experience of working with "Western" institutions, others have Russian education, or experience of working with Russian colleagues. Besides, this is hardly an accusation that resonates with the majority of Armenians, with the exception of some hard-line conservatives. Even in the Soviet times Armenians largely perceived the Soviet anti-Western propaganda skeptically: after all, what kind of an Armenian

president.am

May 8, President Armen Sarkissian signed a decree on the appointment of Nikol Pashinian the Prime Minister of Armenia

are you, if you don't have relatives in Los Angeles, Marseille or Buenos Aires? But these conspiracy theories may harm the new government's relations with Russia, since Moscow, currently in a state of confrontation with the West, is quite sensitive to any hint of Western involvement. It is possible that the idea that Pashinyan's team is full of "Western agents" is promoted both by the Serzh Sargsyan loyalists, and some lobbyist circles in Russia that may have ties to Azerbaijani leadership. Luckily for Russian-Armenian relations, so far it seems that these theories have not been influential when it comes to shaping the Kremlin's policies toward Armenia's new leadership.

REVOLUTIONARIES, TECHNOCRATS AND ALLIES: WHO IS WHO IN THE NEW GOVERNMENT

Obviously, the reality is much more complicated than all the clichés, whether positive and negative. Pashinyan's team is more diverse than it seems from the outside. Essentially, the people who form the new government can be divided into three groups. One of them is Pashinyan's team per se, i.e. the people who surrounded him since he was in opposition, mostly members of the Civil Contract party, such as first deputy prime-minister Ararat Mirzoyan, deputy prime-minister Tigran Avinyan, minister of education Arayik Harutyunyan, minister of diaspora Mkhitar Hayrapetyan, Minister of Culture Lilit Makunts and others. Also, one can include within this group those who were among the leading activists of the revolution, though had never been affiliated with the Civil Contract party, e.g. the Head of the State Control Service Davit Sanasaryan and Secretary of the National Security Council Armen Grigoryan.

IT IS THE MEMBERS OF HIS TEAM WHO ARE THE FAVORITE TARGET OF CRITICISM, WHETHER FROM THE OLD GOVERNMENT'S LOYALISTS, FROM THE MEDIA OR FROM THE ORDINARY CITIZENS

Unlike what happened in Georgia after the Rose Revolution, involvement of civil society figures has been relatively limited. Some with a background in civil society, did receive post in the new administration, as the already mentioned NSC secretary Armen Grigoryan. However, there has been no major influx of civil society figures into the government. Some prominent activists, such as Gyumri-based Levon Barseghyan, one of the most outspoken leaders of the protests, made it clear that they saw their role as members of civil society. Such an approach limits the options of the new government, but it has its merits. A massive influx of civil society people into the government would have left it without the oversight of a strong civil society and in the long term could have weakened democracy in Armenia, as the experience of Saakashvili's Georgia suggests.

Another group is represented by the allies of the Civil Contract from other political parties, who joined the revolutionary movement at different stages. Among them are members

of parties that had formed the Yelk alliance, such as the Minister of Labor and Social Affairs Mane Tandilyan, from "Bright Armenia" party, and the Minister of Justice Artak Zeynalyan, from "Republic" party. Some government members represent two parties that have in the past been members of government coalitions with the Republican Party: "Prosperous Armenia" (or rather Tsarukyan alliance) and Dashnaktsutyun, such as Minister of Economic Development and Investments Artsvik Minasyan (Dashnaktsutyun) and Minister of Emergency Situations Hrachya Rostomyan (Tsarukyan Alliance).

While "Yelk" members are relatively close to Pashinyan's "inner circle" in terms of their background as opposition politicians, the distance between Pashinyan on the one side, and Tsarukyan Alliance and Dashnaktsutyun, on the other, is more significant. Their alliance is probably a situational one, and most likely these parties will go to elections on their own, rather than in alliance with Pashinyan. However, at this point they all have a common competitor: the former government camp headed by Serzh Sargsyan, who still remains the head of the Republican Party. In fact, in parliamentary deliberations the tension between members of "Prosperous Armenia" and Republican Party has sometimes been more pronounced than that between Republicans and "Yelk" members.

Finally, there is the third group, so called technocrats. These are people who have held mid-level, or even some high-level posts under the previous government, but have not been involved in active politics, and have not been members of the inner circle of Serzh Sargsyan. Such key officials as the Minister of Foreign Affairs Zohrab Mnatsakanyan and Defense Minister Davit Tonoyan are representatives of this group. The most controversial representative of this group is arguably Valery Osipyan, whom many revolution activists still continue to associate with the police repression of Sargsyan's years. One could say that this group also includes the head of National Security Service, Artur Vanetsyan, though he represents a younger generation and has had a lower level post in the past, so in this sense he is somewhat closer to the first group. In any case, Vanetsyan, due to his agency's anti-corruption activities, has succeeded in becoming one of the most popular members of the new government: while NSS has been one of the most unpopular government agencies in the past, its anti-corruption efforts have changed the attitude of many ordinary Armenians.

MISSION IMPOSSIBLE?

So, as much as Pashinyan's team may seem homogeneous, in fact it is quite diverse. It is this team that will have to solve numerous issues that stand before the country. The problems are, indeed, immense. And, probably, the most difficult part of the job is choosing the right pace of change. Going too slow may result in disappointment and loss of popular support. Going too fast may lead to instability, both political and economic. For example, tackling corruption is what the new government has promised and what the people of Armenia expect from it, but the corruption had been so widespread and so entrenched, that the anti-corruption campaign may have undesired effects on the economy, e.g. capital flight and loss of jobs. Not to mention, that probably tens of thousands, or even hundreds of thousands of Armenians have been involved in corruption in one way or another, e.g. as either bribe-takers or bribe-givers. So, the government has to tread extremely carefully, making sure that corruption will no longer be tolerated, while making sure that the country's economy is not endangered.

> THE GOVERNMENT NEEDS TO TAKE MEASURES FOR PROTECTION OF ENVIRONMENT, WHILE MAKING SURE THAT FOREIGN INVESTORS ARE NOT "SCARED AWAY" FROM THE COUNTRY

Similar dilemmas exist in virtually every other field. Thus, as the situation around the mining in Armenia shows (particularly the Amulsar gold mine), the government needs to take measures for protection of environment, while making sure that actual and potential foreign investors are not "scared away" from the country. Similarly, when it comes to foreign policy, particularly relations with Russia, it needs to assert Armenia's sovereignty and build an equal relationship, while not alienating Russia and preserving strategic alliance with Moscow that strengthens Armenia's security. The government also needs to advance relations with the West, without jeopardizing the relationship with the Kremlin. And, when it comes to issues of Artsakh or Armenia-Turkey relations, the government needs to assert Armenian side's position, while at the same time avoiding a potential escalation. And all this has to be done at a time, when the old elite are still powerful. While Sargsyan and his allies may have lost political power, they still maintain control over a large part of Armenia's economy, and, most importantly, control a significant part of Armenia's media field. And the government needs to show some concrete results of its work before the elections, which will probably take place within a year, otherwise, it risks losing support of the population.

Doing all this in such a short time is complicated setting, to say the least. In fact it may be virtually impossible. But, then, back in March 2018, who thought that a peaceful revolution was possible in Armenia? ◆

FUTURE BY THE DOOR

Science and engineering are truly occupations for cosmopolitans: Almost every major research or project is conducted by a team of specialists from around the world. Regional Post presents Armenian scientists and engineers living in different countries and working on projects that can bring the future to our door.

TEXT : TATEVIK STEPANYAN

Karina Zadorozhny (Movsesjan)

FIELD OF STUDY: BIOLOGY
RESEARCHER AT MASARYK UNIVERSITY, CZECH REPUBLIC

Karina Movsesjan is 19 years old and has already broke the common notion of what one can achieve by that age. She has been published in “Nature,” probably the most well-known and cited scientific journal in the world. She started her PhD studies in biochemistry at the age of 16, and at the age of 18 she won the first prize of European Union Contest for Young Scientists for her work on the role of RAD51 protein mutations in cancer development. She has also received Dudley R. Herschbach Stockholm International Youth Science Seminar Award.
Her research is mainly focused on RAD51 protein which was earlier discovered in several tumor types and is associated with cancer. She studies the mechanism of how RAD51 mutations contribute to tumorigenesis. Movsesjan told the Society for Science & the Public, “I aimed to understand how protein mutations contribute to the formation of a tumor. The protein I focused on, RAD51, takes care of broken DNA strands in our cells and protects cells from DNA damage. As this protein is extremely important for cell survival, it was very puzzling to find mutations of RAD51 in tumor cells. In order to determine how it was possible that those cancer cells weren’t dying, even though they had such an important protein mutation, I conducted a biochemical characterization of a RAD51 mutation that was found in a very aggressive uterine tumor. The results provided a striking explanation for this phenomenon. Although there was a mutation, the mutated RAD51 protein was still able to repair broken DNA efficiently. However, I also found that there was a different defect: mutated protein could not fulfill a RAD51 role in the protection of duplicating DNA. This could thus explain the mechanism by which RAD51 mutations confer an advantage for tumorigenesis.”
Karina Movsesjan currently works as a researcher in the Laboratory of Recombination and DNA Repair of Masaryk University, one of the leading HIEs in Czech Republic.

Arnak Dalalyan

FIELD OF STUDY: MATHEMATICS
PROFESSOR AT ENSAE / CREST, FRANCE

At the age of 13 Arnak Dalalyan took part in Armenian national competition in mathematics and, without having a special training, managed to get the third place. He was soon included in the extended list of candidates for the national team that had to represent the country in the International Mathematical Olympiad. And that is when he decided to become a researcher. “I really felt that mathematics is easy for me,” says Arnak. “Looking back now, I understand that it was mainly thanks to the family education I had received. My parents, being both scientists, had cultivated a curiosity and interest in the scientific discovery that conditioned my future.”

Arnak graduated from Yerevan State University with a Bachelor’s degree, obtained his Master’s in Pierre and Marie Curie University in Paris, and got his PhD at the University of Maine. He is working on mathematical aspects of data analysis and machine learning and is currently focused on getting a better understanding of the algorithms that are popular in machine learning. Arnak notes that mathematics nowadays is very different from that of the 20th century. Back then, a solid knowledge in advanced mathematics could be enough, while now mathematical methods are applied more and more in the industry and in various scientific fields, and a contemporary researcher must be open to new applications and know how to code and implement mathematical methods. “The general goal of the mathematics is to understand the properties of some complex and often abstract objects” explains Arnak. “We do it using sophisticated reasoning and some technical computations. To illustrate scientific findings and to demonstrate their connection to the problems of the real life, we often resort to numerical experiments. These experiments, carried out by using scientific software, help us to make discoveries and to check their validity.”

Arnak is constantly in touch with scientific community of Armenia. In 2016, he spent several months teaching at the American University of Armenia and is planning to repeat this experience in the nearest future.

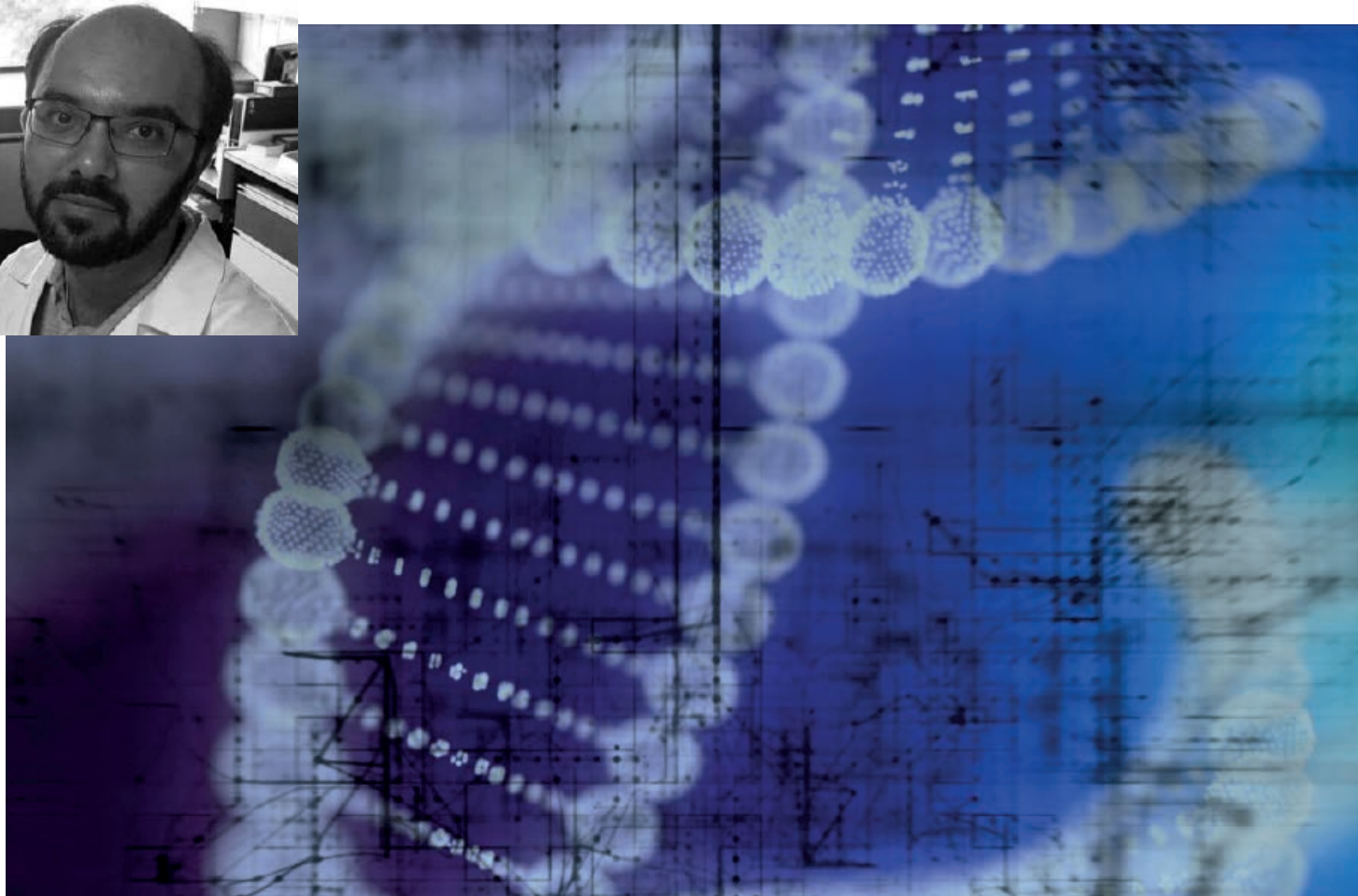
Konstantin Khetchoumian

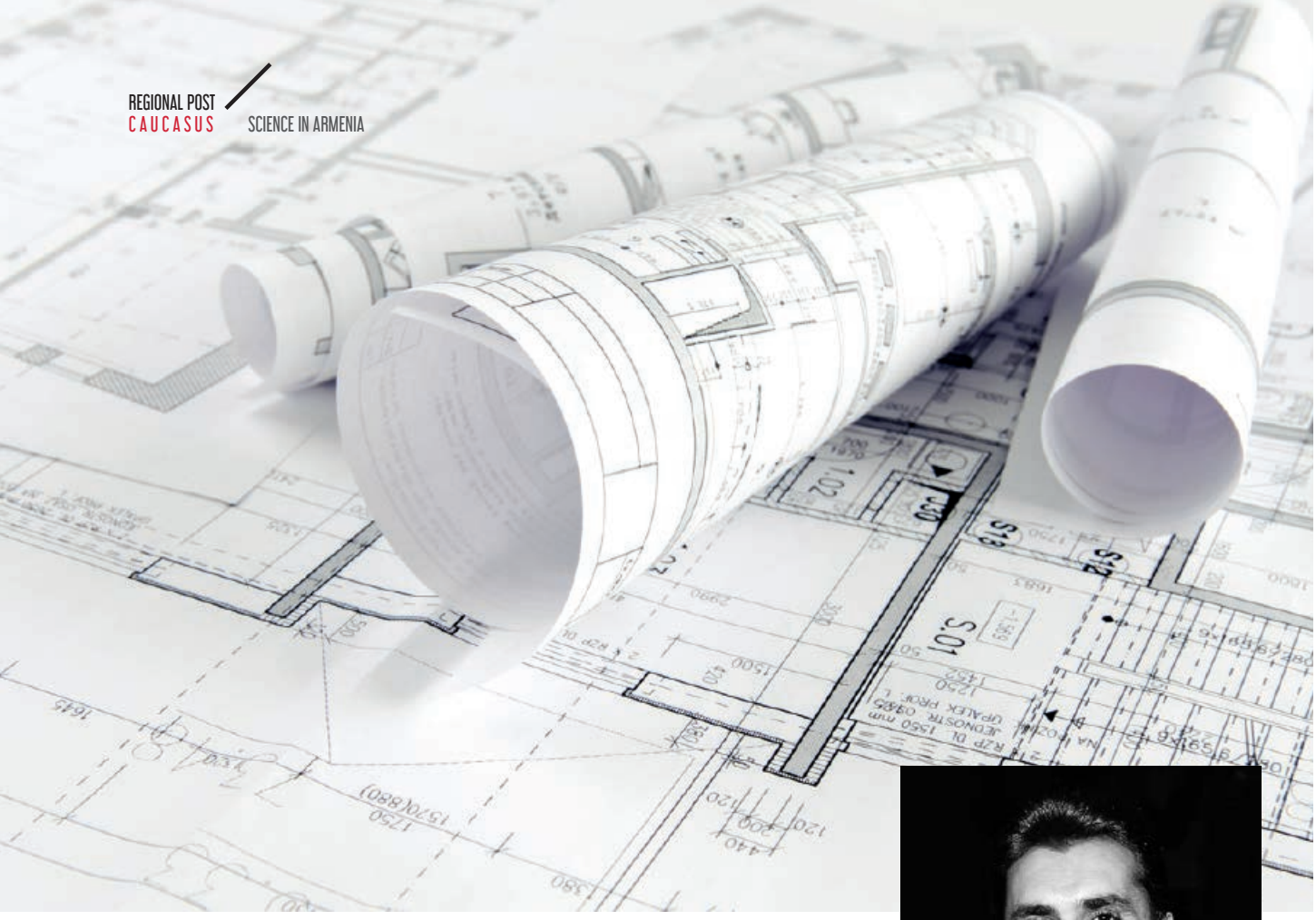
FIELD OF STUDY: MOLECULAR BIOLOGY
RESEARCH ASSOCIATE AT MONTREAL CLINICAL RESEARCH INSTITUTE, CANADA

Konstantin Khetchoumian comes from a family of scientists: his mother is a medical doctor, and his father is a molecular biologist. After getting his PhD at the Institute of Molecular Biology in Moscow, Konstantin's father started his own lab at the Institute of Biochemistry in Yerevan. Konstantin recalls, "I really grew up surrounded by science. I used to spend all my summer holidays in the lab with my father. He always takes pride in stating the fact that I did my first DNA extraction when I was 10!"

After the collapse of the Soviet Union the scientific community, as well as the entire country, faced extreme economic problems. "There was no funding at all. My father lost all his reagents and his big collection of flies." In 1993, the family moved to France where Konstantin decided to follow his father's path. He entered the Université Louis Pasteur (now the University of Strasbourg) to study molecular biology. Laboratory continued to be his main destination for summer holidays. Here in Strasbourg Konstantin obtained both his master's and PhD degrees: his doctoral dissertation was recognized as "best thesis" by the Scientific Council of the Strasbourg Louis Pasteur University. He then moved to Canada to conduct postdoctoral studies at the Montreal Clinical Research Institute. In 2013, Konstantin started to work as a research associate in Dr Jacques Drouin laboratory where their team worked on understanding the regulation of gene expression program at the origin of normal pituitary development, as well as in the case of pathologies, such as the Cushing disease. Konstantin says, "During the last 11 years, here at the IRCM, I achieved a number of results which open new possibilities" and adds, "my number one priority now is to publish the work which is already completed. However, there is still a lot to do, and I plan to continue my work in the same direction, using the new technologies and approaches that are coming out every day. We are living in a great time to do science, especially when it comes to natural sciences."

Although Konstantin hasn't been in Armenia since his family left the country, he is in touch with Diasporan Armenian communities and Armenian scientists abroad. "We are part of a network that includes Canadian, French, British, German, Mexican and American scientists working on pituitary. Each year we have a meeting to share data and establish collaborations. And I am going to propose to organize such gatherings in Armenia: This will be a great way to eventually visit my homeland."





Tigran Shahverdyan

FIELD OF STUDY: PHYSICS, ENGINEERING
CO-FOUNDER OF ROBOMART, USA

Tigran Shahverdyan became interested in engineering while still a child. He was very much inspired by his grandfather, an experienced engineer who worked in Yerevan Computer Research and Development Institute for over 50 years. However, impressive results at several International Astronomy Olympiads and International Physics Olympiad in Ukraine, Russia and Indonesia pushed Tigran to opt for physics as his major in university. He received an invitation to study at Moscow Institute of Physics and Technology (MIPT) and got his bachelor's and master's degrees from the MIPT. Tigran even started preparing his PhD thesis on space physics but left it incomplete because of unflagging enthusiasm for the NewSpace movement. In 2012, Tigran took part in International Space University Summer Space Program in the US, and after getting back to Moscow he joined "Selenokhod" startup. Selenokhod was a team of engineers and researchers who aimed to land a rover on Moon. It was the only team from post-Soviet territory to participate in Google Lunar X Prize competition from 2009 to 2013. At the same time, he started working remotely on a study together with scientists from the Institute for Physical Research in Ashtarak, Armenia. A few years later, this team was awarded President Prize of the Republic of Armenia for the series of articles on analytic models of quantum two-state problem. Tigran also co-founded RoboCV startup in Russia. With RoboCV team he created self-driving vehicles that transport goods inside factories and distribution centers of FMCG companies. Tigran says, "Science and engineering are very much connected but at the same time they differ from each other significantly: a scientist does not look for instant solutions but always searches and generates new knowledge; an engineer, on the other hand, deals with creating solutions and products that can solve existing problems." Tigran's latest project itself is a promising new startup: he is the co-founder of "Robomart," a US-based technological company building the world's first self-driving grocery stores.

Arevik Vardanyan

FIELD OF STUDY: MICROBIOLOGY
SENIOR RESEARCHER AT ARMBIOTECH LABORATORY NAS OF ARMENIA

Arevik Vardanyan obtained her first degree in plant pathology at Armenian National Agrarian University. During her studies, she became interested in microbiology and gradually focused her research on microbiology in mining. Since 2008, she works on the subject at Armbiotech Laboratory in Yerevan. Arevik continued her education at the University of Duisburg-Essen in Germany, and then defended her PhD thesis at Cyprus University of Technology. She also worked as a researcher at the University of Liège in Belgium as a member of GeMMe research group – a unique initiative which aims to develop innovative approaches on efficient recycling of consumers' goods and complex georesources. Arevik worked specifically on microbiological recycling of used electrical equipment. As a result of the above-mentioned research, the group developed a two-stage microbiological and chemical recycling process and applied for the Marie Skłodowska-Curie Actions grant to continue the work. Unfortunately, GeMMe did not get the grant, but Arevik became the firsts Armenian scientist to receive "Seal of Excellence" which is awarded to the high-rated proposals. Arevik says the award will allow her to apply for an individual fellowship to continue studies on extraction of precious metals from electrical equipment to make them reusable in the future. "I grow iron-oxidizing microbes in a special environment, and then use the liquid with microbial products to decompose PCBs" explains Arevik. "It is a closed-cycle process called bioleaching. It does not produce dangerous emissions and is safe for the environment. Furthermore, it is more effective than the alternative methods." While the study is still in the stage of laboratory research, Arevik is convinced the method is fully applicable in Armenia. The results of another research she works on are not only possible to implement in Armenia, but can be of high demand: bioleaching technologies that are being developed by Arevik and other researchers in Armbiotech Laboratory can be used to extract metals if, of course, mining companies ever start to produce pure metals instead of concentrates. Although the technology is time-consuming, it is both cheap and clean. Moreover, it can be used to clean the mine tailings – an intensively growing problem for ecology of Armenia.

ARMEN ORUJYAN:

"Destination: Armenia in the world's Top 10 innovation countries"

Armen Orujyan, PhD, is the Founding CEO of the Foundation for Armenian Science and Technology (FAST). Focused on producing an ecosystem that drives scientific advancement and technological innovation, under Armen's leadership FAST has launched a Fellowship for the top 10% of all PhDs in Armenia in STEM, deployed numerous scientific grants, a startup studio and established the first Science and Technology Angels Network in Armenia.

INTERVIEW : KARINE GHAZARYAN / PHOTO : ARMEN ORUJYAN ARCHIVE

Dr. Orujyan, FAST is a very promising initiative, considering Armenia's general course for developing the tech industry. How was the foundation created?

— The idea was generated by Ruben Vardanyan through his discussions with Noubar Afeyan several years ago as part of their overall commitment to development in Armenia. It was a way of making sure that Armenia went back to its roots with science and technology at the core of its economic development. Two years ago, in August, I received an email from Ruben, expressing his interest in discussing the idea with me. We met in Los Angeles and had a fascinating conversation about his work throughout Armenia. I had not been there in about ten years, so everything he was describing seemed new and exciting to me. I accepted his invitation and traveled to Armenia to see it all in person. It was a short trip, but I was completely blown away not only with the work he, his partners, and his team had already accomplished, but also with the promising developments such as TUMO, AYB or UWC Dilijan. I was also amazed with the positive developments in tourism, particularly in Tatev, which had gone from hosting 4,000 tourists a year to 150,000, leaving a profound impact on the region. At the end of my trip,

Ruben mentioned science and technology, and my curiosity really piqued. I have devoted the past two decades of my life to providing opportunities to those in need, building innovation solutions for individuals, companies, and countries, and I was offered an opportunity to have the support of these remarkable individuals, devoted philanthropists, and straight up incredible people. So, we agreed that I would return to Armenia for 6 months in April 2017 to contribute to the ongoing efforts of Ruben Vardanyan, Noubar Afeyan, Artur Alaverdyan and other partners. I wanted to get a better feel for the country, the economy, the industry, and understand how we could create something mighty and lasting. When I returned in April, I began to fall in love with the country. I got to know students, young entrepreneurs, scientists, and workers from different sectors, see their desires, ambitions, and anticipations for our homeland. It was beautiful to see what could be accomplished here. Soon, it all came together, and we agreed that I would be predominantly based in Armenia for the next three years to help make the Foundation for Armenian Science and Technology a reality. FAST was formalized last June, and I officially joined as a Founding CEO on November 1st, 2017. It has been an extraordinary experience with an incredible promise for the future.

WE HAVE THE POTENTIAL TO SURPASS WHAT WE HAD IN THE SOVIET ERA AND BECOME A REAL DRIVER WITHIN CERTAIN SCIENTIFIC DISCIPLINES IN THE GLOBAL MARKET

There is a common belief that Armenia had a great scientific basis back in the USSR which it lost in the 1990s. Given the amount of effort you put in an initiative like FAST, do you believe Armenia still has this potential to become a regional scientific hub?

— I look at it slightly differently. I am not particularly interested in Armenia becoming a regional player because in today's world, where everything is universal and scientific discovery is no longer kept within the boundaries of a country or a region, we would be doing Armenia a disservice by attempting to make it just a regional player. Yes, we definitely had something to be proud of during the Soviet era, yet today, I see Armenia as capable of becoming more than just a small element in a larger global mechanism. We have the potential to surpass what we had in the Soviet era and become a real driver within certain scientific disciplines in the global market. Armenia's population is too small for it to become a market destination, which is why we are looking for that one scientific vertical that can make us globally competitive. That is how I am leading FAST when it comes to our strategic developments, our tactics, and our roadmap. For us, the goal is to ensure Armenia a place among the Top 10 innovative countries in the world, at the very least.

Which priority areas are you pushing forward that have the potential to take Armenia to the Top 10?

— We are considering data and computer sciences, including artificial intelligence, machine learning, data modeling, data simulation, big data analytics, and more – as our anchor scientific vertical that can make Armenia highly competitive on a global level. Biotechnology, advanced materials, and microelectronics are also

a priority, as well as other disciplines, such as physics. Many of our plans and engagements are looking at this as a vehicle with many players, both in Armenia and abroad, which encompasses not only the Diaspora, but also international institutions and partners. It does not matter where "top notch" comes from. What matters is that the global community has scientific discoveries coming into its own pipeline, so having Armenia as a destination is great for the country itself and also for anyone who cares about fundamental scientific advancements.
There is also a crucial cultural component which works to Armenia's advantage – the culture of studying the hard sciences. The culture of wanting to consume knowledge plays a critical role in determining how long it will take to repurpose the educational system and the potential research community to create a desire among the students to get involved in certain types of scientific disciplines. This desire already exists among young scholars of Armenia. The problem is in the quality of instruction. The input, that is to say; the desire to go to class and study natural sciences, is equal to that of France or the UK, but the level of instruction is not, which results in us having a lower output. We are, therefore, looking at ways of increasing our output by enhancing the quality of instruction as a starting point.

It is known that the natural sciences require significant financial resources. Do you think it is realistic for Armenia to find such investments?

— We are looking to drive scientific advancements by partnering and collaborating with large international institutions. We have already begun the process of partnering with a number of universities abroad, including the University of Southern California and the Technological University of Hamburg, Germany. We are trying to expand our reach and foster a proper cooperation between our local scientific community and the experts from abroad.

You have a whole range of projects aimed at creating a network between the local and international scientific communities, as well as strengthening the network between local scientists. Why do you think networking is so important?

In 2017, Armen Orujyan joined Rice University' Baker Institute for Public Policy as a Member of the Board of Advisors. He has been an advisor at Facebook and a Commissioner on the United Nations Broadband Commission for Digital Development. Armen was also named a UN e-Leader for ICT and Youth and selected as one of top under-40 young leaders by Asia Society.

— The mission of FAST is pretty straightforward. We are focused on producing an ecosystem that drives scientific advancement and technological innovation. An ecosystem has three capacities: intellectual, financial, and network. Before creating a new instrument or mechanism to be deployed into the ecosystem, we first do an evaluation of each component to see what functions properly and what is missing. We are not looking to do all of the work ourselves, but to cooperate with highly driven champions and experts in their fields. We help consolidate the resources around them, and only when we cannot find a champion that can bring an important instrument into the ecosystem do we establish something ourselves.
Network capacity with its many domains and verticals plays a critical role here. One of its most important components is the relationship between a country and its citizens. Through its rules, regulations, laws, and procedures, the nation states either enable science or stifle it. And it is part of our work to educate all sorts of influential communities about the importance of this phenomenon in order to prevent the expatriation of experts. Another component of network capacity is the creation of links and bridges between the scientists in Armenia and the scientific community abroad, both foreign and Diasporan. This is the aim of many of our engagements, including our

The inaugural BreakFAST hosted the 2018 Laureate of the Aurora Prize

upcoming Global Innovation Forum and our initiated Next Generation (NextGen) Council.

In what ways does the NextGen Council assist in FAST's work?

— NextGen is a platform where talented young scientists, technologists, and entrepreneurs from Armenia and around the world come together and exchange ideas. We currently have twenty very talented members, but we are gradually reaching the chartered capacity of thirty: fifteen from Armenia and fifteen from abroad. We are also making sure that there is an equal number of male and female participants. We already have participants from Switzerland, the UK, Japan, and the US who bring their knowledge into Armenia and, get involved in many of FAST's programs.

You have launched the Science and Technology Angels Network which provides incredible opportunities to starting entrepreneurs. What is the aim of STAN?

— The Angels Network provides financial support to very early stage startups that are geographically bound to Armenia. At FAST, we have done an analysis of the local startup ecosystem and discovered that early startups are missing the very early stage investments – usually 5,000-80,000 USD – which generally come from family and friends. Once they reach a certain level of maturity, accessing funds becomes much easier. In developing countries like Armenia, where adequate middle class is missing, there exists neither a business angels network nor a large play of startups and entrepreneurs because they do not have affluent friends and family members who could invest in their ideas. That is where STAN comes into play. Most of our founding members and I have personally joined the network as angels. We are primarily focused on all the areas of STEM (Science, Technology, Engineering and Mathematics), but may go beyond those boundaries at times to have a greater number of deals. For this network, we are more interested in the start-ups and even very early-stage ideas with a major scientific component at their foundation. We are not really looking at communication solutions or basic apps. We recently had our first pitch session and are looking to invest in 3-4 companies. Later this year, we will begin to expand our pool of 18 angels as well, which will create more funding opportunities.

THE MISSION OF FAST IS PRETTY STRAIGHTFORWARD. WE ARE FOCUSED ON PRODUCING AN ECOSYSTEM THAT DRIVES SCIENTIFIC ADVANCEMENT AND TECHNOLOGICAL INNOVATION

You have a significant number of outstanding individuals supporting FAST. What do you think your young beneficiaries can learn from these people?

— A lot, really. We always need role models, mentors, and advisors to look up to and model ourselves after. Growing up, we mimic our parents and siblings. It is in our nature to imitate and draw inspiration from the people we respect and admire. It is a healthy trait that stays with us throughout our lives. Therefore, it is imperative to have prominent scientists like Yuri Oganessian, Lord Ara Darzi, Naira Hovakimian, and President Armen Sarkissian, who have accomplished so much in their fields and industries, because they prove that there is a future for the student who chooses to study biology, chemistry, physics, or mathematics. Prosperity builds up all capacities. We are striving to make science a relevant, exciting, and inclusive field with opportunities for everyone. Almost everything today has science and technology at its base, and it is going to expand and become more and more advanced. We want Armenia to be in it as a real player, instead of just watching from the sidelines as it has been for generations. I think it is time for us to take this seriously and show our kids that the future of science holds extraordinary opportunities for them.

50/50

Astghik Hakobyan

Hripsime Atoyan

The reluctant approach to achieving an equal gender ratio among scientists in STEM in Armenia may soon change significantly as the Foundation for Armenian Science and Technology (FAST) emphasizes the importance of encouraging and engaging women.

TEXT : KARINE GHAZARYAN

As one of the biggest and most comprehensive projects working with science and technology in the region, FAST has proven its commitment to empowering female scientists and encouraging young women to explore their potential as researchers and contribute to the development of the field in Armenia. Women are present in FAST team on all levels: from the board of trustees to the promising young scientists of the NextGen Council. "My colleagues at the lab are mostly men, and I haven't faced any discrimination from them," says Dr. Astghik Hakobyan, a researcher at Yerevan Institute of Molecular Biology and member of the NextGen Council. "Actually, we have a lot of women in the field of science. The problem is that not many of them end up at top managerial positions." Astghik highlights the lack of ambition in young female researchers – the very same aspiration they were taught not to demonstrate. Women are underrepresented on the higher levels of the academic hierarchy (e.g. Grand Doctor level, this is the sec-

YOUNG FEMALE PROFESSIONALS IN SCIENCE IN ARMENIA

FIGURES OF 2017

SOURCE : ARMSTATBANK.AM

NUMBER OF PHD STUDENTS:
1085
female: 575

GRANTED WITH SCIENTIFIC DEGREE:
141
female: 73

RESEARCHERS:
3588
female: 1894

FULL TIME STUDENTS:
108
female: 38

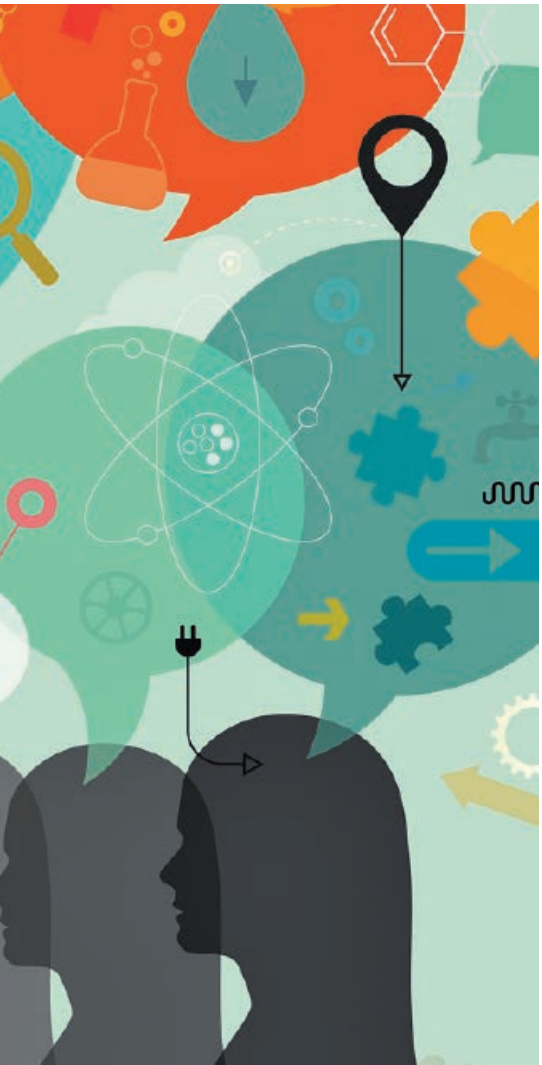
DOCTORATE STUDENTS:
496
female: 101

RESEARCHERS (TECHNICAL SCIENCES):
553
female: 186

APPLIED FOR SCIENTIFIC DEGREE:
702
female: 470

PHD STUDENTS:
1556
female: 779

RESEARCHERS (MEDICAL SCIENCES):
227
female: 149



ond degree, not to be confused with PhD) in all STEM fields. Studies have shown that over the past 17 years, only 18.7% Grand Doctors of Science on average have been female. “At first glance, there are so many women in academia and the applied sciences, including my field, but when it comes to PhD studies, women tend to be elected less,” says Hripsime Atoyan, senior laboratory assistant at the Research Group of Molecular Parasitology of Scientific Center of Zoology and Hydroecology of NAS RA. Hripsime is one of the three female PhD students to have received a FAST Fellowship in 2018. She points out that many universities may drop female candidates in favour of males. According to the data provided by Statistical Committee of the Republic of Armenia, only 11% of full-time PhDs are female, even though they make up 69.6% of degree-seekers. Men used to occupy most of this seats, as this was the only way to get a deferment from army. This picture will change in the upcoming year, as the law of deferment has been modified.

“When I was starting my PhD, people were a bit accusing, pointing out that the place could be given to a young man who had to serve. Fortunately, my supervisor was quick to defend me.”
Taking this background into consideration, FAST developed a special initiative to support female students: the Fellowship program of the Foundation, which provides scholarships for the best students, allocating 10 fellowships meant exclusively for outstanding female degree-seekers. And this is just one step in the long-term strategy of valuing not only talent and creativity, but also equal opportunities.
The extremely unbalanced ratio of women and men in the field of science, especially in STEM, has been around for so long that we have almost gotten used to it. Apart from pointing out the obvious, there did not appear to be much being done in Armenia to solve the problem. But as FAST picks up steam in the country, there is hope that the new generation of researchers in the field traditionally occupied by men will become more diverse. ◆

FAST FORWARD

The office of FAST is located in a very special place – Yerevan Computer Research and Development Institute (also known as Mergelyan Institute). The building fits perfectly in the network of historical and modern constructions of the true "isle of science" of Yerevan. Inside the minimalistic and thoughtfully designed rooms of FAST multiple truly innovative and potentially impactful projects are being implemented. We present just several from the whole series of promising FAST initiatives.

TEXT : KARINE GHAZARYAN / PHOTO : FAST

EXPERIMENTING WITH CREATIVITY

Experimentation Area, a multifunctional platform for the origination and development of science-intensive ventures, is just about to be launched. Here the researchers will apply the unique approach to company creation developed by Boston-based Flagship Pioneering. This company stands out among thousands of startup incubators and acceleration labs throughout the world. It was founded in 2000 by well-known American-Armenian researcher, businessmen, FAST co-founder and Board of Trustees member Noubar Afeyan. Over time, FP established dozens of successful companies in the field of biotechnology. FAST partnered with FP to repurpose their work in biotechnology and apply it particularly to data sciences in Armenia using the Experimentation Area. Biotechnology is the specialization of Flagship Pioneering. “Very few people on the planet have successful single biotechnology project, and Noubar Afeyan and FP team have over three dozen of them,” FAST CEO Armen Orujyan notes. “Cooperation with FAST over the Experimentation Area is a testament from FP team as specialists in the field, but also a testament of the organizational model: how they do scientific discovery and exploration, create companies, rule out those that are not impactful and focus on those that could turn into marvels.” In FP innovation is being done deliberately and in a planned way. They run teams internally that are tasked with coming up with new areas to explore, find out what impactful solutions may be developed and what valuable companies may be founded. The creation then moves to a next stage where they ensure the expansion and growth of the company. “FP provides not just money, but people, guidance, our culture of innovation and driving value. We are a large company with small divisions which end up becoming major companies themselves,” FP Partner Avak Kahvejian says. “In cooperation with FAST we want to bring this model to Armenia. We are going to train people in FAST to be self-sufficient in their ability to generate ventures so that they can run the process of ideating and bold their ideas into compelling companies.” Experimentation Area also provides scientists an opportunity to travel to Boston and work within FP team to get direct exposure to the process. Once they have acquired enough knowledge on how that type of scientific discovery is done, they will return to Armenia and help to establish something similar for data sciences in local laboratories and universities. “We want to spur true innovation and entrepreneurial spirit in Armenia to show that creation of more than just service-based business is possible here,” Kahvejyan says. “This is a process that takes some work but it is fully possible as long as we have this collaborative, creative mindset.” Ventures started in Experimentation Area will have to go thorough month of stress testing, and if they survive it,

Young members of the NextGen Council

Ruben Vardanyan will participate in Global Innovation Forum this October

VERY FEW PEOPLE ON THE PLANET HAVE SUCCESSFUL SINGLE BIOTECHNOLOGY PROJECT, AND NOUBAR AFEYAN AND FP TEAM HAVE OVER THREE DOZENS OF THEM

they are going to be turned into actual companies and deployed in the market. The whole concept of Experimentation Area is based on fundamental science but also looks to commercialize science – an important challenge for modern-day Armenia. Focusing on pure scientific discoveries, FAST will also work towards turning some of those discoveries into viable enterprises to contribute to both development of knowledge and the growth of economy of Armenia.

FP Partner Avak Kahvejian

FAST Headquarters in Yerevan

PITCHING IN FRONT OF ANGELS

Science and Technology Angels Network is there to discover and support seed-stage Armenian startup. Not only this, but a whole project for boosting the startup scene is being maintained by FAST. Startup studios are to be opened in Yerevan in autumn; another three are being developed in collaboration with UWC Dilijan, TUMO, and Vanadzor Technology Center.
The idea behind Startup Studio is to support science and technology-backed startups as well as budding entrepreneurs with an aspiration to become a company founder. Startups and budding entrepreneurs will first need to go through a selection process, after which the selected candidates will be given free access to the space for up to four months. FAST will also provide free coaching, mentorship, and programming during that time to help them turn their ideas into business concepts, and possibly even real prototype products. Each month participants will take a practice-pitch exam. Different modules will be introduced to cover the needs of all participants: from experienced entrepreneurs looking for some fresh approaches to beginners doing their first steps in business. All the graduating teams will pitch in front of Science and Technology Angels Network which unites distinguished entrepreneurs from various countries of the world. With time, these labs may enable a greater deal-flow than the one that currently exists in Armenia.

ENGINEERING THE EVOLUTION

This year marks the launch of the Global Innovation Forum, an annual conference of the leaders of the fields of technology and science who will gather in the capital of Armenia to tap into the linkage between disruptive technologies and industries of the future. Global Innovation Forum is designed to engage the global scientific community and become a flagship event of its kind in Armenia and in the region. Armenian Scientific Diaspora Association, co-organizer of the Forum, joined efforts with FAST to ensure deeper engagement and reach. The Forum will provide the Armenian scientific community a firsthand access to the scientists which do breakthrough research along with an opportunity to exchange practices and experiences. Some of the established connections may turn into joint publications of local scientists and those from abroad whom they would not have been able to meet otherwise. Additionally, the Forum will allow foreign scientists to get acquainted

GLOBAL INNOVATION FORUM IS DESIGNED TO ENGAGE THE GLOBAL SCIENTIFIC COMMUNITY AND BECOME A FLAGSHIP EVENT OF SUCH KIND IN ARMENIA AND IN THE REGION

with the work that has already been done here thus increasing visibility of Armenia, especially since it will attract not only researchers but large and diverse audiences to the country. They are neither presenters nor necessarily experts but are coming to Armenia to learn from globally renowned experts and interact with the scientists in Armenia in person. The Forum will also provide an immersive technological experience, so all of the participants will actually get to interact with some nifty solutions. And, of course, FAST teams – from board members to NextGen council – are all to be met at the Global Innovation Forum.

Co-founder of FAST Noubar Afeyan

The FAST fellows

STAY AND THRIVE IN ARMENIA

To encourage and enable young Armenian scientists to do research in local institutions, FAST started Fellowship Program, a series of grant for outstanding students. Financial aid covers tuition fees and living expenses, depriving students from the need of a day job during PhD studies and allowing them to focus on quality research only. Partial and full grants of up to $7,000 are provided to the top 10% of students studying physics, biology, mathematics or engineering. In addition to that, 10 fellowships are provided to outstanding female students to empower and engage women in science. FAST facilities will be open for those who have received fellowships. Fellowship Selection Committee member Ani Aprahamian, who is a professor of experimental nuclear physics at the University of Notre Dame (Indiana, USA) and the newly appointed Director of National Science Laboratory of Armenia (YerPhI), recalls, “Having just accepted the directorship of the National Lab of Armenia, I was looking forward to expanding the science capabilities of Armenia via FAST.” Omit “Aprahamyan recalls” She then adds, “And, I share one key thought with the founders of FAST: the most important resource in the 21st century is human capital. That is why I like the Fellowship Program so much: this project gives funds to students in Armenia to stay in Armenia and thrive in Armenia.”

Researcher Tatevik Baghdasaryan, who received a fellowship in 2018, says she was being strongly advised not to do PhD in Armenia as ‘here science is meaningless’. “I started my PhD in Spain, but eventually decided to continue here. So, when I won the FAST fellowship, friends were astonished and started telling everyone that a woman scientist can actually be valued and supported here!” Baghdasaryan draws attention to the FAST fields of interest. “The focus areas of the Foundation are of particular importance for Armenia. I think over the course of the years, the Fellowship Program will lead to generating some impressive achievements in these areas.”

Apart from fellowships, the Foundation runs Travel Grant and Collaborative Research Program which aims to encourage Armenian researchers to establish relations with their foreign counterparts, especially those who have received funding from national science organizations in the US, Europe, Japan, China, and Russia. The grant of up to $7,500 is available not only for Armenia-based, but also to Diaspora scientists who want to do research in Armenia. Furthermore, Guest Researcher Program brings prominent researchers from different continents to work and exchange experience in Armenia. This list goes on and on marking a new, probably groundbreaking step in the chronicle of the development of Armenian science.

AREVIK ANAPIOSYAN:

"Solutions may 'hurt', but the long-term impact will be tangible"

Deputy Minister of Science and Education Arevik Anapiosyan has studied and developed some ways to make the field function more effectively in Armenia for years. We spoke to her about the problems distinguished by the new government and solutions which might be deployed in the nearest future

INTERVIEW : ARSHAK TOVMASYAN / PHOTO : AREVIK ANAPIOSYAN ARCHIVE

It has been three months since you started to serve as Deputy Minister at the Ministry of Education and Science. Did your understanding of the field coincide with the real situation?

— Pretty much it did, but I have always been optimistic, and I believe we can perform rapid changes if there is political will. However, I see now that we have a serious problem of human resources for conducting reforms. This problem is not one you can solve quickly. Another issue is the extremely intricate regulations and laws, and addressing it also requires human resources, as there is a need to calendar the problems and develop proposals for directional changes. I would highlight these two issues as the most important ones because if we discuss, for example, availability or scarcity of finances I must note that there is enough room for optimization within our current budget.

Not once has the Minister stated that there is a lot of inefficient spending in the field of education. Could the same be said about science?

— The state and the economy should define and set certain tasks for science: I don't think simple increase in wages would be efficient. There are two types of scientific activity: one is for development of economy and the other is for the sake of science itself. I believe we are not effective enough in both of those fields. We must definitely raise the funding of science, but we

Arevik Anapiosyan with Minister Arayik Harutyunyan

also must give reasons for doing so. So, if we raise salaries – and we actually plan to do so – we should introduce some tasks of new kind and character.

The Republic of Armenia inherited multiple scientific institutions from the Soviet Union: various academies, unions, etc. Do you investigate the effectiveness of their work?

— In general, there is a big gap separating science and education. I think science must serve as basis for education, which is not how things are now, and that is a problem. We are now working on the new law for the field and will try to make it comprehensive enough to regulate both sectors. We have MA and PhD programs both in scientific institutes and in universities, and a scientific institute basically functions as a HEI. Why do we then have to segregate these two? Presently, we work to unite them, to establish a university system which has science as its constituent part. We have developed certain solutions which may 'hurt' a bit at the beginning, but their long-term impact will be very tangible.

IN GENERAL, THERE IS A BIG GAP SEPARATING SCIENCE AND EDUCATION. I THINK SCIENCE MUST SERVE AS BASIS FOR EDUCATION, WHICH IS NOT HOW THINGS ARE NOW, AND THAT IS A PROBLEM

Former Prime Minister Karen Karapetyan used to note quite often that science should create products, sell them and self-finance. Many scientists, on the other hand, say one should demand that science create commercial value. What is your opinion on this matter?

— Very often in the field of science and innovation we need to ensure incubator conditions. And, of course, it is wrong to demand a product from an initiative still at its seed stage: the result may be seen in 10 years. But we are for sure going to apply in science the approaches and techniques from the world of startups and innovations, be it acceleration labs or incubators. We are already partnering with public and private organizations here in Armenia over specific models and projects which will help to contribute to the development of science. And yes, we also have in mind that in a long-term perspective science should provide concrete results and create value. By the way, there is an important issue where the government can have its positive impact: it can either purchase or help to purchase scientific equipment. This also implies formation of a respective tax field so that the equipment can be transported to Armenia in the best and cheapest way.

It is known that we have outflow of young scientists. This is not a solely Armenian issue, but here the immigration is significant. How are you going to address this?

— A couple of days ago we were looking into statistics, and it turned out that about 10% of young scientists leave the country. Some believe that if the wages rise a bit, we may keep about 24% of that number in Armenia. But I am not inclined to think the wages can solve the problem. You see, scientists in Europe or in the US earn money by seeking and applying for various grant opportunities for their research. The universities, in their turn, provide facilities, exclude corruption, etc. So, now I want to understand why we don't use this system. Having worked as a researcher myself, I understand that it is not easy to write a proposal, to calculate a budget, but one can learn all that. Doing only scientific work and not dealing with the administrative side is not good; we should be more flexible and practical.

While working on this issue of Regional Post, we discovered multiple outstanding Armenian scientists who live in various countries. Do you plan to work with this network?

— We cooperate closely with the Ministry of Diaspora and have a number of projects here at the Ministry of Education and Science. One of them is a conference with Diaspora specialists in the field of education which gathers brilliant professionals in Armenia once every two years. I believe we have a tremendous potential in Diaspora which the government is not always able to use in the right way.

Do you think that women and girls should be encouraged to build a career in science?

— We do not have a separate positive discrimination initiative, and I do believe we should not push women into science but rather provide equal opportunities for everyone and eliminate gender-based discrimination. There are many women deputy ministers, and they got positions not because they are women but because they are strong professionals. It would be better to have more women at the top positions as well, but many assume the society is not ready for it yet. So, I think we should promote those role models of women who are successful because of being good at their job. Two years ago, there was a research on school textbooks which showed that we teach leadership to male students and tolerance to female students. That is why reforming educational materials is one of our primary goals, and we are going to use gender mainstreaming strategy.

Many educational projects like FAST, Tumo, AYB, etc., operate outside of general public education system. How are you going to cooperate with them?

— Because the government hadn't had a clear vision and strategy in education, many side projects – including good projects – had entered the field. We have now developed a precise policy on education, and can see, analyze and value the work Tumo, Armat Labs, FAST or Araratian Baccalaureate do. I think we should learn from all those projects see how we can work with them staying faithful to the values of our current government which include equity and accessibility of high-quality education for everyone, enforcement of integrity within the system which implies elimination of corruption, as well as depoliticizing of education.

WE HAVE NOW DEVELOPED A PRECISE POLICY ON EDUCATION, AND CAN SEE, ANALYZE AND VALUE THE WORK TUMO, ARMAT LABS, FAST OR ARARATIAN BACCALAUREATE DO

What is your opinion of Araratian Baccalaureate, particularly taking into account the conflict between them and Minister Harutyunyan?

— I cannot express any grounded statement regarding the overall content of the project, since I have not studied the content as such,, but I am very much impressed by the work the AB examination center did: these are excellent specialists who have developed a whole new approach to evaluating knowledge. For now, the contract with AB is being terminated, but we work with them to discuss different aspects which should be under the state supervision. We need to align the academic programs with the development perspective of our country, thus the content of the 4 subjects that has been accredited by UK NARIC and serve as key openers for the international recognition, should also be studied. Since these are STEM subjects I think we won't have any major alignment needs, but the process has to be performed. I believe if there is a decision to introduce AB system in all high schools, it is a long-term process, and we need to conduct expert examination and understand how it should be conducted. ◆

AYB FOUNDATION:

The only goal is to improve the educational sector

When people hear "Ayb", they mostly think of either the school or Araratian Baccalaureate. But the foundation has many other projects. What talked about it all with foundation's Deputy Director Mary Mamikonian.

INTERVIEW : TATEVIK STEPANYAN / PHOTO : AYB ARCHIVE

When people hear "Ayb", they mostly think of either the school or Araratian Baccalaureate. But the Foundation has many other projects. What is Ayb Educational Foundation in its entirety?

— All projects of Ayb Foundation have one goal – to improve the educational sector of Armenia and create an atmosphere in which children will develop, be competitive in changing reality and easily respond to the new challenges. Besides Ayb School and Araratian Baccalaureate, our major projects include: international and all-Armenian contests (Kangaroo – Math for All, Meghu – Armenian Language for All, Russian Bear – Linguistics for All, All-Armenian Tournament of Young Chemists, the national stage of the World Robot Olympiad), the initiative of the school's alumni – Khan Academy Armenia, FabLabs, AYB Labs, Dilijan Central School, etc..
Indeed, Ayb School is closely connected with us. We always introduce the school to our benefactors and partners as one of our largest projects and the most apparent outcome. That project was the first one; it already lives its own life. The Foundation focuses more on creating and developing new projects.

You have a large community of donors. It is interesting to know on what projects the raised funds are spent?

— This year, the main goal of fundraising team is the scholarship fund replenishment. 70% of Ayb high school students receive scholarships as reimbursement of the tuition fees. These are children of families, where parents have difficulties to pay for their child's education. This is a serious responsibility for us – our actions directly influence children's future.
The statutory goals of Ayb Foundation are another important direction. The raised resources enable us to create new projects aimed to develop the educational sector in Armenia. In this case, Ayb's major donors help us greatly. Our donors support our initiatives, as they trust us and believe in our mission. By the way, any person can make a contribution and become our donor at donate.ayb.am.

We talked about scholarships. Many people think that these finds are allocated for children from financially secure families.

— The funds are allocated only for children whose parents cannot cover the tuition fee partially or fully because of the family's financial situation. Any child from Armenia and Artsakh, admitted to Ayb high school, can get scholarship – reimbursement of the tuition fee
The tuition fee at the school includes the costs of learning, food, and transportation. The tuition fee is reimbursed fully or partially, depending on the family's financial capacity.

Solemn Ceremony of Certification of the Participants of the Araratian Baccalaureate Teacher Professional Development Program

When considering the requests for financial support, you come across many different situations. There are cases, when the family is in critical financial situation but at the same time the child has an outstanding performance and has the chance to get out of that environment and realize his/her potential. For example, the family lives in a far village, one of the parents is unable to work, the other parent works in the village, and there are several children in the family. A child from such family has managed to get admitted to Ayb High School. Of course, these families should be supported. Our donors give the chance of the better future.

In 2006, 8 founders of Ayb set a goal to bring Armenia to a new level with the help of education. After 12 years it is interesting to know how close the foundation is to that goal now.

— Huge work has been done with the support of our founders and donors who have shaped and developed a powerful community around this idea over the years. The community includes donors, alumni, parents, teachers, students, and all like-minded people who represent Ayb everywhere. We have over 259 alumni who are creative, inquisitive, active, initiating business and social projects in Armenia and for Armenia.
In any case, the first 12 years are still the beginning, as we face big challenges in the sector of education every day. All over the world, this is one of the sectors that requires continuous development and changes dynamically.

There is a public education sector in Armenia where most children study, and there are private educational initiatives that exist separately from the public education. Is it possible to use the positive experience of Ayb Foundation in public sector?

— Ayb School is not a private school. Ayb is a community school and in Armenia this format was first established at Ayb. The school belongs to the community; there is no specific owner whose interests are protected here. At the same time, there is no state participation. This is an alternative format, and it is very important for parents to have a choice – to choose public school, community school, or private one.
"Ayb" Foundation's projects' influence is considerable. We have educational contests for entire Armenia and Artsakh. The goal of the contests is to stir the children's interest for education, and why not – to show that learning can be a pleasure.
AYB Laboratories are also impressive. We opened AYB Labs not only at Ayb School, but also at other public schools, with the same format. We create an environment, where a child can apply his/her knowledge, make experiments, and see the real depth of his/her knowledge. It is very important that teacher and student test something together, consulting and helping each other. It is teamwork of a different level and a completely unique way of learning.
We have created an internationally-qualified product for all high schools in Armenia – Araratian Baccalaureate (AB). For about four years, we worked with Cambridge and UCL within the framework of the grant agreement signed with the Ministry of Education and Science. In fact, we plan to implement this program at all public schools. Currently, we are discussing implementation of AB with the Ministry of Education and Science because there is a new team and it is necessary to understand their vision regarding future development of the program.
In the framework of AB our goal is to spread the best experience and improve high school education. AB provides innovative approach to learning processes, lesson plans, textbooks and trainings for teachers and headmasters. The experience of the world's best education systems was taken as a benchmark.

What was your motivation for leaving the banking sector and starting to work in a completely different sector?

— When you work in a commercial sector, at some moment you realize that your outcomes are numerical. At some point, you just say: "And what is behind the figures?". Behind figures you see a smiling customer and human relations. In my life also, the moment matured, and I decided to work in a sector where human relations are priority. I realized that my aim is to build better and more productive human relations around our society and myself, based on charitable deeds, positive emotions, support, and mutually beneficial relationships. Then I realized that it is mainly derived from the bases – the family, the education. The educational sector of Armenia is at the stage of establishment and I would like to be part of development process.

SMBAT GOGYAN:

"Inflation exists not only in finances"

In June, the Supreme Certifying Committee of Armenia, which issues all the academic degrees, got its new chairman: mathematician, senior researcher, university professor and school teacher Smbat Gogyan. Young, active scientist with informal image, Gogyan appears to be an unusual figure for the Committee, whose top managers almost always used to be Soviet-era science bureaucrats. Regional Post discussed with Gogyan the Soviet legacy, modern-day scientific potential of Armenia and the need to revise the government's approach to education.

INTERVIEW : KARINE GHAZARYAN

Conventional wisdom states that Armenia has a valuable Soviet legacy in science, and it is due to that legacy that our science was able to survive the 1990s at all. Do you think this basis is indeed so important?

— The legacy is for sure important because whole scientific groups and institutes were formed on Soviet scientific demand. But after the independence, it seems we did not understand the real scale of our capabilities. We overestimated our role on global science scene and did not struggle to grab our piece of pie. Anything can be lost if one does not make enough effort to preserve and develop it: inflation exists not only in finances. It is important to clearly see where the field heads to, or to move it in your direction. If a country does neither of these, it eventually isolates itself and is able to conduct only the bare minimum.

Armenia has significant scientific equipment: a collider, for example. Simply maintaining it can cost quite a lot of money. Do we manage to keep or use the capacities of all the equipment?

— The collider physically exists but it does not operate very effectively. In general, we failed to realise the potential of applied science. Take the well-known case of drone production. People say we could produce thousands of drones if we wanted. But no one can say for sure whether this is true or not until we actually manufacture them. The fact is there is no drone production in Armenia. Maybe there are good scientific grounds for it, but turning this potential into products requires a long-term strategy and good management.

Do you think there exists a problem of aging scientific community, and that there is no one to replace Soviet-generation researchers?

— We work on the respective statistics. At this moment, I cannot say for sure but I assume such statement is justified. There is a big gap between generations of scientists, and young researchers often have to deal with tasks set by scientists over 60 who often do not really understand the modern challenges. Loosely speaking, no one needs a study on CRT television when digital technologies are in their 4th or 5th generation.

The infrastructure left after the collapse of the USSR largely predetermined the way of development of our science. Do you think the European model of development could be more suitable for the field?

— The Soviet and European models do not differ that much. The difference is in the aim of the outcome of scientific work. In USSR, the government planned the results institutes

had to produce, while in Europe they were a bit more independent. This approach made Armenia able to accomplish certain goals. For example, Nairit Chemical Plant supplied the whole Union. But once there was no Union and no ties between manufacturers, Nairit lost its market and faced the need to find a new one. The latter was not successful, and the factory closed down. The same happened with many institutes where research areas were designed according to the needs of certain production in, for instance, Russia. And when the production stopped in Russia, the work of these institutes became useless. Nowadays, we have the Science Committee which distributes funding for institutes and research groups. So the process goes on, but there is no universal strategy of where the field goes to. This looks more like a mechanism to fight unemployment rather than an engine for encouraging innovation.

Does the country have enough resources to invest in science? Applied fields, like IT or engineering, can be tied to businesses and thus go forward. But what about fields like mathematics or theoretical physics?

— There is a big delusion concerning IT. When they say IT is growing and developing rapidly in Armenia, they do not take into consideration that this development is mostly just about the qualified and cheap labor force that exists here. Many European countries use this labor force, but this cannot be regarded as scientific development. Very little research is done in the field. Of course, there are innovative projects but much fewer than we are used to think. It's like saying that Armenian migrants working at construction sites in Russia make their contribution to the cultural and historical development of Russian architecture.

But IT still gets funding easier than theoretical sciences. Where should the latter find financial resources? Is the government able to provide it?

— I think the researchers should work closely with HEIs. Universities, in their turn, should be interested in attracting highly qualified specialists. To some extent, we have had monopoly in universities, so they were not concentrating much on staff policy. As a result, the American University of Armenia, for example, hunted all the best researchers and professors, while Yerevan State University has serious troubles with attracting students for over three years now. They say students have no money to pay for education, but the fact is people prefer to pay more to the AUA as they give some credit of trust to it. Yerevan State University will have to work very hard on creating competitive curriculum and research groups to change this.

As a scientist you accepted a fully administrative position of the Chairman of Supreme Certifying Committee, so, I assume you give importance to the Committee. How can it contribute to the rise of trust towards degrees issued in Armenia?

— If the Committee supervises the educational and issuing processes properly, the value of Armenian degrees will rise over time. I completed my postdoctoral studies in Poland, and the institute there considered my candidacy based not on my certificate but on the content of my thesis. And my goal as a Chairman is to make the Armenian certificate a criterion for evaluating the content of a dissertation. This is a problem typical for the entire system, and the Committee alone cannot solve it; we should cultivate the right attitude towards knowledge from the preschool age.

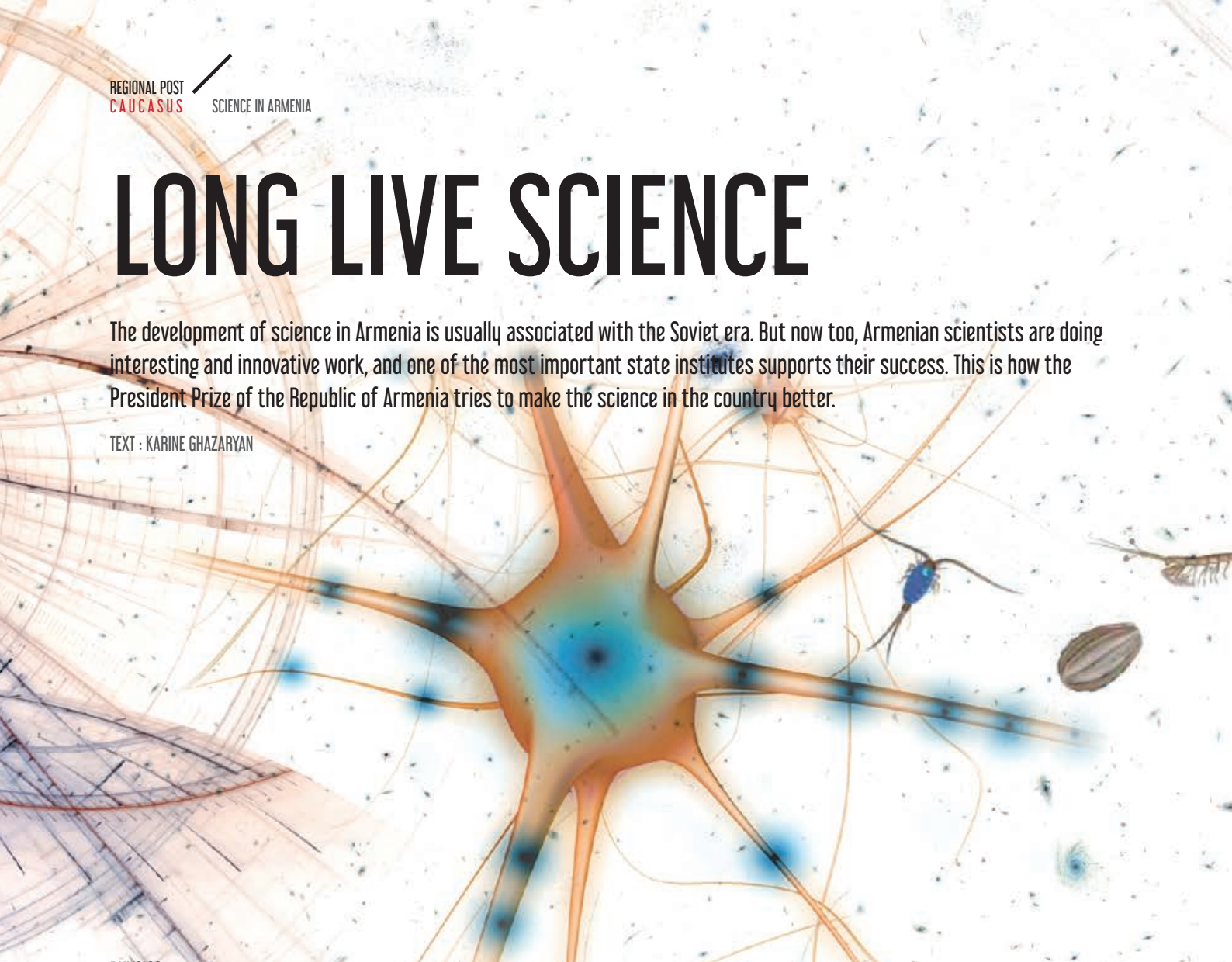
What should be done to make the 12-year schooling system more effective?

— If a person graduates in 18, it does not matter whether he went to school at 5, 6 or 7. What matters is the content and quality of the education he or she received. Yes, our high school is not very effective, and the concept of education should be revised. When I was taking my school students to olympiads, I tried to encourage them not to go for the medal only, but to try to discover the new and to realize their potential. It is them who will form the generation of scientists who do not compete to prove who is smarter, but stand side by side to move the field forward.

LONG LIVE SCIENCE

The development of science in Armenia is usually associated with the Soviet era. But now too, Armenian scientists are doing interesting and innovative work, and one of the most important state institutes supports their success. This is how the President Prize of the Republic of Armenia tries to make the science in the country better.

TEXT : KARINE GHAZARYAN



PHYSICS

The President Prize of the Republic of Armenia is intended for achievements in all the natural sciences. Physics, however, occupies a special place in this series, with a separate prize for physicists. The organizers do not discriminate at all against the rest of the sciences, it is just that in Armenia physics is a much larger sphere. “At first, science was a single sphere, but the physicists always got the prize”, says Roland Avagyan, Head of the President Prize Committee for Physics. “This is one of the most developed spheres in Armenia, with 30% of the authors of the scientific articles published in the country being physicists.” Avagyan clarifies that experimental physics requires too much investment, therefore it is theoretical science that develops more in Armenia. “This is the reason why we in the committee usually give preference to the experimental work out of two equally worthy applications.” In today’s conditions, the prize money is not sufficient for conducting a full-scale research, but, according to Avagyan, even this short-term aid has led to a competition between the working groups, which can boost the sector’s development.

The topics of award-winning works are very different: space evolution since the big bang to the present, laser physics research that can be used in medicine, studies of rapidly developing quantum computing, and more.

Arsen Babajanyan, Doctor of Physical and Mathematical Sciences, Associate Professor of the Department of Radiophysics of YSU, and his colleagues were awarded the President Prize for work revealing the peculiarities of the stimulation and dissemination of polycarbonate surface plasmon polaritons in nanostructures.

While trying to explain ordinary mortals the meaning of this work, Babajanyan mentions the possibilities for its application. “The speed of contemporary electrical equipment is limited, and technically humanity has already hit that limit. By using the possibilities of optical physics, this limit can be pushed. Such equipment is called optoelectronics, and our research is exactly about it. By the way, we started working on this direction when it was just beginning to evolve.” Arsen Babajanyan and other scientists are now conducting their research in the modern laboratory operating at YSU. The laboratory is also open to students who are working here on solar panels, robotics and other projects.

MEDICAL SCIENCES

If physics can be theoretical and experimental, then discoveries in medicine do not stay long on paper. “This prize is awarded to the working groups that are united around one or more scientific issue and who bring the results of their research into practice,” says Dr. Mikayel Narimanyan, Doctor, Professor of Medicine, and the Head of the President Prize Committee for Medicine. Such was, for example, the neonatal resuscitation program: the prize money that was awarded for it was used to buy part of the ambulance special equipment. As a result, children born with problems can be transported to Yerevan, more safely, from even the most remote places of Armenia.

Several years ago, a prize was awarded to doctors who had done a great work in establishing intravenous neurosurgery. Narimanyan explains that while brain and heart strokes remain the most common causes of death in Armenia, intravenous stenting allows far more effective fighting against brain stroke, without harsh interventions. By the way, one of the laureates became co-founder of the brain stroke scientific and educational center at the State Medical University. “In fact, these working groups create a scientific product, which then occupies a place in the market of medical services and gives results. Here the universities play an important role: by incorporating academic achievements, they can greatly facilitate the rapid transition to application”.

Usually, the President Prize is given not to individuals, but to working groups. Mesrop Shatakhyan, Doctor of Medical Sciences, Cardiovascular Surgeon, is one of the unique professionals who received the prize alone. “At that time, I was working on the production of heart valve replacements from pig and cow pericardia: they were then to be implanted into patients with heart disease, from infants to adults aged 30-40.”

Like in physics, large investments are needed to perform a comprehensive medical research and to apply its results in hospitals. Despite this, Shatakhyan is convinced that the prize is an important assessment of the long-term work of the scientist and a serious incentive to move forward.

NATURAL SCIENCES

This award is given for success in several areas. Among the research conducted by the laureates, there are studies in mathematics, chemistry, and biophysics. For example, two years ago the prize was awarded for the work of studying the interactions between the most important biological molecules, nucleic acids, and various biologically active substances and compounds. As the healing or harmful properties of the substances are often associated with these interactions, the work may become the basis for evaluating the effectiveness of drugs in the future. “Science should be in demand and appreciated,” says Levon Tavadyan, Head of the President Prize Committee for Natural Sciences. “Moreover, the award given to one group also encourages other scientists, and when the work is singled out, that directs other academic groups to do a job of similar quality.” He notes that the consumers of science are education, industry, even culture, and all these spheres must be based solely on high-level scientific work. It happens that commissions do not receive such worthy applications. In that case, the prize is not awarded, but the following year there may be two winners at once. “We choose not the best one among the applications, but an indeed worthy job that can have a further development,” says Levon Tavadyan.

At the same time, Poghos Vardevanyan, Doctor of Biological Sciences, Professor, Head of the Chair of Biophysics at YSU, who received the award for research on the interaction of the most important molecules of life, nucleic acids, and the above-mentioned compounds, notes that the work of a scientist is not visible at all and can be judged only by secondary data, such as the appreciation through prestigious prizes. “When an artist creates a canvas, everyone can go and see it. Whereas science is much more complicated: making science public, making it understandable to the people is complicated.” According to him, the President Prize is important in discovering the scope of the scientist. Besides, this award can show the younger generation that the scientist is valued in our society, thus making the scientist’s career attractive. ◆

(IL)LEGAL ACCESS

Access to scientific papers may cost thousands of dollars due to major publishing houses setting surprisingly high prices while often paying nothing at all to the scientists they publish. For years many researchers, like computer programmer Alexandra Elbakyan, fight for open access to scientific content. Meanwhile, university libraries in low-income countries like Armenia find alternative ways to legally provide necessary materials to their students.

TEXT : KARINE GHAZARYAN

Writing a decent academic paper always requires lots of research, including reading decent papers of other scientists – tens and hundreds of papers. Still, not everyone can afford it as scientific content costs quite a lot of money. In general, academic publishing is an industry with limited audience but over $20 billion of annual global revenue. Half of the scientific journals' market is controlled by only three companies: Elsevier, Springer and Wiley-Blackwell. The biggest one, Elsevier, has 24% market share and 36,8% profit margin, as of 2017 (for comparison, Google has just 30,18%). These numbers are unusually high compared to the average in most industries, and Elsevier, along with other major publishers, has faced criticism for unfair policy. The reason for such high margin lies in companies' successful tactic of cutting costs: In most cases, they pay nothing to scientists for publishing their work; furthermore, they use volunteers to conduct peer reviews and confirm that the work is worth publishing. Not only they don't pay the specialists they work with, but publishers also charge an average price of $30 for a single paper and often sell only packages rather than separate papers and journals. The prices are so high that even the richest Harvard University Library complained they cannot afford them. Spending $3,5 million on academic papers annually, Harvard called their researchers to publish works in open-access journals (although scientists have to pay for that out of their own pocket). Notably, the studies Elsevier and other companies publish are generally conducted with government funding, and the journals they sell are often bought by universities using government funding. Despite this closed cycle, in the world of science the value of research is estimated by the prestige of the journal it was published in; and you won't be surprised by who owns most of those journals.

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Alexandra Elbakyan, a young Kazakhstani computer programmer and neurotechnology researcher of Armenian descent, was one of the many scientists who could not afford to buy papers to conduct her research. Frustrated with the unfair policy of publishers, she decided to fight the problem. In 2011, she created Sci-Hub, a website that makes available even the most hard-to-get and expensive papers. Sci-Hub bypasses publisher

paywalls, gets the inquired material, puts it in LibGen online storage, and then provides it to the user. Next time someone searches the same paper, Sci-Hub just provides the copy from LibGen. “I think that Sci-Hub certainly influences publishers’ policy”, Alexandra Elbakyan told Regional Post. “When research articles are right there available on the Internet for free download through Sci-Hub, the paid access to them simply loses its meaning.” During the past seven years, the service collected and stored over 67 million papers, a collection large enough to provide just about any article one may need: from latest papers on quantum mechanics to the classics of semiotics.

There are other solutions that are aimed at facilitating access to those articles that already exist on the Internet. These engines make the search for particular content last as long as a click. However, Elbakyan notes, the success of Sci-Hub is due to its ability to provide access to those articles that literally cannot be found online for free. “Sci-Hub was originally created

WHEN RESEARCH ARTICLES ARE RIGHT THERE AVAILABLE ON THE INTERNET FOR FREE DOWNLOAD THROUGH SCI-HUB, THE PAID ACCESS TO THEM SIMPLY LOSES ITS MEANING

in order to provide access to ‘difficult’ and the most closed paid articles. And it opens any closed content in seconds. That is precisely why it is considered illegal; simultaneously, that is precisely why it may be able to change publishers’ policy.”

In 2015, Elsevier filed a legal complaint in the US against Sci-Hub. They won the trial, and the court blocked the original sci-hub.org domain. The engine then was forced to change domains several times being systematically banned in a number of countries. Just a year after the lawsuit, Nature, one of most cited scientific journals, included Elbakyan in the list of top-10 individuals who influenced the development of science in the world. When asked what’s the possibility for the publishers to eventually bring Sci-Hub to a close-down, Elbakyan said: “War is waged against us. And at the height of war we cannot seriously predict whether we will win or lose.”

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Armenia is listed among countries that acquire more than 50,000 Elsevier papers annually, and this is the highest rate in the South Caucasus. As everywhere else, universities are among main buyers. American University of Armenia, for example, spends around $40,000 per year on purchasing studies. The university’s AGBU Papazian Library director Satenik Avagyan told us they buy less printed books and more online databases, however, digital copies do not cost less. “Of course this is very expensive, and if the government could buy the materials and provide them to many universities at a time, the costs might be reduced. Now the government buys only those journals that are largely used, but it is important to understand that if you make an offer, if you introduce new papers to the audience, interest may arise.” Ms Avagyan adds that in academic institutions there should be more highly qualified librarians who would not simply store the books, but would be able to understand the needs of their communities and form a respective collection.

The American University is a member of Electronic Library Consortium of Armenia (eLCA) which provides access to digital academic materials. Another major HEI, Russian-Armenian University, also participated in eLCA and

Reading room,
Harvard University Library

Alexandra Elbakyan

plans to restore its membership. Head of RAU's library Artur Soghomonyan says this allows to have access to a large number of publications for an annual fee of around $140. "In general, we are subscribed to around 50 journals; mainly these are Russian-language periodicals, still, there are a number of Armenian publications also." Soghomonyan says they spend around $10,000 annually on purchases. "This is a minimum budget, and we could probably spend more, but there is no significant demand. Physics students and researchers, for example, say they don't need us to buy journals as they use subscriptions of their specialized research institutes."

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eLCA is one of the most effective solutions academic institutions use to cope with publishers' high prices. It is an NGO and a part of a larger network called Electronic Information for Libraries (EIFL) that promotes open access awareness in 47 developing countries around the globe. eLCA uses the fees paid by universities to cover the €1400 cost of participation in EIFL and give an opportunity for its members to use all the open-access materials of the network. "Developing countries, like Armenia, have a chance to negotiate better deals with publishers, and the latter usually make discounts", says eLCA executive director Anna Chulyan. "Armenia paid $6,000 for a database called EBSCO, but now we don't have it, as the consumption is low but the price is getting higher every year. The same happened with our Springer subscription: The government eventually called it off." Around 10-11 Armenian universities confirm their eLCA membership annually. "Not only do we provide access to electronic databases, but we also organise educational activities to train university librarians, as good specialists are able to encourage larger usage of available academic materials", says Anna Chulyan.
The consortium found various ways to bring materials to its members: from informing about new studies in open access to using up to 3 years-long free trials. The same goes for universities: they have to find ways and invent tricks to bring knowledge to their students without breaking the law. And individual researchers go all the way from pirating materials via Sci-Hub to establishing pirate bays of their own.

ARMENIA PAID $6,000 FOR A DATABASE CALLED EBSCO, BUT NOW WE DON'T HAVE IT, AS THE CONSUMPTION IS LOW BUT THE PRICE IS GETTING HIGHER EVERY YEAR

ROOM FOR IMPROVEMENT:

Need for Establishing a Clinical Counseling Degree Program in Armenia

Doctor of Philosophy in Counselor Education and Supervision, Licensed Professional Counselor Hasmik Chakaryan addresses the lack of clinical counseling programs and professionals in Armenia illustrating the current mental health state of the people, offering possible reasons and solutions

TEXT : HASMIK CHAKARYAN / THIS ARTICLE WAS ADAPTED FROM ITS ORIGINAL VERSION PUBLISHED BY SPRINGER, AUGUST 2018. ADAPTATION AND EDITING BY SILVA HOVAKIMYAN /
PHOTO : WEBSTER UNIVERSITY

HISTORICAL AND SOCIO-CULTURAL CONTEXT

Because historical and geopolitical factors have greatly influenced the development of the Armenian society, its mentality, as well as the culture, educational system, socio-economic state, and the political structure, a careful examination of past events is necessary in order to understand the current mentality of its people and draw accurate conclusions regarding future implications for a counseling profession. The collective memory of trauma caused by wars, attempts of ethnic cleansing, generational migration and natural disasters, as well as the fear of re-victimization have been passed down from one generation to the next significantly affecting the psychological wellbeing of the Armenian people.

The destruction of state structures, monetary value, as well as the systems of economy, healthcare and education created a cycle of generational poverty and a chain of mental and emotional illness. Armenians still struggle with complex psycho-social issues that impact their daily lives due to all the above mentioned unresolved traumas. Another contributing factor to the psychological state of the people is the ongoing threat of war by Azerbaijan. To add to the already vulnerable condition of the state, people from the nearby regions struck by war and terrorism are flooding the country which lacks structures to meet the needs of these refugees.

CULTURAL OVERVIEW

Armenia represents a mixture of eastern and western trends of mentality and ways of living. Talking to strangers about personal\family problems is discouraged; e.g. it is unacceptable to talk about genetic diseases and disabilities, including mental and emotional disorders. Epigenetic trauma syndrome and sense of self-preservation, in addition to constant fear of another war/disaster have led the society to become very overprotective of their cultural norms and traditions. In this relation-based culture, meaningful connections among close people serve as surrogate for counseling, as connectedness and sharing are important elements in collectivist cultures.

THE DESTRUCTION OF STATE STRUCTURES, MONETARY VALUE, AS WELL AS THE SYSTEMS OF ECONOMY, HEALTHCARE AND EDUCATION CREATED A CYCLE OF GENERATIONAL POVERTY AND A CHAIN OF MENTAL AND EMOTIONAL ILLNESS

CURRENT STATUS OF EDUCATION AND MENTAL HEALTH SERVICES

For mental illness treatment, there is generally only psychiatric hospitalization available. People have little to no understanding as to what clinical counseling is and what these services can accomplish. Negative stigma attached to mental health among the general population create barriers to education and services. The only mental health training programs in the country are psychology programs which heavily focus on theory and research and struggle with lack of practical training. According to alumni of psychology departments in Yerevan, the capital of Armenia, students have no requirement of practical training to complete their degrees and have very little access to clinics where they could potentially complete face to face clinical training. Over the past several years, there has been a blooming increase in the opening of many psychological centers, however, the field is highly disorganized and no oversight is provided in order to regulate and guarantee quality services. There are no systems of licensure, supervision, code of ethics, etc., to regulate the entire field and profession and to provide accountability for the professionals practicing in this area.

Ongoing interviews from 2007-2018 with mental health professionals regarding the state of mental health in Armenia revealed the following common themes: outpatient services are extremely scarce, and way beyond the financial affordability of the general population. Anyone who deems oneself a psychotherapist can start a private practice and provide psychological services. There are no routine, unified and officially recognized standards and regulations to guide and oversee an ethical and evidence-based mental health services. Thus, each agency or specialist comes up with their own “ethical standards” which are often non-written but rather orally conveyed concepts. This makes

it very hard for consumers to seek legal defense against malpractice because there is a lack of definition as to what that practice entails, and what patient/therapist rights and responsibilities are.

NEED FOR COUNSELING

Considering the current state of mental health in Armenia, this field needs immediate attention, improvement and further development. The increasing demand for mental health services in the country and the above mentioned contributing factors have opened a space for a proposal to establish a clinical counseling degree program which would train the students mostly coming from both BA and MA psychology programs to offer supervised therapy services to the public. There already are educational programs that have the potential to develop and serve the foundation for a Clinical Counseling program. Graduating students can work towards obtaining licensure in the future when necessary standards and criteria have been placed nationwide. Counseling is a profession which can fit within the context of the Armenian culture to address people's mental health needs, provide education, training, professional services, and scholarship. The essential tasks are providing fact-base rationale for the necessity to establish counselor education in Armenia; providing ongoing education on how counselor education can benefit the education and healthcare sectors; and providing rationale and ongoing education on how this profession can improve people's mental health.

CODE OF ETHICS AND STANDARDS

To establish the counseling degree and profession, it is crucial to have clearly stated guidelines, ethical codes and standards of practice. Khachaturyan stated in his overview on Armenia that no elaborated and generally accepted policies exist in either research or application in Armenia. Moreover, no general state programs or requirements are in place for training professional applied psychologists in the country and thus each educational organization is responsible for designing its own program. There are no codes of ethics published on any of the organizations' web pages or periodicals.

MEDIA

The role of mass media is very important in raising awareness among the general public on basic educational and health care concerns, needs and terminology. Any changes within any system, such as the educational and healthcare directly affect the people, thus the public must be kept aware and educated on such matters. It is recommended to conduct national surveys and find out Armenians' perceptions of mental illness. Further surveys on availability, accessibility, as well as quality of mental health services would help get necessary data to continuously improve the field. Raising public awareness on mental health and educating people about stigma, myths and facts is crucial. Raising awareness among the general public helps to create a more informed society.

MINISTRIES

Conducting discussions with the Ministries of Education and Healthcare with research data indicating mental health needs among public and importance of a regulated clinical counseling profession to help address these needs both on educational and clinical levels, as well as a long-term plan for continuous improvement of the mental health field is vital for necessary funding and legislation. Ministries of health and education can also help create mental health agencies where licensed specialists and interns can work together to address population's mental health needs.

EDUCATIONAL PROGRAM

Funding for starting and maintaining a graduate counseling degree program and opening centers for clinical practice will need to be obtained not only through state but also through local and international donors. Clinical counseling is a separate department from psychology and

> INTERDISCIPLINARY COLLABORATION WILL ALLOW ALL SYSTEMS WITHIN THE SOCIETY WORKING TOGETHER FOR ADDRESSING MENTAL HEALTH CONCERNS OF THE PUBLIC AND ENSURING SAFETY OF VICTIMS AND REHABILITATION OF OFFENDERS

thus needs to function independently with its own academic leadership and must oversee required practicum and internship processes. This department must set the foundation for the standards and guidelines of best practices for the profession. Ongoing evaluation process must be conducted.

CONTINUING EDUCATION AND OVERSIGHT

It would be necessary for the members of this new profession to facilitate professional workshops and conferences on national and international levels to ensure continued education and exchange of experience in order to create unified standards of practice and code of ethics. Once initial steps have been successfully established, the formation of a unified national professional association and a board for licensure will be initiated. This board can also enforce the requirements for continuous education and licensure by offering a standard national licensure test. Formation of an overseeing body which investigates disputes and unethical conduct as an independent entity for the sake of unbiased professional practice will be required.

Concluding above illustrated steps is a multiphased plan which requires the participation of several professional entities to lead to the establishment of clinical counseling departments in universities offering an MA degree and a PhD in future.

INTERDISCIPLINARY APPROACH

The profession of clinical counseling cannot act independently from other disciplines because collaboration between all fields is vital for clients' best care and safety. This comes in play especially in cases of reporting harm to self or others, child abuse, domestic violence, victim advocacy, offender services, etc. Further steps will include branching out into other fields by creating counselors' offices in hospitals, nursing homes, orphanages, correctional system, as well as organizational structures, including high-risk employment facilities.

Interdisciplinary collaboration will allow all systems within the society working together for one goal – addressing mental health concerns of the public and ensuring safety of victims and rehabilitation of offenders. It will encourage public access to affordable services. It will also allow the mass media to create pathways of delivery of accurate information from reliable sources to the public. This type of strategy will ensure transparency in the system of healthcare and education and will continuously raise public awareness regarding mental health. For this, laws and regulations must be put in place and enforced to guarantee smooth processes within all sectors of the system.

CONCLUSION

To start such a vast project, it is important to investigate the scene and prepare statistics on current state of mental illness and outcomes of developing counseling services. Counseling professionals are urged to maintain ongoing evaluation of their educational programs, training, clinical services, and advocacy. The latter is vital in the Armenian context to not only guarantee proper representation of the mental health clientele but also to gain trust in the society. Ongoing evaluation and improvement of counseling education and services will in time guarantee state and national recognition and acceptance of the profession. This includes the conduct of ethical and empirical research studies by the professionals in the field, as well as continuous preparation of specialists to provide best practices and quality services to the Armenian population. ◆

BRINGING FUTURE CLOSER:

Science in Armenia under Communism

Dmitry Likhachev

TEXT : TIGRAN ZAKARYAN

The communist ideology from its very inception declared that the society should be governed based on strictly rational principles and therefore it can be assumed that science should have had a leading role in the life of the first communist state in the world. The whole undertaking of the USSR was so innovative that many across the world believed it to be a new form of society worthy to emulate

The real situation was quite different. Science in the state of the soviets was put in the service of technological advancement, which during the Cold War started to mean to serve the purpose of the arms race. Meanwhile social science and disciplines close to it were either dismantled altogether (like philosophy, which basically turned into an apology for Marxism-Leninism, preventing it from generating any seditious idea which could potentially question the legitimacy of the Soviet order) or heavily controlled by the party ideology, which under Stalin practiced quite arbitrary approaches, preferring one idea over another and even changing them at a lightning speed. As Soviet renowned academic Dmitry Likhachev put it: "There was a concept in science in practice that from the very beginning of a research there was only one correct way, one correct school of thought and of course one chief scientist, which was the 'chief' in his science." Under Stalin in many cases it was him personally as he was quoted in most, if not all more or less important research, especially when it referred to history, linguistics, economics or anything alike.

With all the above-said it is noteworthy that education and fundamental research had a strong boost under the Soviet rule as Russia, which had to catch up quickly with the rest of the world as the political strife in the country during 1917-1921 had eroded the already weak infrastructure.

ARMENIAN SCIENCE AND EDUCATION BEFORE AND DURING SOVIETIZATION

Armenian short-lived republic and SSR were former backward parts of the Russian empire and during the existence of the first and early years of the second had tremendous amounts of basic problems to resolve.

The Armenian republic managed to create an elementary schooling system as early as in 1919, which however was not always possible to enforce due to lack of financial and other resources. In the same year the government passed a decision to found a first Armenian university in the modern sense of the word. This university was founded in January 1920 in Alexeandrapol (now Gyumri) and later in the year it was transferred permanently to Yerevan as the advancing Turkish army occupied Alexandrapol for several months.

Very soon after Armenia's sovietization science became part of the new leadership's concern. For centuries the city of Vagharshapat and the spiritual center of Ejmiatsin played an important role in cultural and scientific life of Armenia. Ejmiatsin seminary was almost a non-official Armenian university which gathered renowned Armenian scholars in humanities and its students included most part of the Armenian intellectual elite of the turn of the 20th century.

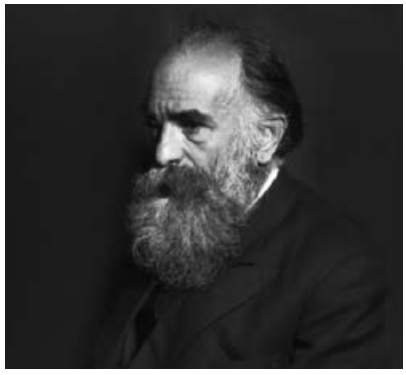
It was no surprise that the first scientific and research institution in Soviet Armenia was the Ejmiatsin Culture-Historical Institute in February 1921, which was created after historical and cultural

monuments, museum and old manuscripts were confiscated from the Holy See and transferred to the new government.
Its activities did not go very smooth at the beginning as one of its founders and director of the museum, Levon Lisitsyan was killed during the anti-Bolshevik February revolt of 1921.
After the end of civil war in Armenia the institution's activities continues with renewed vigor, including Armenian renowned historian Leo (Arakel Babakhanyan) and linguist Hrachya Acharyan, architect Toros Toromanyan and others.
In 1922 the institute was renamed as Scientific Institute of Armenia with linguistic, history and other departments in humanities and art. In 1925 this institution was renamed into Institute of Science and Arts of the Armenian SSR organized on the principle of academy.
From the very first year of its existence, the institute published old manuscripts and modern researches on Armenia's medieval and modern history. Meanwhile some of its members did not escape Stalinist purges. The head of the Matenadaran (museum of old manuscripts) for long years (1921-1937) Senekerim Ter-Hakobyan was arrested and died in prison in 1938.

ORGANIZATION OF SCIENCE IN SOVIET ARMENIA

It was no wonder that in the beginning the Armenian science was heavily, if not exclusively concentrated on humanities and art as in general the Russian empire and the USSR in the early years of its existence lacked fundamental research in areas like physics, chemistry, medicine etc., and whatever existed was concentrated in Moscow or Leningrad (St. Petersburg).
However the mass collectivization and speedy industrialization of the early 1930's which, naturally demanded a certain number of qualified technical personnel as well as research in relevant areas and soon a great number of research institution in science were established across the USSR.
Major economic changes also had their impact on the organization of science in the Soviet Union under Stalin. This was also the time when comparative autonomy of the Armenian (the same as in other constituent republics) academic organization came to an end. It was not eliminated earlier probably because the Leningrad-based Academy of Science the USSR was not totally under Stalin's control until the end of 1930 when scores of academics were arrested and years later it was finally move to Moscow.
In 1933 in Tbilisi the Transcaucasian branch of the USSR academy of science was established which had its sections in Yerevan and Baku. Ultimately in 1935 all of those institutions were transformed into Armenian, Azerbaijani and Georgian branches of the Academy of Sciences of the USSR.
No coincidence that the first head of the Armenian branch was not a local but originally from Leningrad, Franz Levinson-Lessing a veteran of the Imperial Academy of Science of St. Peterburg, and later of the Academy of Science of the USSR.

National Academy of Science



Hovsep Orbeli

THE FIRST HEAD OF THE ARMENIAN BRANCH WAS NOT A LOCAL BUT ORIGINALLY FROM LENINGRAD, FRANZ LEVINSON-LESSING A VETERAN OF THE IMPERIAL ACADEMY OF SCIENCE OF ST. PETERBURG

Armenia's own academy of science was founded in 1943, a period when Stalin needed support of the non-Russian nationalities and engaged in war against Nazi Germany made concessions to some less ambitious desires of constituent republics. So Hovsep Orbeli, an ethnic Armenian was elected as its first president to be substituted by Viktor Hambardzumyan in 1947 who stayed in that position for decades until 1993.

STALINIST PURGES

Meanwhile the years of Stalin's rule were not at all safe and prosperous for the intellectuals of the Soviet Union, including the Armenian SSR.

Although the soviet official ideology trumpeted the success in substitution old bourgeois intellectuals with new proletarian ones, in fact the most prominent ones among them shot or exiled, while some old school representatives managed to survive somehow.

Most bright representatives of the new intellectuals, poet Yeghishe Charents, who died in prison and writer Aksel Bakunts (who also worked as a specialist in agriculture) shot in prison were among the most prominent Armenian victims of the bloody purges.

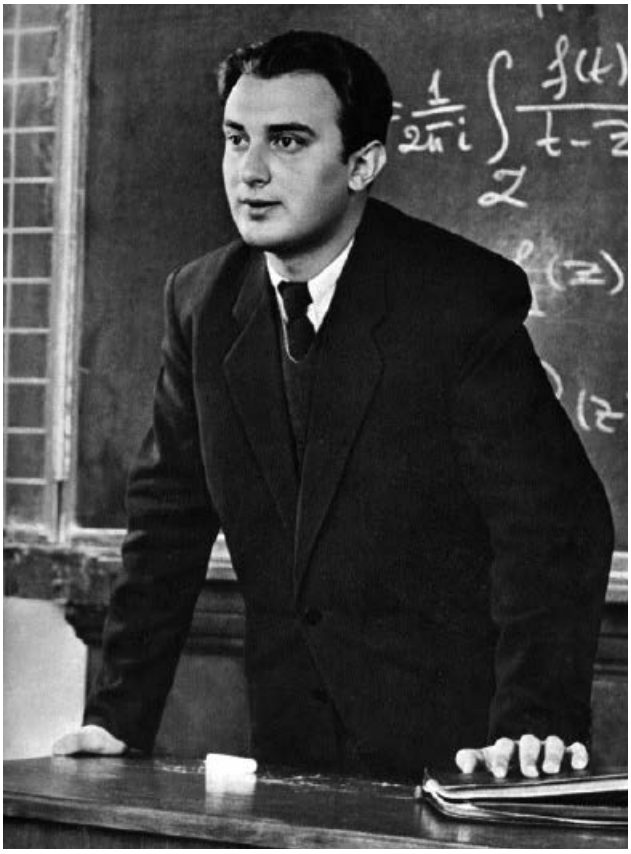
The purges also touched on those who were in charge of research and propagation of the communist ideology. Economist Nersik Stepanyan, head of the Armenian branch of the Marxism-Leninism institute and was in 1933-1934 Armenian SSR People's Commissar of Education, in a private note wrote, probably to his surprise that the Communist leadership is "fighting against national feelings rather than bourgeoisie". No surprise, that in 1937 he was charged with "nationalism" and shot along with other intellectuals and political leadership of the Armenian SSR.

This was a tremendous blow to the intellectual life of Armenians, which was undergoing a second intellectual genocide after another just decades before which was unfolded under the Ottoman rule just a couple of decades before.

Among dozens of prominent intellectuals who found their death under Stalin were woman writer Zabel Yesayan, historian Astvatsatur Khachatryan, histrorian, archeologist Ashkharhbek Kalantar, mathematician Arshak Tonyan, lawyer Grigori Yevangulov, pedagogue Gurgen Edilyan, philologist Gurgen Vanandetsi, historian Davit Ananun, economist and historian Tadevos Avdalbegyan, physician Khosrov Hekimyan, biologist Hakob Hovhannisyan, Armenian Republic's first prime minster and architect Hovhannes Kajaznuni, chemist Husik Ter-Poghosyan, philologist Poghos Makintsyan, writer and translator Vahan Totovents and many others.

SANCTIONED TO THINK BEHIND BARS

Those intellectuals, including scientists who survived were either put to pressure being forced to write apologies for Stalin and the Soviet regime or were part of the system,



sometimes penning accusing letters to NKVD in the hope that cooperation with the regime would spare their life, however it was not always the case.

All this put tremendous pressure on research let alone any free thought in the Soviet Union.

The Soviet intellectuals were not supposed to raise problems and discuss it, as a true intellectual in a more or less free society should be, instead they were summoned upon by the authorities to resolve problems, a large part of whom were created by themselves. So these intellectuals were rather experts than intellectuals in the true sense of the word.

Although the Soviet authorities proclaimed their scientific bases, things under Stalin worked in some case in most anti-scientific way. Delirious ideas, such as for instance to turn the rivers flowing towards the Arctic Ocean into the interior for irrigation and things alike could incidentally be embraced by the soviet leaders and all those arguing against it declared as "enemies of the people" while at Stalin's whim the situation could be reversed.

The same was also in Armenia, where Armenian medieval author Movses Khorenatsi was sometimes announced as 5th century author and those who argued with it had to bear serious consequences of non-academic nature.

An epitome of this voluntarism in the Soviet Union was the construction of the Belomorkanal (the White-Sea-Baltic Canal) by the GULAG slaves costing thousands and thousands of human lives, which ultimately proved to be useless for the navigation of larger ships.

Hrachya Acharyan

Viktor Hambardzumyan (left) in Mexico

However the need of defense forced soviet leader to think in a more constructive way. That urge ended up with a first serious attempt in the history of humankind to develop science behind the bars on the vast territories of the GULAG. Staring from 1930 and later up until Stalin's death in 1953 number of secret research and technical institutions existed in the Soviet Union mostly composed from slave technicians and researchers, whom some German POWs and forcibly removed scientists were added. They were mostly working on technologies designed for military purposes.

SCIENCE DEVELOPMENT AFTER STALIN

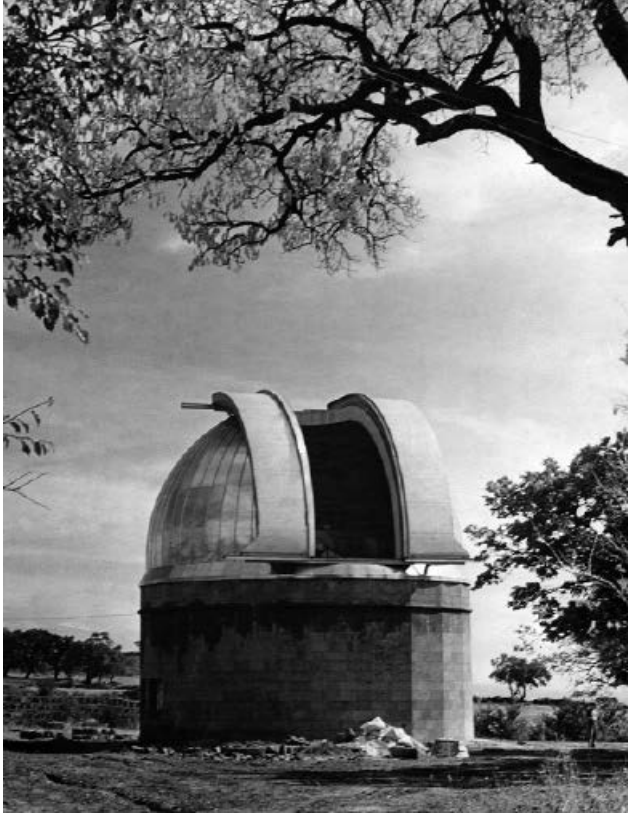
Although after Stalin's death and the 20th congress of the Communist Party of the Soviet Union a period of thaw ensued and GULAG prisoners were released, tight ideological control remained in place. On the other hand no great repression was any more needed as the ideological mold had done its effect over the past decades: most intellectuals agreed with the ideology, while a tiny minority which was to different degree critical preferred to keep silent.
Different new science branches required proper organization and the newly founded academy by 1950 already had over 30 institutions under its umbrella. In 1958 the Matenadaran, which moved from Ejmiatsin to Yerevan in 1939, was given a special status and extended its activities.
While cybernetics was considered as a "fake science" under Stalin, after his death studies in mathematics and cybernetics developed quickly and Armenia became a leader in that area. As early as in 1956 Yerevan Computer Research and Development Institute was founded, soon unofficially called "Mergelyan Institute" after its renowned director Sergey Mergelyan. The institute had some 7,000 employees by 1990.

IN 1956 WAS OFFICIALLY UNVEILED THE BYURAKAN OBSERVATORY, EQUIPPED WITH STATE-OF-THE-ART TECHNOLOGY AND DEVICES OF THE TIME, WHICH STILL IS A MAJOR ONE IN THE REGION

1960's saw a rapid expansion of science industry in Armenia with scores of new institutions added to the Academy of Sciences, in branches such as radio physics, microbiology, seismology, geophysics, cardiology etc. In 1956 was officially unveiled the Byurakan observatory, equipped with state-of-the-art technology and devices of the time, which still is a major one in the region.

PRESSURE ON SOCIAL SCIENCE AND DISSIDENCE

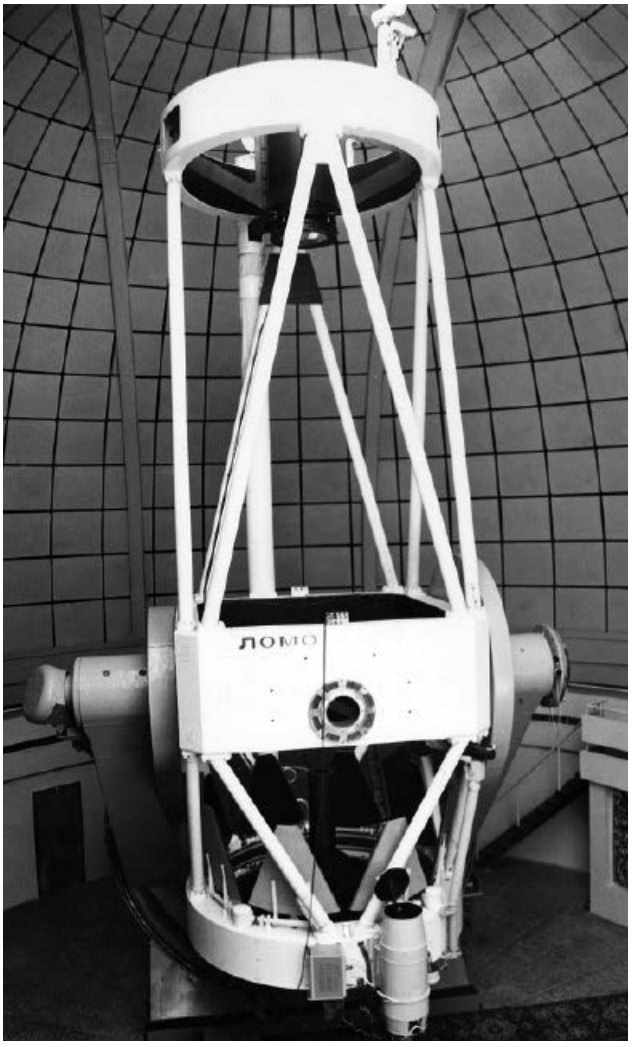
Meanwhile dissidence, mainly coming from few democratic and nationalist centres of mind was not totally eliminated even at the heyday of Stalinism.
Dissidence in Armenia existed even then. In 1941 a group of 30 people mostly students from the Yerevan State University history department which reportedly propagated anti-Stalinist and nationalist ideas, was uncovered, arrested and later shot or exiled. This showed were dissidence possibly could come. Armenian history was indeed a tough topic and any serious student in it could find flagrant discrepancies between what the facts said and the ideological rigid frameworks.
All this accumulated and exploded in early 1960's when the Armenian SSR leadership ensured consent from the central authorities in Moscow to hold memorial events on the 50th anniversary of the genocide. Yet this was not enough as



Byurakan observatory

people on 24 of April 1965 took to the streets in a spontaneous move, in the meantime breaking the official half-silence and for the first time in Armenian SSR history making a national cause part of the republic's social life. There was no way indeed to counter this, the only possible option was to channel the energy into something less harmful for the soviet authorities.

Indeed the research on Armenian genocide surged after those events. In the same their anti-Turkish rhetoric was in the interest of the Soviet Union as this seemed a plausible reason for keeping Armenia within under Moscow's control, in the same time silencing any voice on Soviet-Kemalist cooperation against Armenia, which was a well-known secret to most sound-thinking researchers and more or less informed public. Armenian history textbooks, academic publications in their research of recent Armenian history were strengthening the image of "Turkey-foe vs Russia-brother" and this is still valid in Armenian historiography, although some parts of it are seriously reconsidered after independence.



On the whole Armenian social science and history in particular, functioning under Soviet ideology, admittedly had some success in fact-finding, checking, offering some explanations, however, in some cases they lacked connection with other relevant histories and badly lacked diversity in theoretical approaches.

No suprisingly, in 21st century Modern Armenian social science is only slowly moving away from most patterns established by then, trying to integrate into the global research community.

WHAT IS THE SOVIET HERITAGE IN SCIENCE?

Admittedly Soviet period was a quite dynamic period in the history of science in Armenia. However there are certainly some problems with it, starting from its nomenclature. It was rather "science in Armenia" than "Armenian science" since it was part and parcel of the Soviet science serving its own purpose, mostly unrelated to the needs and expectations of the Armenian people. It was dominated by a certain ideology which at times was contrary to the development of science itself and to the Armenian national interest.

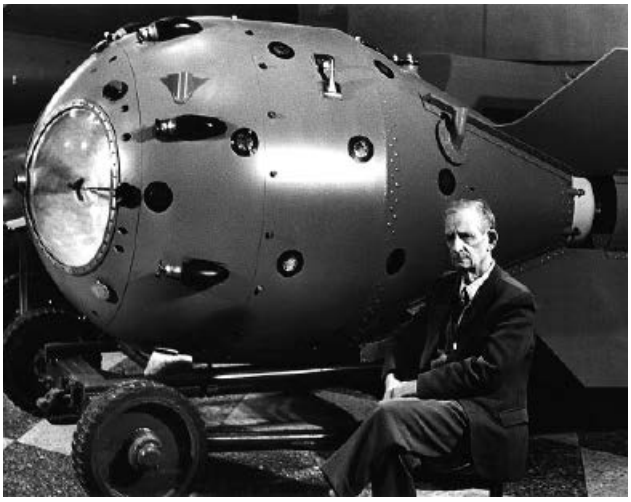
On the other hand modern Armenia inherited a number of research institutions with highly trained professionals but who are underpaid and badly underequipped. Modern Armenia can hardly revive the science which existed in the Armenian SSR. There is no need of doing it either. What we need is a dynamic, internationally integrated science, which can show leadership in certain areas. Social science and research needs a special attention in Armenia in order to have a more modern and dynamic society and this needs to be a prime concern for the Armenian current and future governments. ◈

THE BOMB

The invention of nuclear weapon came as a great miracle from the standpoint of the development of science. But it also could spell a disaster when in the hands of the power holding politicians. Attracting with the opportunity to gain power over the world, the atomic bomb still frightened with the reality of the death of mankind. The history of creation of this weapon turned into a battle of outstanding minds: scientists, politicians, spies. And in this battle many Armenians played significant roles.

TEXT : EVA KOCHIKYAN, ELEONORA MALKHASIAN / THE ARTICLE WAS FIRST PUBLISHED IN YEREVAN MAGAZINE IN 2010

By the beginning of the Second World War, research on nuclear weapon development began in Germany, Britain, France, the United States and a shortly after, in the USSR. Scientists and country leaders knew that the state, which would be the first to create a nuclear bomb, would dictate its rules to the rest of the world. German scientists led by Werner Heisenberg and Otto Hahn achieved outstanding results but, fortunately, did not manage to create nuclear weapon before the collapse of Nazi Germany. Years later, Heisenberg said: "We did not want to make an atomic bomb and were only pleased when the circumstances released us from that need."
The first bomb was created by US scientists led by J. Robert Oppenheimer at the Los Alamos National Laboratory. The operation was code-named Manhattan Project. The tests of the bomb held in 1945 in New Mexico were successful. Soviet leaders immediately gave a assignment to their scientists to build Soviet's own nuclear weapon as soon as possible. The nuclear scientists used to joke: "Those, who would have been sentenced to death in case of failure, will be awarded the title



Los Alamos
National Laboratory

The First Soviet
Union atomic bomb

of the Hero of the Soviet Union upon success; respectively, those subjected to imprisonment, will be awarded the Order of Lenin and so on a downward spiral." Probably driven not so much by sympathy for the USSR, but by awareness of what a threat any nuclear monopoly is for humanity, one of the participants of Manhattan Project, physicist Klaus Fuchs, reported important classified materials to the Soviets. Fuchs was later sentenced to 14 years of imprisonment for espionage.
According to the chief designer and head of research of the "Arzamas-16" nuclear center, Academician Yulii Khariton, the first Soviet atomic bomb was manufactured based on the American prototype with the help of information received from Fuchs. When giving the awards after the first successful test of the Soviet bomb in 1949, Stalin said: "Had we been late for a year or a year and a half with the bomb, we would have probably experienced it on ourselves." ›

GAIK OVAKIMIAN. OPERATION ENORMOUS

The first report on a joint Anglo-American project of nuclear weapon creation was received in Kremlin from Gaik Ovakimian (covername Gennady), a New York resident of Soviet intelligence service. However, back in 1940, the government considered this an attempt by the Americans to misinform the USSR. Only a year later, when a similar message from another source was received, the officials took it more seriously.
Ovakimian himself lived in the US since 1933. Combining job in trade representation of the Soviet Union to the United States with postgraduate studies, he defended doctoral thesis with flying colours. In 1938, a wave of Stalinist repressions reached the American coast. After the shooting of the resident of Soviet intelligence Peter Gutzait, who was accused of participating in a counterrevolution terrorist organization, the Center appointed Ovakimian to replace him.
In 1940, the resident was recalled to Moscow. But a few days before the departure Gennady was arrested by the FBI on suspicion of espionage. They were unable to catch him red-handed therefore he was charged with violation of the law of the registration of foreigners. Only after the United States joined the war, and Stalin himself called Roosevelt, the President ordered to stop the persecution and facilitate Ovakimian's return to homeland. The agent arrived to Moscow in 1942 and continued to coordinate the work of intelligence officers in the US and the Great Britain.
In 1941, Gaik Ovakimian and the head of scientific and technical intelligence Leonid Kvasnikov launched the development of a large-scale operation to sneak into the foreign research centers and industrial facilities. Ovakimian entitled the operation "Enormous." He created a highly conspiratorial intelligence network in the American scientific organizations, and soon many American secrets related to nuclear production became known to Soviet scientists.

The "Fat Man" bomb dropped over Nagasaki

THE CENTER APPOINTED OVAKIMIAN TO REPLACE HIM. IN 1940, THE RESIDENT WAS RECALLED TO MOSCOW. BUT A FEW DAYS BEFORE THE DEPARTURE GENNADY WAS ARRESTED BY THE FBI ON SUSPICION OF ESPIONAGE

Information from the US arrived in a single handwritten copy. Only a handful of people had access to it: Ovakimian himself, chief of the NKVD's foreign intelligence Pavel Fitin, director of the Soviet atomic bomb project Igor Kurchatov, and, if necessary, Beria, Molotov and First Deputy Chairman of the Council of Ministers of the USSR Mikhail Pervukhin. Kurchatov barely had enough time to read the amount of information provided by Ovakimian. He later wrote to Ovakimian: "You shortened the duration of manufacturing the bomb for a whole year!" Decades later, head of "Arzamas-16" Yulii Khariton confessed: "It's fantastic! We thought Kurchatov's information came from *sharashka* (*so were called Beria's secret research institutes where prisoners – scientists and engineers – worked. – editor*).

From left to right: Yury Trutnev, Yuly Khariton, Steve Younger, Denny Erickson, 1993

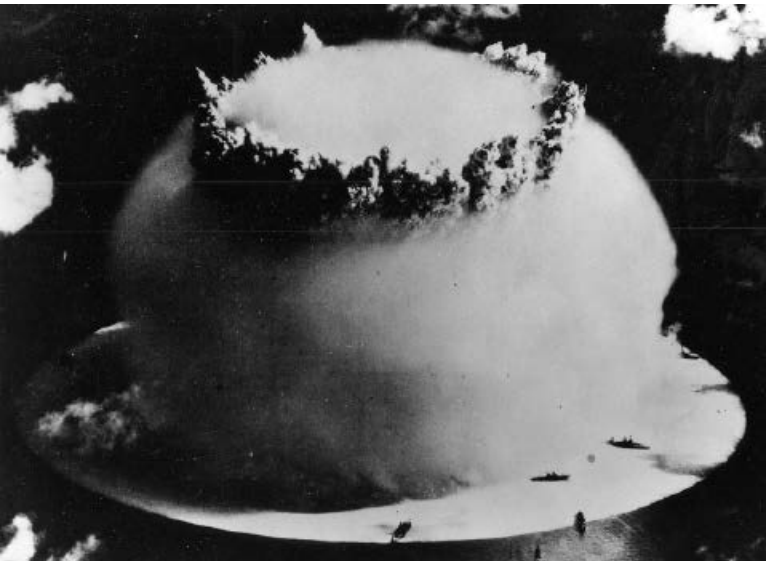
SAMVEL KOCHARYANTS. TOP-SECRET ARMENIAN

Two-time Hero of Socialist Labour, laureate of Lenin Prize and a number of other state honors, one of the creators of atomic and hydrogen bomb in the USSR – it is difficult to name all the regalia of Samvel Kocharyants right away. It is not by accident that he was nicknamed “top-secret Armenian:” There is still not so much information released about him.

In 1930, Grigor Kocharyants send one of his six children, Samvel, to study in Moscow. In the capital the young man entered Power Engineering Institute. His skills were immediately noticed. In 1937, he was admitted for postgraduate study, and in just two days after the outbreak of the World War II earned his PhD degree. Aged 37, he was already head of a department, soon after that – dean of faculty. And then one day, the head of the military department of the Central Committee of the Communist Party showed up in the university and told Kocharyants: “You are being redirected to another job, at Stalin’s personal command.” No one could possibly assume that Kocharyants was transferred to a secret town which was called “Object” at a time, and was renamed “Arzamas-16.” He spent 47 years here working as the head of the engineering sector, as chief engineer of the All-Soviet (currently All-Russian) Scientific Research Institute of Experimental Physics, chief engineer of the atomic and hydrogen bomb.

In 1953, the tests of the first Soviet hydrogen bomb were successfully conducted. For that Kocharyants and three other members of the working group were awarded Stalin Prize of the First Degree and the second Order of Lenin. At the initiative and direct participation of Samvel Kocharyants in the city of Gorky a branch of Bureau of Construction was created, where Kocharyants served as director in 1966-1976.

One of Kocharyants’ sons, Gennady, remembers: “In the beginning of 1970s I met father at a military airfield near Moscow. He was returning with some of his employees from



Semipalatinsk test site. On the way they were hotly debating around an emergency situation that had occurred during the experiment. Only years later, in 1990s, I found out what had happened back then. They needed to dismantle detonators from the fully equipped atomic device just before the test explosion. My father had climbed the metal tower, where the device was installed, and performed the operation.”

Samvel Kocharyants himself confessed in an interview that the work with detonators was the hardest for him. Usually when atomic device is being equipped with detonators, everyone around are taken away to a safe distance. The operation is extremely complicated, and one needs to be calm and confident to implement it. “If someone is anxious, you cannot allow him to work. I always discharged those feeling nervous, and installed the detonators myself.”

Kocharyants was once asked: “Do you get along with everybody?” And answered: “It depends… Our job was tough and unusual: The work we did affected the interests of not only our country, but also the whole world. Besides, we had to do many things for the first time. For example, I wasn’t sure how our device would perform when in contact with the water surface. I told Korolyov: ‘We need to test the missile in aquatorium.’ He said there was no way he would allow that, as problems in international relations might occur. So, I had to explain everything to Khrushchev. The latter gave permission. Eventually, Korolyov tested his rocket, and we tested our device. He then asked me: ‘Go to Nikita, please, I need new launches.’ For that time it was a fortune for the supreme leadership to take our opinion into consideration. Nikita Sergeevich allowed to perform some more tests in aquatorium.”

Despite all the confidentiality, Kocharyants surname was very well known among physicists, rocket specialists, state leaders and intelligence agents. He was officially registered in Moscow, but there was no street and no house in the capital that was indicated in his documents. Instead, he had an all-mighty mark, thanks to which he could receive all-round support in any police department of the country.

Understandably, Kocharyants communicated little with his foreign colleagues, but he knew many of them. In private meetings he used to mention Paul Ter-Karapetyan, an engineer of the same rank but 15 years younger and working on the opposite side of the barricades. In 1972-1987 Paul was the head and chief engineer of Aerospace Corporation in El Segundo, California, as well as a chief advisor of Pentagon. ›

KIRILL SHCHELKIN. RIVER SHIPPING AGENT

When Kirill Shchelkin (Kirakos Metaksyan) received Kurchatov's invitation to take the position of deputy chief designer of the atomic bomb, he was a young scientist, who just recently defended a PhD thesis and directed the laboratory of combustion and detonation at the Institute of Chemical Physics. He arrived to "Arzamas-16" in 1947 and started to prepare the site for tests and select specialists for all-Soviet research institute of experimental physics – a right given to him by Stalin himself. Shchelkin rejected the well-known scientists, saying that the institute needed a consolidated team which would put mutual efforts on solving the problems rather than on disputing about whose opinion is more weighty. Shchelkin set a simple requirement: "In any circumstances, given any failure of any unit, the blast control system has to work!" For that purpose, a two-channel system of control was created, which, on Shchelkin's insistence, was tested a thousand times. Besides the position of deputy chief designer, Shchelkin also worked as the head of research sector which included 10 labs, theoretical department and all the test sites of "Arzamas-16." In fact, only two scientists – Yulii Khariton and Shchelkin – had access to the full information on the work of the entire staff. The two researchers complemented each other: the first was more into theory, and the second leaned toward the experiment.

It is known from the report on the first tests of the bomb that Shchelkin was the last to leave the tower: he sealed the entrance himself. It was him who put the detonating charge into the plutonium sphere of the first Soviet atomic blasting device RDS-1. (By the way, people used to expand this abbreviation in two ways: "Reaktivny Dvigatel Stalina", i.e. "Stalin's rocket engine", or "Rossia Delaet Sama", i.e. "Russia does it herself"). The danger was redoubled by the high rocking the tower and the blasting caps, which could explode from clashing. However, the test was successful. Kirill Shchelkin was awarded the title of the Hero of Socialist Labour for his contribution.

For missile men Shchelkin's work remained anonymous. The soon-to-be three-time Hero's pass modestly stated: "Volga River Shipping Procurement Agent." But this seemingly unpretentious document easily got Shchelkin in the Central Committee of the Party and to KGB's Lubyanka Building: officially, "Arzamas-16" was called "Volga Office."

Shchelkin wasn't easy to get along with: he always said what he thought straight out. Coworkers valued him for that, yet exactly with that he made enemies. His relationships with Beria, and later with Khrushchev, were not smooth at all. Still, in a situation where the USSR had to make its own atomic bomb, Beria, who was in charge of the project, could not refuse to take care of Shchelkin. For example, when the scientist, who used public transport, got into an accident and was injured, Beria immediately provided him with a car and a driver – one of his deputies. Besides, two agents of MGB guarded Shchelkin throughout the day and the night.

In 1955, Shchelkin was appointed head of research and chief designer of the second atomic center established in Ural Region. Physicists, who very well realised what a threat the hydrogen bomb constituted for the human civilisation, opposed the new tests. Kurchatov was trying to convince Khrushchev there was no need to create a superbomb.

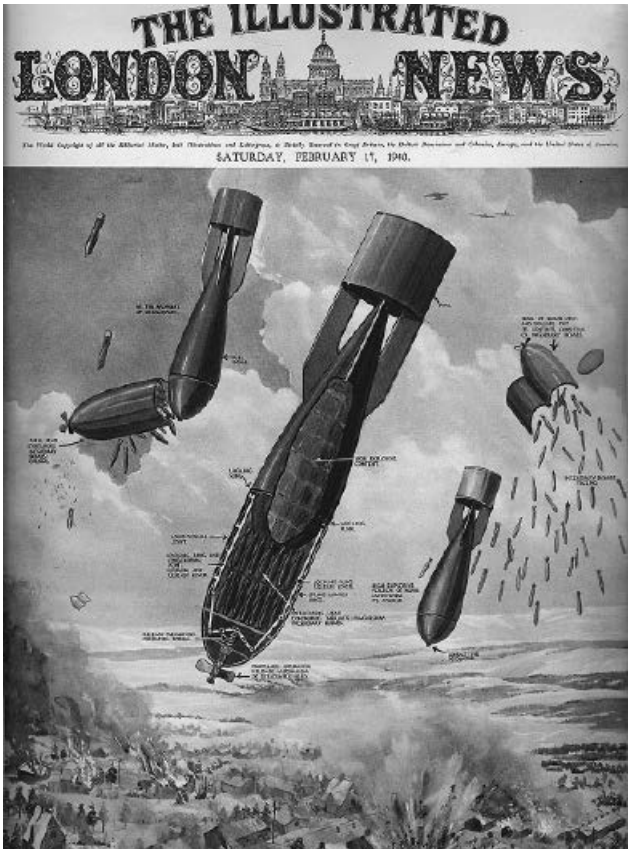
Not all the details of this confrontation are revealed, but it is known that Kurchatov and Shchelkin stood against Khrushchev's will. Shchelkin refocused the work in Chelyabinsk-70 secret town to create a compact nuclear weapon which, as he was sure, would be enough to contain any counterpart. As a matter of fact, this was a refusal to obey Khrushchev's command. In the meanwhile, Kurchatov who then worked on thermonuclear research, invited Kirill Shchelkin to the Institute of Nuclear Energy. But Nikita Sergeevich did not let him leave Chelyabinsk-70. After Kurchatov's death the conflict with Khrushchev became worse. In order not to invoke disfavor of all Chelyabinsk residents, Shchelkin, who wasn't even 50 by then, applied for disability and retired. Soon after that his name was erased from the atomic project.

Symposium at the All-Russian Scientific Research Institute Of Technical Physics

ABRAHAM ALIKHANOV. KURCHATOV'S COMPETITOR

According to one of the myths of the science world, Stalin considered two candidacies to head the research of the atomic project: Igor Kurchatov and Abraham Alikhanov. We don't know why Kurchatov was his choice. They say, Alikhanov was not a member of the party and wasn't really very fond of the Soviet government, and that he behaved too independently during the interview. One more assumption was that his Caucasian origin became an obstacle. All of these are, most probably, speculations. There is, however, a fact: In 1943, it was Alikhanov who was the elected to the USSR Academy of Sciences, and an additional place was allocated for Kurchatov only at the insistence of the Central Committee. Still, no events, rumours or gossip prevented the two prominent scientists from being good friends. In the fall of 1942, Alikhanov arrived to Moscow together with Kurchatov, who had been given large resources and organising rights, as well as wide powers to select specialists. Predictably, Alikhanov became one of them. In the summer of 1945, the Soviet government expanded work on atomic projects. Alikhanov was offered to organise the so-called Laboratory N3, which later became the Institute for Theoretical and Experimental Physics. Alikhanov led the large research institute he had created for almost 25 years. The scientist founded three big research groups: theoretical, experimental and engineering. The first research reactor was built under his command in 1949 in an unprecedentedly short period of time – less than two years. Specialists consider this period being a minimum even by today's standards. First such reactor was created under the command of Frédéric Joliot-Curie in the French military fort of Châtillon. In reactor engineering Abraham Alikhanov showed himself both as an outstanding experimentalist, and as a specialist in engineering-physical problems of application of atomic energy. ◆

THE FIRST RESEARCH REACTOR WAS BUILT UNDER ALIKHANOV'S COMMAND IN 1949 IN AN UNPRECEDENTEDLY SHORT PERIOD OF TIME – LESS THAN TWO YEARS. SPECIALISTS CONSIDER THIS PERIOD BEING A MINIMUM EVEN BY TODAY'S STANDARDS



NATIONAL TREASURE

Among the Armenian scientists working on atomic projects on the other side of the ocean the name of Nerses Krikorian stands out. He is rightfully considered one of the pioneers in the US in the field of national security and nuclear weapons. The American intelligence community dubbed him a "national treasure." In 2003, Krikorian was awarded Los Alamos National Laboratory Medal. Handing the award, the director of the Laboratory Peter Nanos noted: "Nerses Krikorian's career embraces most of the history of the Laboratory: from designing the weapons to disarmament, national intelligence and other missions of state importance. Nerses Krikorian's contribution is difficult to overestimate. He is one of the most respectable and renowned US scientists." Among not many researchers awarded this prize are Nobel laureates Hans Bethe and former director of the Laboratory Harold Agnew. In 1991, he was awarded the CIA's Intelligence Community Medallion.

ARMENIA ART FAIR 2018

This spring Armenia's very first art fair opened to the public at Yerevan Expo. Playing host to curators, galleries, exhibitions and a number of talks and performances, Armenia Art Fair welcomed artworld professionals, buyers and the general public to come together to discover art from the Black Sea region, the Caucasus, the Middle East, UK and beyond.

Located at the crossroads of east and west, Armenia Art Fair succeeded in attracting galleries from a diverse array of cultures. Among the top booths in its inaugural year was the presence of Art Residence Aley from Lebanon and Syrian London-based gallery Lighthouse. Situated in Aley, which is on the Lebanese freeway to Damascus, Art Residence Aley is a residency programme that provides Syrian refugee artists with the opportunity to make art in Lebanon. In Yerevan, Art Residence Aley exhibited the works of Farah Azrak, Adel Dauood and Hasko Hasko in a vibrant display of collages and large-scale oil paintings on canvas, and also invited the artists to Armenia to engage with the art fair's audience. In an extension of the project in Aley, Lighthouse Gallery in London also displayed a moving array of contemporary Syrian works with paintings by Heba Al Akkad and Shadi Abou Saada being particularly memorable.

Also, of note were a number of curated booths that included the participation of Belarusian Nata Sokolowska and an exhibition entitled *The Figure: Presence and Absence* by Dr Randall Rhodes. Sokolowska's display of Oleg Kostyuchenko's work was especially striking, with deep red paintings of women floating on tire swings in front of large carcasses of raw meat (Flashback, oil on canvas, 2016) and a self-portrait in which the artist represents pushing himself out of his comfort zone (Approaching zero – 3, oil on canvas, 2017). Amongst the Armenian-based galleries, standouts included Albert & Tove Boyajian's exhibition of Saro Galentz's (1946-2017) work, whose still life compositions are comparable to European surrealist paintings. This 'surreal' component carried through Karoyan Gallery's display. Part of the Institute for Contemporary Art in Yerevan, the gallery's overall focus is in working with artists who produce post-media conceptually-driven works. This was most visible in the unmissable *Instinct & Intelligence* by Vahram Galstyan. The work consisted of a long table covered with plaster, and with a seat at either end. In front of the chairs and on top of the table were two white bowls filled with

President Armen Sargsyan (on the right) on the openning of the Armenia Art Fair

several white heads floating in a mysterious blue liquid. The resulting work looked like it fell straight onto the earth from out of a science fiction movie and certainly entertained and perplexed the majority of the art fair's visitors.
The participation of young Armenian artists was emphasized through the presence of the State Academy of Fine Arts of Armenia. There were also a number of projects working to promote Armenian art beyond its borders including KulturDialog Armenian and

THERE WERE ALSO A NUMBER OF PROJECTS WORKING TO PROMOTE ARMENIAN ART BEYOND ITS BORDERS INCLUDING KULTURDIALOG ARMENIAN AND PROGRESSIVE ART AGENCY

Progressive Art Agency, an international artistic collective which works to produce art that crosses boundaries and disciplines, with the highlight being Vahag Hamalbashyan's Submarine, acrylic on canvas, 2016, in which a number of disconnected figures come together to eat ice cream on a beach.
In addition to the nineteen booths, an 'Open Space' exhibited the work of young contemporary Armenian artists through five exhibitions. Curated by Eva Khachatrian, this section of the art fair shed light on young emerging Armenian artists and cemented practitioners from Armenia as innovative, dynamic and daring. Particularly noteworthy amongst this cluster of exhibitions was the projection of a series of films by Hamlet Hovsepian and Tigran Khachatryan, in which the audience was able to witness rarely screened films of the Armenian avant-garde, as well as Grigor Khachatryan's ticking work Those Who Love Me Have Power Over Me, Greater Power Have Those Whom I Love.
Another young artist was showcased during Armenia Art Fair in Hayp Pop Up Gallery's *The Leather Show,* which took place in conjunction with the fair. The exhibition at the Mergelian Institute presented Narek Barseghyan's work through several large paintings inspired by 90s pop culture. The works incorporate Armenian, Russian and English texts scrawled over images of bright blue and pink figures wearing white t-shirts and leather jackets. During the opening a fashion-performance took place where a number of designers who collaborated with the artist paraded their designs in an electrifying art-meets-fashion runway experience. This was not the first performance during the fair, which also hosted a *Transliterative Tease* by Polish-Iranian duo Slavs and Tartars. An additional and unexpected performative piece took place during the art fair's opening when a group of artists carrying masks of political Armenian figures – including the recently rejected Serzh Sargysyan and the newly elected Nikol Pashinyan – mingled with guests carrying a red suitcase with the word 'government' printed on the front in Armenian. In an act that could have proved delicate, the artists invited the audience to interact with them and take selfies with their masks, adding an element of humour to recent political events in Armenia.
Adding to the predominantly visual art fair, there was a round table discussion and open Q & A between art world professionals and the art fair audience. *Shifting Perspectives on Art from Local to Global* was a night owl dialog moderated by Dr Randall Rhodes, provost at the American University of Armenia, between Susanna Gyulamirayn (director of the Art and Cultural Studies Laboratory), writer and curator Georg Schoellhammer, and critic, curator and director of the Institute for Contemporary Art Nazareth Karoyan. The evening event allowed for a moment of reflection on the current global trends in an ever-diversifying art market.
All in all, the debut Armenia Art Fair succeeded in not only highlighting the talents of artists, curators and galleries inside Armenia, but also in attracting practitioners from outside the region, creating a diverse foundation upon which to build for the second edition of the fair in 2019.

BLIXA BARGELD:

"Sound is so boring"

Once or twice a year Armenian segment of Facebook bursts with a "sensational" discovery: some strange German industrial rock band with almost unspeakable name Einsturzende Neubauten, sings a melancholic ballad called "Nagorny Karabakh". Very soon Armenian Facebook users find out that the band and its founder and frontman Blixa Bargeld are a legendary underground band with eleven studio albums and a huge fan base all over the world. Now, in Armenia too. Regional Post met Blixa in Berlin, a day before Neubauten played a sold-out gig in local Kolumbiahalle hall as part of The Greatest Hits tour. Topics of the conversation are the mystery of songwriting, future of the music and, of course, band's "Armenian" songs.

INTERVIEW : ARTAVAZD YEGHIAZARYAN, ZHIRAIR TERZYAN

Neubauten has not one, but two, let's say, Armenian songs...

— Actually, we even have three ones. And four, if you count "Nagorny Karabakh" too.

Of course we do!

— I certainly have a soft spot for Armenian music. It all started with my interest to the ethnic music (there was no term *world music* by then). One night, sometime around 1981, I recorded a program about Armenian music on the radio. I still have that cassette, by the way. So, this became a basis for what we did and what later became a track, called "Armenia". In that composition I tried to translate what that music meant to me. The second song was first called "Armenian massacre", because it was part of the "Lament" stage project, which was all about the First World War. And then there was also "Armenia III", which was based on the duduk melody.

What is "Nagorny Karabakh" about?

— I lived at that time in San Francisco. And the relation of that city to the rest of the USA, at that time ruled by George W. Bush, is a bit like Nagorny Karabakh: it's like an enclave that has nothing to do with what is surrounding it. And I lived on the hill, with a very dark, almost black garden (*Karabakh means Black Garden in Azerbaijani – editor*). So I wrote about my life there, that was like Nagorny Karabakh. And I also remembered the fantastic non-fiction book by Richard Kapuchinski, "Empire", where some of the plot takes place in Nagorny Karabakh.

Looks like it's time to visit Karabakh! Have you ever been to Armenia?

— We would be absolutely delighted! A concert would be great! A couple of years ago I was in Georgia, with a little concert in Tbilisi. That was the closest I came to Armenia. And it was funny when people discovered that Neubauten had a song called "Grand Hotel Tbilisi", although it was completely unrelated to the actual city.

But it seems you have deep connection to the region! By the way, how do you write the songs?

— There are 68 volumes of my notes on the shelves in my office. I bought my first computer in 1992 and started making daily notes, typing them, printing them out, and saving them all. It's my duty to write something every day, maybe just one word. Sometimes, I write songs based on those words. There's a record called "Berghain," but it has nothing to do with the club, I just desperately wanted to use that word. And I love writing nonsense. It is extremely difficult, I have to say. Sense is always somehow creeping in.

What about "Youme, meyou", one of your best songs?

— It was a marriage vow to my wife. She bought me a table so I could seat down and write it. So, I had no choice!

You are now finishing The Greatest Hits tour. I assume, it wasn't easy selecting from songs you created during the decades. What was the criteria?

— Very simple: we chose the songs we liked to play live. By the way, some people say it is ironic to call the tour and the CD Greatest Hits, because we never really had great hits! (laughs)

How did you connect your life to music?

— I was born in 1959. My musical socializing started when the Beatles were still there. It made an impact on me as a human being. I am a school dropout, so, there were only two things you could possibly do apart from wasting your life: become an artist or a musician. I tried both, but music seemed easier.

Do you have a specific place in Berlin, which is dear to your heart for some reason?

— I come from the poor corner of the Friedenau district, a long street called Grazer Damm. At the end of it you have a manmade hill, which is very important, because Berlin is so flat. And that street was built by the Nazis. It's very dear to me not only because I was raised there, but also because you can see on that one street a part of German history concentrated in the architecture. And the name of the street came after connecting Austria to Germany.

For some time you lived abroad...

— I left Berlin in 2001. First moved to San Francisco, then to Beijing, and came back in 2010. But now I live in East Berlin, which is very new to me, because I never lived in this part of the city, there are no memories connected to here. In West Berlin I would be terrorized by the memories.

You once said that the specific sound of Neubauten was a result of the lack of instruments and skills. Now, would you have liked to have had different opportunities at that time?

— Too many choices is not good. And we were lucky not to have many of them. Had we had many instruments, recording equipment, it would have been different and maybe worse. We made the doors in the wall ourselves.

Neubauten's sound changed a lot in 37 years...

— Maybe sound but not the approach. And the importance of the sound is very overrated. It is completely unimportant, so I wouldn't judge from that perspective. I have wasted so many afternoons trying to find the best bass sound, but there is no good sound, there is only a context where it works. If you think the band's sound changed, maybe it did, but the approach never did. Now we don't have to do so much trying anymore, we have tried it all.

Twenty years with the Bad Seeds.

— Yeah, I tried it too!

It must have been very difficult to be a member of that band and lead your own for so many years.

— It was all about planning. Of course, it wasn't easy, a couple of times, I had to choose one of them. Like, once it was announced that the Bad Seeds are doing the Lollapalooza tour, but I already had arrangements with Neubauten. They had to go without me. And one day, we just went different ways. But Nick and I are still friends, it was a great experience.

What do you think music will be like in the future?

— The band is now dying as a format. Because of the production of the band – five or six different people working in the studio, it shrinks down to solos or duos in front of the monikers. The production format dictates how music is going to get produced. Today recording companies are not doing repertoire anymore. While back then, it was all done in the companies. If you project that into the future, then yes, it would be electronic, which will not be different from the acoustic. We are already consuming music from the speakers, it's already digital. Live played music is still very important, but it's becoming a niche, mainly for merchandising, because at the same time you can't make a lot of money with selling records.

What music do you listen to? Has there been anything you've liked recently?

— Very rarely, once or twice a year probably, I hear something that I like. My favorite right now is a music program on radio BBC 3, where they air ethnic, classical, modern music, different strange things. That's where I get information. I have no idea what's happening in the popular music.

What about the future of the Neubauten?

— Just recently, another journalist quite aggressively asked me: "How many more records are you going to make?!" I said "One". That's how I plan: one more record. After that, I'll think of another, and so on. Very often, simple-minded people say that art is created because an artist can. But, as composer Arnold Schoenberg once said, art is created when it has to be and not just when there is the ability.

SHURNUKH:
Outstanding and Predictable

In August, the attack against nine LGBT individuals caused large-scale debate in Armenia. Many speculated on the event on the background of acute political moods after the Velvet revolution triumphed in spring. Still, the violent incident in Armenia seems to be just one more case in the usual row of hate crimes in the most homophobic region of Europe.

TEXT : KARINE GHAZARYAN / ILLUSTRATION : MOLLY ANTELL

ATTACK IN SHURNUKH

"I have flip-flops at home for Yerevan hot weather. But somehow, I find myself putting on sneakers every morning because in sneakers I can run". It's August 7, four days have passed since the violent attack on LGBT people in Armenian village of Shurnukh. We are sitting in the park with my friend Elvira, who has been among the victims. I already knew the story in detail: Elvira and Hayk, another victim, had already given several interviews repeating time after time what had happened to them.
Shurnukh is a small village in the southern region of Syunik in Armenia with a population of about 200. Hayk was born and raised here. Nearly all his fellow villagers knew he was queer, and there was no serious tension until this August, when about 30 men and women attacked him and his friends, shouting 'dirty faggots' and chasing and beating them with stones. "I thought if one of us stopped or fell, they would kill us because they were shouting 'finish them, finish them'," Elvira says. They ran about a kilometer from Hayk's house, where they were staying, to the intercity highway, then tried to stop cars but the villagers didn't let the drivers stop there. Police arrived 90 minutes after it was called and finally took them to the nearby Goris town. Two of nine young people were transported to hospital; others got off with lighter injuries and spent the night in police station. All of them came back to Yerevan next morning accompanied by human rights defenders. The psychological trauma, however, seems to have followed them. "I was afraid before," Elvira tells me. "But I could always escape the dangerous place and come back to safety. This was the first time that I had run away but had taken my fear with me."

PREHISTORY

Shurnukh incident has its prehistory. In April, when protests against Serzh Sargsyan were flooding the major cities of Armenia, Elvira and Hayk travelled to Goris in the frame of their ongoing initiative to hold small discussions on queer culture in towns and rural areas. They made a post on Facebook telling they would like to support and participate if an anti-government protest was being organized. On the same day, Hayk's father received a call from someone, who he says was connected to municipality officials. The caller warned him to stop his son and threatened with consequences. Shortly after, Elvira and Hayk were attacked by two men in Goris. The police gave assurance to investigate the case. But in summer the young people were contacted and told the police was unable to find any suspects.
One of Goris attackers was detained in August as he was among the violent crowd in Shurnukh.

CELEBRATIONS AND HATE SPEECH

The story in Shurnukh immediately became a sensation. With multiple reports, analyses and discussions of what had happened, Facebook broke into a festival of hate speech. On August 7, Deputy Prime Minister Tigran Avinyan condemned the attack naming violence "unacceptable". He told in an interview to Radio Liberty: "We chose the peaceful way to solve the most complex problem in this country, and we did solve it. Do you think there are more difficult issues in our society which need to be treated with violence? I don't". However, not many compassioned with the victims. Instead, rage was caused by the fact that LGBT men and women travelled to Shurnukh. Soon, theories appeared that the young people were being noisy and therefore got beaten. On August 12, conservative activists – some of them are among the outspoken critics of the post-revolutionary government – organized a feast in Shurnukh. One of the leaders of the group was former Chief of Police Vladimir Gasparyan's advisor. The celebration included dancing and banquet.
By the time I met Elvira in Yerevan, police had not initiated criminal proceedings yet. It did so on August 10, appealing to the article 118 of the Criminal Code. "The article presumes up to 100,000 drams of fine or two months of detention for battery," Luise Vardanyan, the aggrieved party representative says. "But I think other articles of Criminal Code should also be applied in this case, and we now work on that."

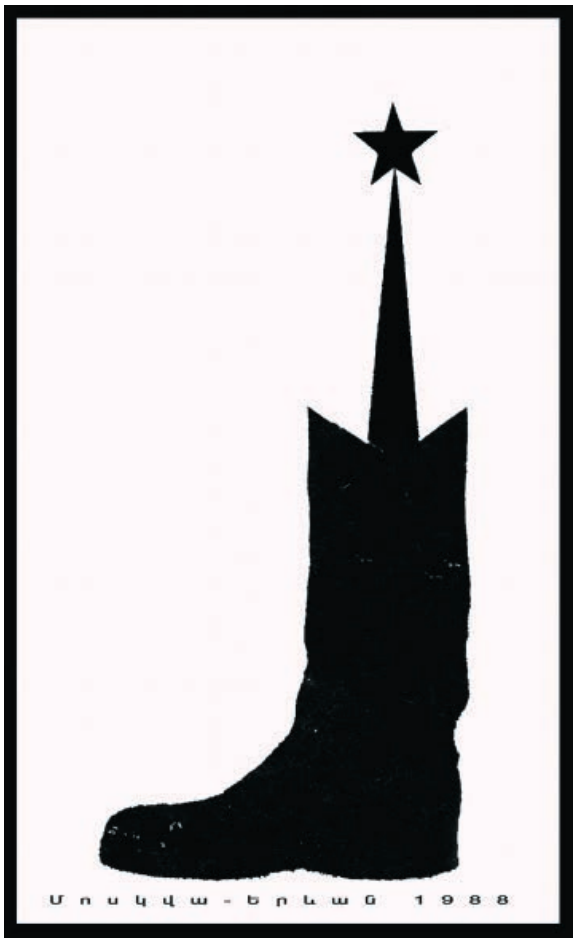
ARMENIA HAS NO LEGAL OBSTACLES TO HOMOSEXUALS AND RECOGNIZES GAY MARRIAGES REGISTERED ABROAD. HOWEVER, IT DOES NOT HAVE SEPARATE LAW ON HATE SPEECH AND HATE CRIMES

MOST HOMOPHOBIC AREA IN EUROPE

Armenia is ranked 48th among 49 states in ILGA Rainbow Europe index. Azerbaijan is ranked the last, and Turkey is 47th. Despite homosexuality is legal in all three countries, they together comprise the most homophobic area in Europe.
Just last September, Azerbaijani officials were reported to have organized raids, detained dozens of LGBT people forcing them to take medical examination, and to have beaten and blackmailed them to have them share contacts in their mobile phones. Homosexuality was legalized in Ottoman Empire back in the 19th century and has never been illegal in Turkey. Despite that, predominantly negative attitude towards LGBT people is common. Between 2010 and 2014, over 40 hate murders of LGBT individuals were reported in the country.
Armenia also has no legal obstacles to homosexuals and recognizes gay marriages registered abroad. However, it does not have separate law on hate speech and hate crimes.
One of the most resonating cases happened in 2012, when two self-proclaimed neo-Nazis threw Molotov cocktails in a gay-friendly DIY pub. Then MP and now Minister of Economic Development and Investments Artsvik Minasyan supported the attackers and allegedly helped them to escape serious charges. It is estimated that between 2011 and 2013 about 6000 LGBT people migrated from Armenia. ◆

POLITICAL POSTERS OF 1988

DURING THE MOVEMENT OF 1988 IN ARMENIA POLITICAL POSTERS PLAYED A HUGE ROLE. MOST OF THEM WERE ANTI-SOVIET

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